

Bolinger's *meaning and form* as a pragmatic filler in Chomskyan X-Bar module

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Abstract

X-bar module characterizes the syntactic configuration of phrase constituents and recommends various tests for determining their syntactic presentations. The theory, however, does not account for plausible semantic and pragmatic implications of the constituents. The theory suffers a few inaccuracies in its overemphasis on syntactic dimensions of the constituents and its assignment of peripheral significance to their semantic and pragmatic considerations. This paper is an attempt in theoretical linguistics to fill these potential loopholes by applying the theoretical model of *Meaning and Form*. The study is delimited in its focus because it discusses two aspects of X' module. The first half discusses the notions of complement and adjuncts while the second part brings into focus the genitive dimension of POSS-NPs. Besides semantic and pragmatic dimensions, the study analyzes genitive structures within the framework of DP-Hypothesis. The study has used *Meaning and Form* model as a theoretical tool for plugging in the gaps and has sought the support of other linguists whose notions are at par with the model and whose views can be cited as potential semantic and pragmatic fillers in the module. The study follows a cross-linguistic approach and examines the syntactic configuration of the module in Pashto language. This has been done to highlight the validity of this module across languages.

Keywords: X-Bar Module; Semantics; Pragmatics; *Meaning and Form* Model; DP Hypothesis

Introduction

X-bar theory is the module of Universal Grammar (UG) that regulates the structure of phrase constituents. The basic premise of the theory is that all phrases have obligatory heads and optional adjuncts: A VP is headed by V, NP by N etc. A phrase, however, cannot be led by a head of different categorical nature. Notationally, this can be represented as (i)

- i. $X' \rightarrow X YP$

- (i) Shows that a phrase “X ’” takes a head word “X” and other constituents “YP” as complements.

Chomsky (1986, p. 160) expresses this relationship notationally as (ii) and (iii):

- ii. “X ’→X...”
iii. “X ’’→ [Spec, X ’] X ’”

In (ii), X represents a variable for any lexical categories like noun, verb, adjective and preposition. X ’ is formed with X as head accompanied by other elements indicated by ellipsis (...). Schema (iii) comprises of double bar X which contains X ’ and pre-head elements associated with X ’ and specifier(s). Nouns take determiners as specifiers; verbs auxiliary verbs and the specifiers of adjectives can be intensifiers like “very” or comparative structures.

The module specifies the syntactic position of complement. Characteristically, the complement appears to the right of the head word:

- iv. X ’→ X (WP)
1. “John beat Michael.”
NP1 V NP2

In (1), the NP2 is complement of the head V.

There are, however, parametric variations and the complement can appear to the left of certain languages like Pashto. This can be expressed as (v):

- v. X ’→ (WP) X
2. “John Michael owa kho.¹” (“John Michael beat”).
NP1 NP2 V

Now consider (3).

¹Unlike English, Pashto is SOV language. This study has focused on dialect of Pashto spoken in Peshawar city of Khyber Pukhtun Khwa. Being a metropolis city of the province, it is considered the standard dialect of Pashto language. The study relied on data received from BS English students at Islamia College, the institution where the researcher teaches English linguistics at BS level.

Note also that English is written from left to right while Pashto from right to left. If this factor is taken into account, then the complement of V in Pashto will also be to the right of the head word.

3. “Books of Poems”

In (3), the complement ‘of poem’ follows the head word “books.” English can also be left branching with the complement to the left of the head as in (4).

4. “John wrote a poetry book.”
NP1 V AP NP2

In (4), the complement AP “poetry” precedes the head word NP2. Examples (3) and (4) show that NP as a head word can take complement to the left and right. This however, is not the case with V which as a head word always precedes its complement.

Examples (3) and (4) will be expressed as (5) and (6) in Pashto language.

5. “Da shagheri kitab” (Of poetry book)
6. “Kitabano da shagheri.” (Books of poetry)

In such cases, Pashto follows the same paradigms as English. Or consider (7) and (8):

7. “I visited a book shop.”
8. “I visited a shop of books.”

Example (7) follows paradigm (v) while (8) is (iv). The corresponding structures in Pashto will be (9) and (10).

9. “Zu da kitabono dokan ta larm².” (I the books shop visited).
10. “Zu dokan da kitabano ta larm.” (I shop the books visited).

Examples (9) and (10) show that like English, Pashto takes NP or PP as complements to the right or left of the head word (NP in such cases) respectively.

Specifiers

The projection rules for a specifier are expressed as (vi):

- vi. $XP \rightarrow (\text{SPEC}) X'$

² Pashto does not admit singular complement in such cases.

(Vi) shows that a specifier appears to the left of the projection of the head word X' . As an illustration, consider (11).

11. “The book”

In Pashto, the equivalent structure will be (12).

12. “Da kitab” (The book)

Sentence (12) shows that English and Pashto take specifiers to the left of the head word.

Adjuncts

For adjuncts, X' module recommends the following two projection rules :

vii. $X' \rightarrow (ZP) X'$

viii. $X' \rightarrow X' (ZP)$

This means that an adjunct (ZP) can precede or follow the head word X' . Examples (13) and (14) illustrate these rules.

13. “*Red roses*”

14. “*Books from Poland*”

The italicized phrases in (13) and (14) are adjuncts which are to the left and right of the head word respectively³.

Examples (13) and (14) will be written as (15) and (16) in Pashto language.

15. “Sra gulana⁴” (“Red roses”)

16. “Da Poland Kitabono ” (“From Poland books”)

Examples (15) and (16) show that English and Pashto are same concerning pattern (vii). There is, however, a parametric variation in relation to pattern

³ The addition of determiner is possible in (13): “The red roses.” In this case, noun is the head of the construction. The determiner ‘the’ takes NPs as complement, not APs: “The roses” but “*the red.”

⁴ AP as a complement has number property in Pashto language. With a singular NP, the AP ‘sur (red) comes as a complement; with plural ‘sra (red).’ Consider (a) and (b):

(a). “Ma la sur gul wahla. ” (“Buy a red rose for me.”)

(b). “Ma la sra gulano wahla.” (“Buy red roses for me.”)

(viii). It is very rare to see an adjunct to the right in Pashto language except in some poetic expressions like (17).

17. “Qamais toor” (“Shalwar black”).

The unmarked form (17) follows paradigm (viii) and is regarded the same as in English (18) wherein the adjunct follows the head word:

18. “River navigable”

This analysis also leads to this conclusion that APs cannot be complements to nouns because APs precede the head nouns while as shown above complements follow the head words in English.

Literature Review

The module has received ambivalent responses from linguists. Smith (2004), for instance, regards it as the simplification of lexical entries for individual categories like verb, noun or adjective because information concerning the individual category has been packed in the abstract schema called X-bar schema. The module covers all the categories equally. For Carnie (2001), it captures essential facts about phrase structure rules and highlights the formation of phrases and their constituents cross-linguistically. Fukui (1997) considers it the backbone of contemporary linguistic theory. It, according to him, presents hierarchical grouping of the constituents, their types and the linear order or what we can term precedence of the constituents. For Baker (1995), X-bar theory is a general theory that applies to all constructions of language. The rules that the theory project are applicable to all categories and can be applied to all structures and substructure of language.

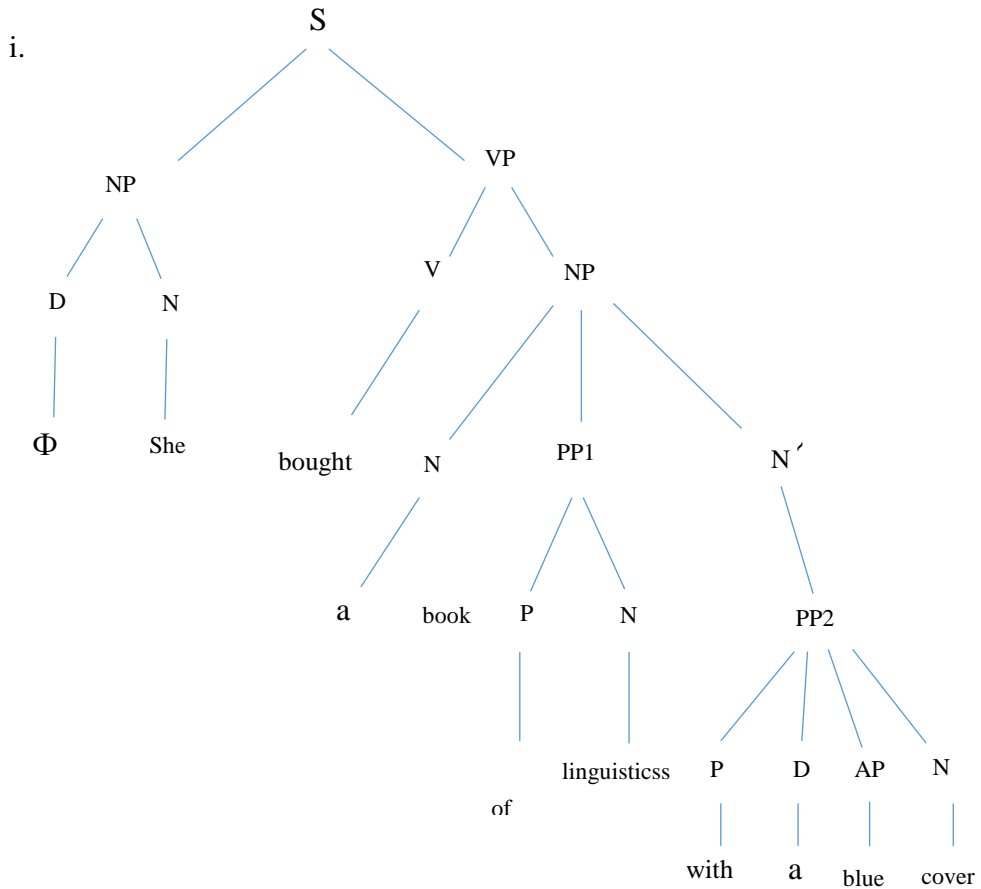
Complement and Adjuncts

According to X- bar theory, a complement is the immediate constituent of X' while specifiers are recognized as the immediate constituents of XP. An NP projects a prepositional phrase (PP) either as a complement or an adjunct. Syntactically, a PP is a complement when it is a sister to an X (N, V, A, P). It, however, features as an adjunct, when it is a sister to a bar-level (N', V', A', P'). Consider the following example.

19. “She bought a book [of linguistics PP1] [with a blue cover PP2].”

In (19), PP1 serves as a complement while PP2 is an adjunct to the NP “a book.” Complements are obligatory components of the head word X and hence are not omissible from X’. Adjuncts, on the other hand, are peripheral to X and are recognized as non-essential parts of X’.

Figure (i) illustrate the syntactic positions of these PP’s:

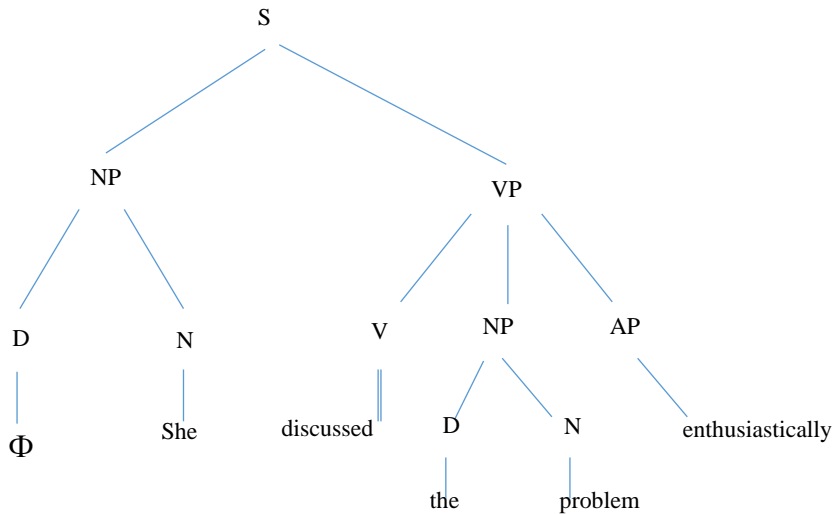


Sentence (19) will be translated as (20) in Pashto:

20. “Haghe oode gatha wala linguistics kitab waghasto.”
 (“She blue cover of linguistics book bought.”)

Sentence (20) shows that the complement ‘linguistics’ is adjacent to the head word “kitab” while the adjunct “oode gatha” is not at sister level to X (N).

ii.



Sentence (24) will find expression as (25) in Pashto:

25. *Haghe da masala surganda kra दौरا پا جازبا.” (“She the problem discussed enthusiastically.”)

The AP ‘دایرا پا جازبا (enthusiastically)’ is sister to N, not N’ and hence is an unacceptable structure in Pashto language.

Moreover, adjuncts have the property of recursivity, which means that there can be as many adjuncts as possible. Complements lack this phenomenon of stacking together. They cannot be recursive, and hence cannot generate themselves. This can be seen in example (26):

26. *She bought the book [of linguistics PP1] [of anthropology PP2].

The ungrammaticality of (26) is because the NP “the book” cannot take two complements (PP1 & PP2). This is due to the lack of recursive property in complements.

Structure (26) written as (27) will also be marked as unacceptable in Pashto as shown below:

27. **“Haghe da linguistics anthropology kitab waghsto.”* (“She of linguistics anthropology book bought.”)

This, however, will be acceptable provided that the complements “linguistics” and “anthropology” are conjoined:

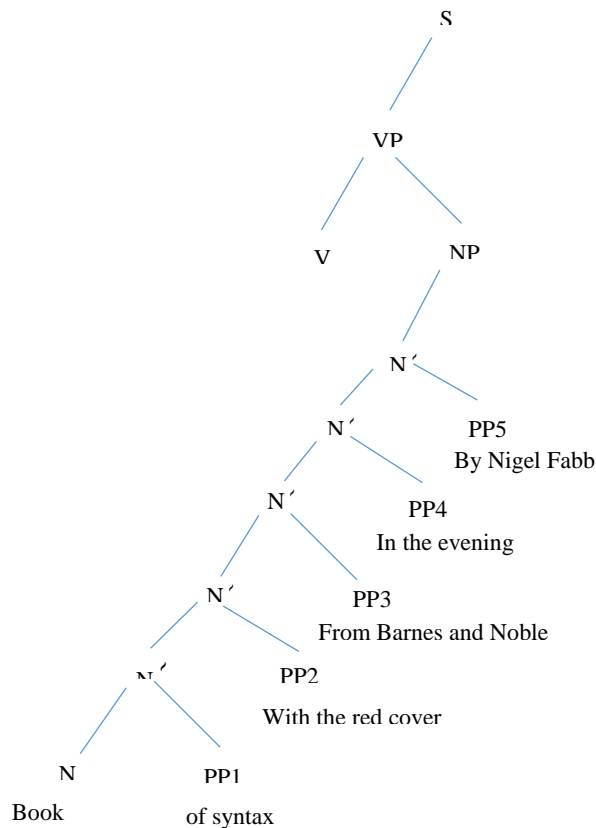
28. *“Haghe da linguistics aw anthropology kitab waghsto.”*
 (“She of linguistics and anthropology book bought.”)

Now consider (29):

29. *“She bought the book [of syntax PP1] [with the red cover PP2] [from Barnes and Noble PP3] [in the evening PP4] [by Nigel Fabb PP5].”*

In sentence (29), the X “the book” projects PP1 as a complement PP1 and the rest of the PPs as adjuncts (PP2-- PP5) as shown in figure (iii).

(iii)



As illustrated in the tree diagram (iii), “N” takes PP1 as a complement and the “N’s” take other (PP2--PP5) as adjuncts.

Syntactically, an adjunct can be reordered with respect to another adjunct but no such syntactic ordering is plausible between adjuncts and complements. This has been illustrated in examples below.

30. “She bought the book [of syntax PP1] [from Barnes and Noble PP3] [with the red cover PP2] [in the evening PP4] [by Nigel Fabb PP5].”
31. *“She bought the book [with the red cover PP2] [of syntax PP1] [from Barnes and Noble PP3] [in the evening PP4] [by Nigel Fabb PP5].”

Sentence (31) violates the principle of Adjacency. The complement (PP2) has not been in sister node with the NP “the book.” Moreover, the reordering of adjuncts with complements cannot happen as explained above.

Recursivity of adjuncts and adjacency of complement is recognized as acceptable patterns in Pashto language:

32. “Haghe da syntax kitab da Barnes and Noble na sur gathe wala pa maham k da Nigel Fabb waghsto.”

(“She of syntax book from Barnes and Noble with the red cover in the evening by Nigel Fabb bought.”

Any misplacement of the complement to the head word will make the sentence unacceptable in Pashto.

33. “*Haghe kitab da Barnes and Noble na sur gathe wala pa maham k da Nigel Fabb da syntax waghsto.”
 (“She book from Barnes and Noble with the red cover in the evening by Nigel Fabb of syntax bought.”

Fabb (2002) says that adjuncts can be freely placed inside a sentence. Furthermore, the optionality of adjunct can be validated through movement test. Structurally, an adjunct can either be PP or Adv. P. The following examples illustrate the mobility of the adjunct “immediately.” The adjunct can be assigned

any syntactic position within the sentence, but it cannot intervene between a VP and its complement as stipulated in the Principle of Interpolation⁶.

34. "John will send the money immediately back to the girl."
35. "John immediately will send the money back to the girl."
36. "Immediately John will send the money back to the girl."
37. *"John sent immediately the money back to the girl."

In 34--37, the complement NP "money" is adjacent to the head word 'send' and the adjunct "immediately" has been assigned different syntactic positions in the examples.

Sentence (37), however, violates adjacency of the complement to the head word and hence has been marked ungrammatical⁷. Since complement is an obligatory part of the head word, it, therefore, does not undergo movement in the sentence. This, according to Jackendoff (1990, p. 174), also applies to verbs like 'live, lay, deprive, rid, present, furnish, and sentences that start with expletive 'there'⁸.

42. "John lives in London/here."
43. "Mary laid the book near the fireplace."
44. *"The robbers deprived John."
44. "The robbers deprived John of his money."
45. "Bill provided/presented/furnished the students with some books."

⁶ This principle, according to Anderson (1977), states that "Only an object can intervene between an object and its predicate" (p. 278).

⁷ Adverbs dominated by VP should occur before the verb, finally (without a pause) and at various places in between. The one place where adverbs sound particularly bad is between the verb and the following NP as in (37). See Jackendoff, R. (1972).

⁸ Expletive *there*. Cattell (2006, p. 185) calls expletive 'there' as 'Referential there' means the one that refer to actual objects in the context. Such structures take PP or AP as complements as in the following examples:

38. "There is a line in the cafeteria."
39. "I like Miami."
40. *"There are many beaches."
41. "There are many beaches there."

46. “John rid the room of insects.”

Since complements cannot undergo movement, the following sentences are unacceptable:

47. “*Near the fireplace Mary laid the book.”

48. “*Of insects John rid the room.”

The validity of examples (34-37) can be tested in Pashto language in the following examples.

49. “John ba paise genai ta paise wapos olege zar.”⁹

(“John will the money to the girl back send immediately.”)

50. “John zar ba paise genai ta wapos olege”

(“John immediately will the money to the girl back send.”)

51. “Zar John ba paise genai ta wapos olege).

(“Immediately John will the money to the girl back send.”)

52. “John paise zar genai to wapos olegai.”

(John the money immediately to the girl back sent.”)

In (52), the adjunct “zar” (immediately) intervenes between the head word “olege” (sent) and the complement “paise” (the money). The structure, however, is still acceptable to Pashto speakers. This points to the fact that Pashto language does not adhere to Interpolation principle.

Relative Clauses as Adjuncts

Consider the following example.

53. “John, who lives in our neighbourhood, is a tennis player.”

Relative clauses cannot be complements because they have recursivity.

54. “John, who lives in our neighbourhood, and who works in our office, is a tennis player.”

Relative clauses cannot be called specifiers because they follow, rather than precede, the head. Moreover, as mentioned above, specifiers are not recursive. This means that the head NP projects relative clauses as adjuncts.

⁹ Adjuncts in end positions are generally not encouraged in Pashto language.

Pragmatic and Semantic Dimensions in X' Module

Whereas X' Module characterizes the concepts of complements and adjuncts, it, nevertheless, sidelines a few syntactic and their potential semantic implications. First and foremost, it does not substantiate the semantic and pragmatic ramifications of syntactic stacking of adjuncts. Does any divergence in the syntactic order of adjuncts result in any plausible pragmatic or discourse variation? Chomsky (1986) himself does not provide any theoretical justification for it. Carnie (2001) contends that a deviant syntactic order of adjuncts generate negative response and is something that is unacceptable to many native speakers. This means that a canonical linguistic description suggests that a single syntactic structure cannot entail more than one type of meaning. This assumption is at the heart of Bolinger's (1979) *Meaning and Form Model*. The one-to-one correspondence between a syntactic structure and meaning should therefore be attempted along with its pragmatic considerations.

Murcia and Freeman (1983, p. 88) also refer to fossilized order in adjuncts and contend that manner precedes direction and position. Hence (55) is an acceptable structure while (56) is not:

55. "John ran [quickly PP1] [around the track PP2] [at the park [PP3]]."

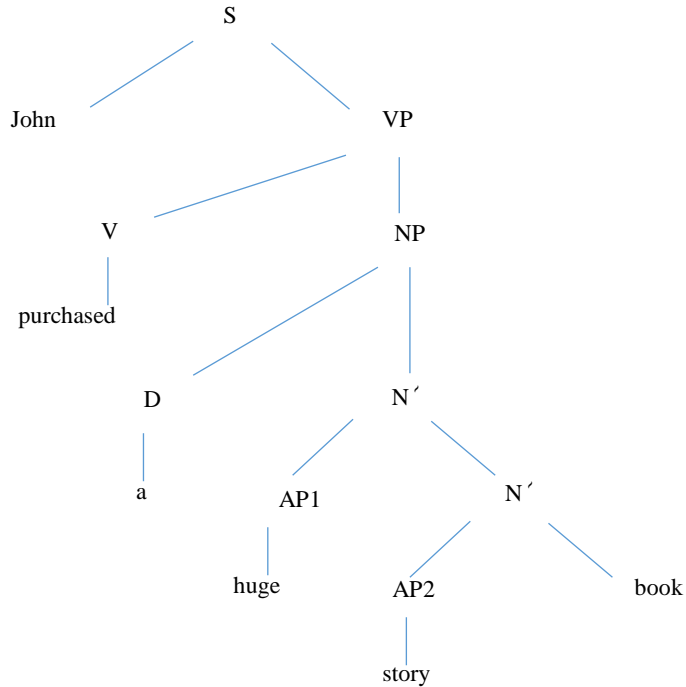
56. *"John ran [around the track PP1] [quickly PP2] [at the park PP3]."

This can also be applied to APs which can be adjuncts or complements to NPs.

57. "John purchased a huge story book."

In (57), the X "book" has "huge" as an adjunct and "story" as a complement. The syntactic tree for (57) will look like (iv).

iv



As pointed out, a complement cannot be reordered with an adjunct. This accounts for the unacceptability of (58):

58. *"John purchased a story huge book."

Sentence (58) also does not qualify conjunction test because a complement cannot be conjoined with an adjunct:

59. ?"John purchased a huge and uninteresting story book."

Moreover, the unacceptability of (59) is due to the fact that conjoining happens between coordinate adjectives¹⁰.

¹⁰ Baker & Chantrell (2005), p. 254) take coordinate adjectives as adjectives that modify the same NP and that belong to the same class. Such adjectives can be conjoined either through a comma or a function word "and."

So both (61) and (62) are acceptable patterns, but (63) is not.

61. "A soft, comfortable chair."

62. "A soft and comfortable chair."

63. *"A beautiful and sandy beach."

The recursive quality of adjuncts can be cited as the possible syntactic reason for the presence of more than one adjunct in the following examples:

60. “John purchased a big blue nice story book.”
64. * “John purchased a big blue story nice book.”

According to Bolinger (1977), syntactic variation actuates semantic variation in a sentence. This reordering of adjuncts brings about syntactic variation, and hence the sentence does not have the same semantic configuration. Baker & Chantrell (2005) recommends the following order (a) when an NP takes more than one adjective as an adjunct¹¹:

- a. “Opinion -size- age -shape- color- condition- origin- material-purpose”
Sentence (64) will be written as (65) when this order is followed:

65. “John purchased a nice big blue story book.”

X-bar module disregards this conventional order, and it needs due linguistic consideration within semantic framework.

This module describes specifier as the syntactic sister of N' and a daughter to XP (head). An NP “a car” contains a specifier “a” and an XP “car.” Unlike adjuncts, specifiers are not recursive¹². The presence of more than one specifier with an NP is, therefore, a syntactic impossibility¹³. Sentence (69) violates this restriction, and has, therefore, been marked ungrammatical:

69. * “John hired the his car.”

¹¹ One possible exception is that a short adjective precedes a long one as in (66):

66. “A big horrible building caved in yesterday”

¹² A variant structure is possible in case of quantifier *all*, as in *all the books*. Abney's DP hypothesis (see Newson (2006), however, which states that determiner head their own phrase provides a partial explanation for this exception.

¹³ Some specifiers like “all, both, half” may appear as sisters in an NP as in (67):

67. “All the students attended the class.”

Sentence (67) cannot be written as (68).

68. * “The all students attended the class.”

This further validates a fossilized order of specifiers in language.

Specifiers are placed in the left-most branch of an NP. Their syntactic positions in NPs cannot be changed with complements or adjuncts. This restriction accounts for the unacceptability of (70):

70. *"John is reading interesting an book."

Syntactically, conjoining happens between specifiers as shown in (71) but the reverse is true in case of an adjunct as in (72):

71. "John bought two or three books."

72. *"John is reading an interesting or one book."

Syntactic Configuration of Genitive Structures and DP Hypothesis

X-Bar module recognizes genitive as a morphologically realized third Case in English. There are, however, a couple of important syntactic issues that need due consideration.

Syntactically, a genitive construction is either

(a) The inflected genitive indicated by an apostrophe + 's' suffix or an apostrophe only, after the modifying noun: modifying NP +s' + head NP: "the children's toys, somebody's fault,"

Or

(b) The periphrastic genitive consisting of a PP containing a head NP followed by the modifying noun phrase: head NP + of + modifying NP: "the toys of the children, the fault of somebody,"

For simplicity, we can call (a) –s genitive and (b) as free genitive or *of* genitive. The two kinds of genitive constructions show NP1 Possessor and NP2 possessed relationship.

There are a few important considerations about "–s" genitive construction. This construction attains great significance in terms of DP hypothesis. It is important to recognize that apostrophe "s" marker is attached to the whole possessor NP "the man standing over there" as in (73), not just to the head "man" as in (74):

(73). "[The man standing over there]'s hat"

(74) *"The man's standing over there hat"

This invalidates the view that-“s” is a suffix; it should rather be taken a small word that indicates possession.

Also observe that it is in complementary distribution with determiners. Unlike periphrastic genitive, the 's-genitive does not take determinate NPs i.e., nouns with determiners. This illustrates the ungrammaticality of (75).

(75). “*The building’s the roof” (cf.¹⁴ “The roof of the building”)

(76). “*The panther’s the coat” (cf. “The coat of the panther”)

As pointed out above (see example 69), specifiers lack recursive property. Thus -“s” and a determiner being in complementary distribution cannot be the constituents of the same NP. In other words, the linguistic configurations of these words may be taken the same. These words may be described as different variants of the same type. If it is assumed that “-s” is a determiner, and if we analyze “s” genitive structures within DP hypothesis, we can account for such structures by stating that “s” occupies the head X’ position, and the possessor NP appears in its specifier (YP). So to go back to (vi), we will write (73) as (73 b):

73 (b). “XP→YP [The man standing over there] X’ (‘s) NP2 (hat)”

Example (73 b) shows that genitive’s constructions function as DP, a view that does not find adequate description in X’ module.

Pragmatic Dimensions in Genitive Case

The semantic and pragmatic implications of genitive structures do not find ample description in X-bar module, and it is something that provides room for analyzing the module within *Meaning and Form* (1979) model. The “apostrophe’s” genitive, according to Bolinger (1981, p. 232), was canonically used for human possessor or for non-human possessor when it was personified. The “of-phrase” construction got linguistic recognition in Middle English and started gradually substituting the “-s” method. The “-s” genitive is admittedly applied for relational purpose. The idea that George owns a car can be expressed either as (77) or as (78):

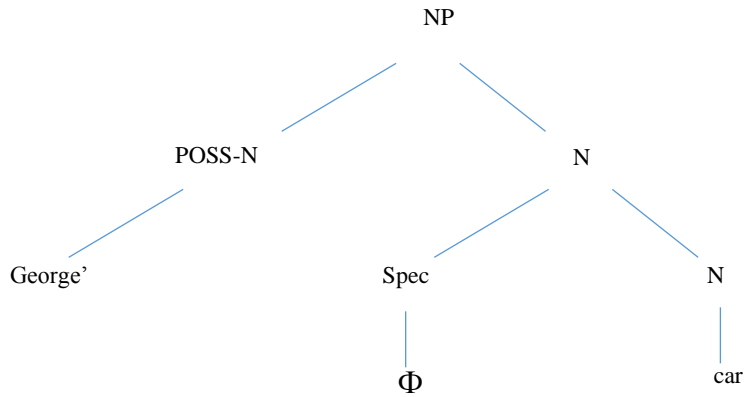
77. “George’s car.”

78. “The car of George.”

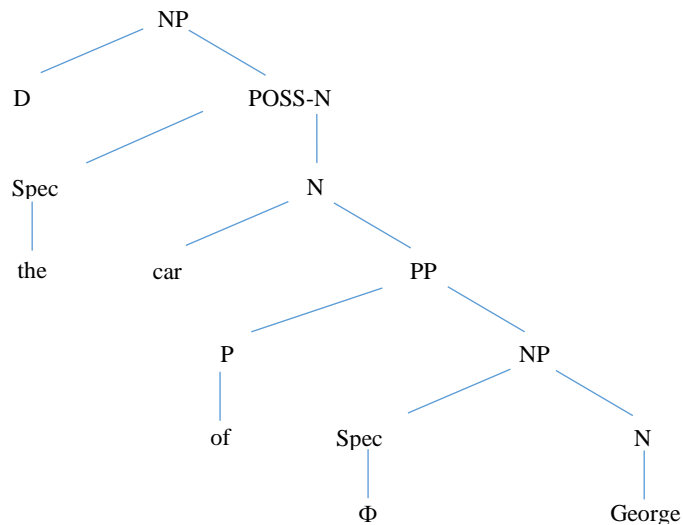
¹⁴ Cf means correct form.

Figure (v) and (vi) show the syntactic representations of (57) and (58):

v



vi



The Genitive “-s” morpheme, however, does not always describe the concept of ownership. In (79), “Harry’s” is simply the grammatical subject of the predicate “smoke.” It does not employ any idea of ownership.

79. “I disapprove of Harry’s smoking.”

For Bolinger (1981), the inflectional morpheme “-s” and “of-phrase” are semantic tools of emphasis. Consider the following examples.

80. “The car’s wheels”

81. “The wheels of the car”

82. “The car wheels”

In (80), the complement of the POSS-N “wheels” receives more focus whereas in (81) the reverse happens and the NP “the car” receives more emphasis. The compound form in (82) makes the NP “the car” unspecific. That’s, it might be a car with no wheels attached to it. Moreover, Non-living possessors which have partitive relationship with the possessed can be written in compound forms such as (83):

83. “the hotel room/the room of the hotel/*the hotel’s room”

However (84) is possible but (85) is not because there is no part and whole relationship between the two NPs.

84. “The train’s arrival”

85. *“The train arrival”

Furthermore, the use of possessive morpheme is restricted: It, according to Khampang (1973), could not be used for an inanimate NP:

(86). “*John broke the chair’s leg.”

Sentence (86) is marked ungrammatical because the POSS-NP “the chair” is not an animate NP.

This constraint, however, does not apply when the POSS-NP is perceived as capable of movement as can be seen in (87):

87. “John was waiting for the train’s arrival.”

Conclusions of the Study

Keeping in view the arguments presented in the paper, the following working conclusions can be derived.

1. X-bar module demonstrates the syntactic allocation of complements and adjuncts without specifying their semantic and discourse significance. A linguistic theory, however, is considered composite by definition and it must take into account non-linguistic factors. The module assumes a true linguistic flavor when it is read within the extra-linguistic factors of discourse context and the semantic principle of form versus meaning dichotomy.
2. Chomskyan module (X-bar) provide a syntactic description of linguistic structures but assign tertiary role to pragmatic considerations.
3. The syntactic order of adjuncts does not have seminal significance in X’ module. It, however, attains great importance in certain fossilized linguistic structures.
4. The module accurately highlights the genitive property of NPs. The syntactic description of POSS –NPs, however, does not entail the possible semantic constraints and the role of POSS-NP’s animacy.

5. The POSS-NP structure can be used as a template to validate Abney's DP Hypothesis.
6. The theory captures some important facts about the movement of the constituents. It, however, recognizes what constituent can move where instead of specifying the conditions under which it can move.

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