DP-Structure and Predication

Yeon-Seung Kim

1. Introduction

We find some peculiarities in the predication of adjectival adjuncts within a noun phrase. Safir(1987) presents some interesting examples showing the peculiarities. He also suggests, I think, a correct solution of them. His solution, however, does not go beyond the simple description of the data and does not develop into any systematic principle.

Many recent studies suggest that syntactic principles are maximally general, and that most of syntactic structure arises merely as a result of the interaction between lexical specifications and general principles. Accordingly this article is devoted to an explanation based on natural and systematic principles. If we admit DP-structure of a noun phrase and admit the difference in argument structure of different types of nominals, the seemingly peculiar phenomenon of adjunct modification will be accounted for naturally and systematically without any ad-hoc revision of the condition in predicate linking.

Section 2 presents some typical examples illustrating peculiarities of adjunct modification. This section also includes the brief summary of Safir's explanation. In section 3, to lay the groundwork for the discussion I first review how DP-structure is motivated and how nominals are divided. Under the groundwork a new analysis of the predication of adjectival adjuncts will be illustrated. Some problems related to the Chain Condition and barrier in movement within and out of a noun phrase will be investigated in section 4. Section 5 concludes that the restriction on adjunct modification within a noun phrase argues against NP-structure of a noun phrase in favor of DP-structure.

2. Some Peculiarities of Adjunct Modification

Safir's(1987) discussion begins with the following examples :

(1) a. the photograph of John$_i$ sick$_i$
    b. Bill$_i$'s photograph of John$_j$ sick$_{*i,j}$
    c. *John$_i$'s photograph sick$_i$

While the *of*-object *John* in both (1a) and (1b) can be modified by the adjectival adjunct, neither the agent prenominal genitive in (1b) nor the theme prenominal genitive in (1c) can be adjunct-modified. The contrast between (1a) and (1c) argues against the analysis of nouns like *photograph* in terms of movement, because in (1c) the movement analysis ought to permit a postnominal trace to license the adjunct predicate. This leads Safir to the idea that the prenominal genitive NP (=PGNP), in most cases, is base-generated, not moved from postnominal position.[1]

Now let us consider the following examples :

(2) a. John$_i$'s treatment of Bill$_j$ naked$_{i,j}$ started a riot.
    b. Joe$_i$'s discussion of this issue stoned$_i$ created confusion.

In (2a) the adjunct *naked* can modify *John* as well as *Bill*. In (2b), *Joe* is clearly modified by the adjunct, as there is no ambiguity possible. The only difference between (1) and (2) is the type of nominals. The nominals like *treatment* and *discussion* describe an event or process, whereas *photograph* does not.

Safir states at least a part of the restriction on PGNP modification as follows :

(3) An adjunct can modify a PGNP only if the nominal describes an event or process.

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[1] Safir(1987) thinks that PGNPs in ergative nominals (nominals derived from unaccusative verb) and passive nominals with a *by*-phrase move from internal argument position to PGNP position.

If (3) is generally a sufficient condition on adjunct modification, it predicts the following example to be grammatical, since examples like (4) clearly refer to a process or event. But (4) is ungrammatical under either the interpretation where *Bill* is Agent or where *Bill* is Theme.

    (4) *Bill$_i$'s treatment naked$_i$ started a riot.

To account for the ungrammaticality, Safir revises the modification condition (3) as the following :

    (5) The Adjunct Restriction
        An adjunct can modify a PGNP only if :
        a. the nominal describes an event or process and
        b. the nominal in question links an internal argument.[2]

Since the internal argument is not linked to postnominal position in (4), the adjunct modification is blocked by (5b). Safir's observation seems to be correct descriptively. However, the condition (5) still remains a stipulation. We must find a solution in which (5) is derived from independently motivated principles.

    Under the standard predication theory, it is widely accepted that there must be a mutual m-command relation between a subject and a predicate (Rothstein (1983),[3] Mcnulty (1988)). Even if we accept that the PGNP in (1c) is base-generated in the position, the impossibility of *Bill* in (1b) being modified by the adjectival adjunct is still to be clarified.

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  [2] In Safir's system (1986, 1987) two related notions "projected" and "linked" are somewhat different.
  ·(i) An arument is
      a. linked if it is mapped onto a structural position at DS.
      b. projected if it is syntactically non-inert at DS.
Safir distinguishes between the two notions to account for the peculiarity of an implicit argument. In his system an implicit argument is defined to be projected but unlinked (not occupying a syntactic position, but syntactically non-inert.)
 [3] Rothstein(1983) adopts a mutual c-command condition between a predicate and a subject. However her notion of c-command is equivalent to Chomsky's (1986) notion of m-command.

Under the NP-structure of a noun phrase, *sick* in (1b) m-commands *Bill* as well as *John*. The standard predication theory wrongly predicts *Bill* to be modified by *sick*. Now we are in a position to adopt one of two alternatives : one is to modify the widely accepted predication condition (a mutual m-command condition between a subject and a predicate) and the other is to reanalyse the structure of (1b) so that the condition may be retained. We prefer the latter to the former, adopting the DP-structure of a noun phrase suggested in recent studies.

3. Predication in DP

3.1. DP-structure

It is generally assumed that C selects IP and I selects VP. According to Abney (1986) these selections are the process by which functional elements inherit the descriptive content of a lexical category (i.e., VP). The fact that determiners occur exclusively in noun phrase suggests that there is selection between noun and determiner. If there is selection, we must assume that it is the determiner which selects NP because selection in Englsh is generally rightward.[4] By this reason Abney (1986) presents the following DP-structure :

(6)   DP ("noun phrase")
                    _____|_____
                DP   D̄
                           _____|_____
                        D   NP
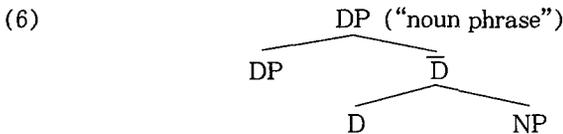
That is, in this structure, the determener is the head of the "noun phrase" and NP is the complement selected by the functional head D.

In this system it is correctly predicted that I and D have similar semantic functions. Since I funtionally selects VP and D functionally selects NP, I is predicted to have the similar function to that of D. VP provides a predicate, that is, a class of events, and tense or inflection locates a particular event in time. In Higginbotham's (1985) term, I θ-binds VP's event place. Like-

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[4] It is generally assumed that only maximal categories may be selected.

wise the function of the determiner is to specify the reference of a noun
phrase. The noun provides a predicate, and the determiner picks out a par-
ticular member of that predicate's extension.[5]

If we admit DP-structure of noun phrase and admits of the difference in
argument structure of different (at least three) types of nominals, the
peculiarities of adjunct modification indicated in section 2 will be explained
naturally and systematically.

3.2. Three Types of Nominals

Pustejovsky (1984) presents interesting examples in which different
types of nominals play a crucial role in extracting an element out of DP.[6]

(7) a. Which theory did you read Kripke's proof of ?
    b. Whose book did you read Bill's comments on ?
    c. The opera that we saw the Mary's performance of
    d. The city that I witnessed the enemy's destruction of

(8) a. *What did John eat Bill's loaf of ?
    b. *What did Mary drink John's bottles of ?
    c. *What is John reading Bill's play about ?

He distinguishes NPs that are clauselike in thematic structure from NPs
that are not. That is, the nominals in (7) are deverbal nominals which, I as-
sume, inherit the argument structure of the corresponding verb and thus
are clauselike. On the contrary, all the nominals in (8) seem to be concrete
nouns, not deverbal nominals. I assume that concrete nouns, unlike
deverbal nominals, do not have any θ-roles except a reference θ-role. If
this assumption is correct, the PGNP in (8) is not an external argument of
the head noun, whereas the PGNP in (7) is.

This simple division between concrete nouns and deverbal nominals does
not seem to be sufficient, because *play* in (8c) is not a concrete noun in a

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[5] Williams (1987a, 1987b) assumes that every N has a reference θ-role. Under
his assumption D is considered to θ-bind the reference θ-role.

[6] A suggestion explaining the difference in extraction is made in section 4.2.

strict sense. Rather it may be regarded as a deverbal nominal. We can find a solution from Grimshaw's (1988) division of deverbal nominals into process nominals and result nominals.
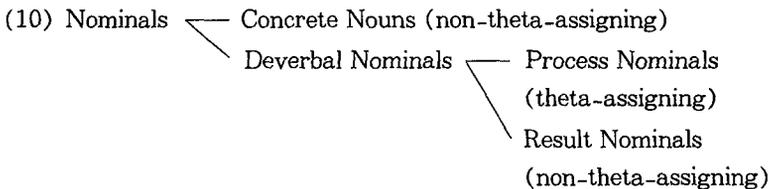
Grimshaw's central claim is that some nouns do, but others do not, project an argument structure. This difference between nouns with and nouns without argument structure corresponds to a semantic difference, often labelled the process/result distinction. Result nominals refer to the output of a process or event, process nominals refer to the process or event itself. For example the noun *examination* has two interpretations.

(9) a. The examination/exam was long.
    b. The examination/*exam of the patients took a long time.

While *examination* is ambiguous, the abbreviated form *exam* is unambiguously a result nominal, and does not occur in the same context as the process nominal.

Grimshaw argues that only process nominals are theta-assigning, whereas result nominals are non-theta-assigning. It means that the PGNP in a result nominal is not an argument, but a kind of modifier. *Play* in (8c) is a result nominal derived from a verb. Now the difference between (7) and (8) results from whether the nominal takes an argument or not.

After all, nominals can be classified into three types illustrated by the following diagram :

(10) Nominals ⟨— Concrete Nouns (non-theta-assigning)
               ＼ Deverbal Nominals ⟨— Process Nominals
                                          (theta-assigning)
                                       ＼ Result Nominals
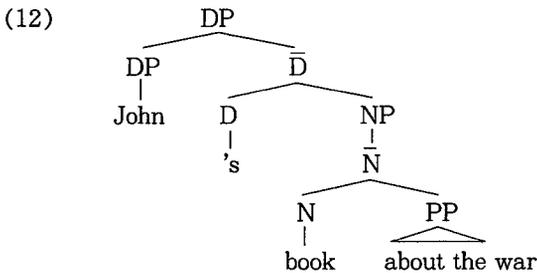   (non-theta-assigning)

3.2.1. Concrete Nouns

Book, picture, magazine, loaf, etc. belong to this category.

(11) John's book about the war.

Since concrete nouns are uniformly non-theta-assigning, *John* is not an external argument of *book*, rather a modifier. It receives a free thematic interpretation in relation with the nominal head *book*. In fact *John* can be interpreted as an author, possessor, and some other possible functions. If the assumption that *John* is not an argument of the noun is correct, the DS of (11) would be roughly as follows[7] :

(12)

```
                        DP
              _____/_____
           DP                  D̄
           |              ____/\____
         John          D            NP
                       |            |
                       's           N̄
                                 __/\__
                               N        PP
                               |      __/\__
                             book   about the war
```

John occupies the SPEC position of DP at DS, because it is not an external argument of the head noun.[8]

   A piece of evidence that concrete nouns are not argument taking, comes from their behavior in copular constructions.

   (13) a. The picture was of Bill. (modifier)
        b. *The destruction was of the city. (argument)

   (14) a. The book is by Bill. (modifier)
        b. *The destruction of the city was by the enemy. (argument)

[7] Abney(1986) presents a licensing condition restricting the generation of a node.
   (i) Every node must be uniquely licensed by entering into a sufficiently strong
       relation with independently licensed node.
That is, as long as there is not any strong relation with a head such as θ-assignment or modification, the SPEC position or complement position is not licensed. Therefore, in the case of concrete nouns the NP-SPEC position is not licensed at DS.

[8] The assertion that *John* is not an argument of *book* does not mean that *John* does not participate in situations the noun is used in : for a book to exist, it must be the case that someone made it up. Grimshaw (1988) argues that the relation of the modifier with the head noun is the property of the lexical conceptual structure (LCS), not of argument structure.

(15) a. The book is Bill's. (modifier)
      b. *The destruction of the city was the enemy's.[9] (argument)

Modifiers can be separated from a head by a copular. The grammaticality of (13a)-(15a) confirms that concrete nouns are not argument taking.

3.2.2. Process Nominals

(16) a. John's destruction of the city
      b. John's treatment of Bill

Williams (1987b) thinks that the nominalization of a verb includes the addition of an external argument of the head (i.e., +*ion*), which is schematized in the following equation :

(17) *destroy* $\langle$Ag, Th$\rangle$ + *ion* $\langle$R$\rangle$ $\Rightarrow$ *destruction* $\langle$R, Ag, Th$\rangle$

What is important in his idea is that deverbal nominals inherit the theta structure of the corresponding verb. Incidentally, the nominalization does not scatter the theta structure but only adds a reference θ-role. Accordingly the process nominals inherit the process/event reading of the verb.

In accordance with the θ-criterion the θ-roles (Ag, Th) must be assigned at DS.

(18)

                                 destruction (of) the city

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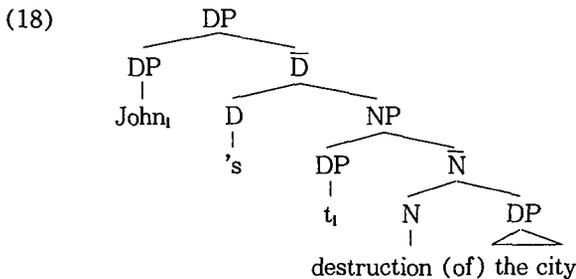
[9] These examples (13)-(15) are from Grimshaw (1988). She presents the examples as an evidence that *by*-phrases and the possessive are not a simple adjunct but argument-like elements. She refers to *by*-phrases and the possessive, however, as argument-adjuncts in that they are optional.

John occupies the NP-SPEC position because it is the argument of the nominal head, and it moves to the DP-SPEC position to receive a Case. Chomsky (1986) asserts that the sister relation holds between a θ-role assigner and a θ-role assignee.[10] If *John* occupies the DP-SPEC position at DS, it can't be assigned a θ-role because a maximal projection ($=$NP) intervenes between a θ-role assigner and a θ-role assignee.
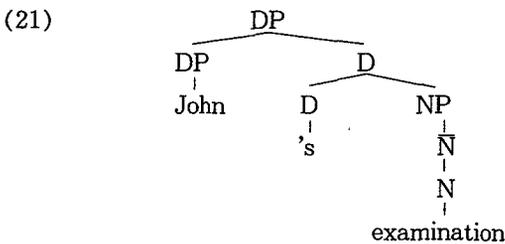
3.2.3. Result Nominals

Result nominals are derived from the verb, but do not inherit the theta structure of the corresponding verb, because they do not indicate the process or event of an action but the result of the action. Therefore result nominals do not contain any process reading as illustrated by the following examples :

(19) a. The assignment is to be avoided.
       b. *The constant assignment is to be avoided.

Constant requires a process reading but *assignment* is a result nominal lacking in any process reading, which leads to a conflict of meaning.

(20) John's examination was terrible.

The DS of (20) would be roughly as the following :

(21)

```
                    DP
         ┌──────────────┴──────┐
        DP                      D
         |               ┌──────┴──────┐
        John             D             NP
                         |              |
                        's              N
                                        |
                                        N
                                        |
                                  examination
```

[10] In DP structure and VP-internal subject analysis, the subjects of a clause and of a noun phrase will be θ-marked in the same fashion.
  (i) a. [$_{VP}$ DP [$_{V'}$ V ...]]
      b. [$_{NP}$ DP [$_{N'}$ N ...]]
This makes it simple to define the notion of sisterhood in θ-marking. The sisterhood is defined like the following :
  (ii) α and β are sisters if they are dominated by the same maximal projection.
See Fukui (1986) for the inadequay of Chomsky's (1986) definition of sisterhood.

John occupies the DP-SPEC position at DS because it is not an argument of the nominal head. *John* receives a free thematic interpretation. In fact *John* can be interpreted as agent, or theme, owner or even author of the nominal *examination*.

The assertion that result nominals do not have any thematic structure is confirmed by the following contrasting examples :

> (22) a. John's destruction of the city
>   b. the destruction of the city
>   c. *John's destruction

> (23) a. John's discussion of this issue
>   b. the discussion of this issue
>   c. John's discussion

What is crucial here is the contrast between (22c) and (23c). To account for the ungrammaticality of (22c) Safir (1987) presents a restriction on argument structure realization, which is summarized informally :

> (24) An external argument can't be realized without an internal argument being realized.

According to his explanation, *destruction* is a process nominal and thus *John* and *the city* are the arguments of the nominal. (24) correctly predicts (22c) to be ungrammatical because the external argument *John* is linked without the internal argument *the city* being linked. On the contrary *discussion* in (23c) may be regarded as a result nominal. *John* in (23c) is not an argument of the nominal head but rather a kind of adjunct, and thus the restriction (24) is not relevant.[11]
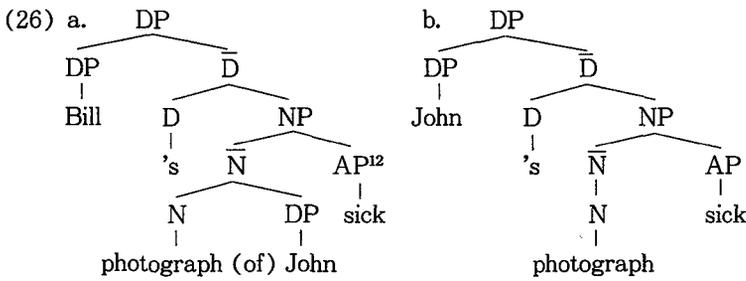
3.3. Predication of Adjectival Adjuncts

[11] Safir(1987) does not use the terms "process nominals" and "result nominals". The explanation given is the one reinterpreted in my analysis.

The adjunct modification within a noun phrase can be reanalysed under DP-structure. Reconsider the examples presented in section 2 repeated here for convenience.
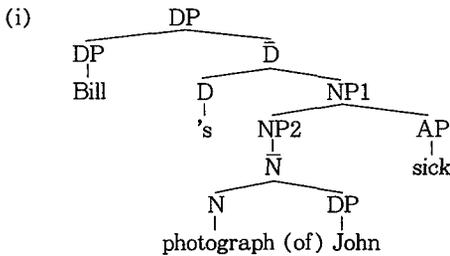
(25) (=(1)) a. the photograph of John sick
              b. Bill's photograph of John sick
              c. *John's photograph sick

The DS of (25b) and (25c) would be as in (26a) and (26b) respectively.

(26) a.

```
        DP
       /    \
    DP        D̄
    |        /  \
   Bill     D    NP
            |   /   \
           's  N̄     AP¹²
              /  \    |
             N    DP  sick
             |    |
        photograph (of) John
```

b.

```
        DP
       /    \
    DP        D̄
    |        /  \
   John     D    NP
            |   /   \
           's  N̄     AP
               |      |
               N     sick
               |
          photograph
```

Photograph is not theta-assigning and the PGNPs are not arguments and

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¹² In (26) the adjunct is posited as a daughter of NP. The other positions are also available ; the daughter of N', N'-adjoined position and NP-adjoined position. The former two positions do not raise any problem in predicate linking. However, the NP-adjoined position raises a problem in Chomsky's (1986) definition of m-command.

(i)

```
         DP
        /    \
     DP         D̄
     |        /    \
    Bill     D      NP1
             |     /    \
            's   NP2     AP
                 |        |
                 N̄       sick
                /  \
               N    DP
               |    |
         photograph (of) John
```

Chomsky defines m-command as follows :
   (ii) A m-commands B.
      iff A does not dominate B and every maximal projection that dominates A dominates B.
NP1 is a segment of NP and thus is not a maximal projection. After all, in the definition of m-command (ii), *sick* and *Bill* m-command each other.

thus occupy the DP-SPEC position at DS. In these structures the adjunct is
not in the mutual m-command relation with *Bill* in (26a) and *John* in (26b)
since a MP(=NP) intervenes between the predicate-linking elements.
Therefore *sick* in (26a) can modify only *John*, but not *Bill*.

I assume that *John* in (25c) is base-generated in the DP-SPEC position
even though it has a theme reading, because it is a modifier, not an argu-
ment. On the other hand, *the city* in *the city's destruction* is analysed to
move from postnominal position to the DP-SPEC position because it is an
argument.

Anderson(1978) also asserts that the modifier in PGNP position is base-
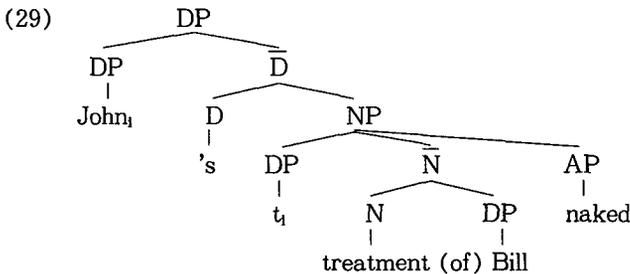generated, not moved.

(27) a. Yesterday's lecture will be given tomorrow.
    b. *The lecture yesterday will be given tomorrow.

The difference in grammaticality between the two sentences indicates that
the modifier *yesterday* in (27a) is not derived by movement from postnomi-
nal position. If the lecture were scheduled for yesterday but is being given
today we could call it *yesterday's lecture* but not *the lecture yesterday*.

Now let us consider why an adjectival adjunct can modify PGNP position
in the case of process nominals.

(28) (=(2)) a. John's treatment of Bill naked started a riot.
              b. Joe's discussion of this issue stoned created confusion.

The DS of (28a) is represented as in (29) :

(29)   DP
            ┌─────────────────┴──────────┐
          DP   D̄
          │   ┌────────────┴──────────┐
        John₁   D   NP
                            │   ┌─────────────┴──────────────┐
                           's   DP   N̄   AP
                                        │   ┌──────┴──────┐   │
                                       t₁   N   DP   naked
                                               │   │
                                          treatment (of)   Bill

In the case of process nominals, PGNP is an argument and thus occupies
the NP-SPEC position at DS. In (29) *naked* can modify both *Bill* and *John*,

because the structure satisfies the mutual m-command condition in predicate linking. The condition still holds at SS since the trace and the adjunct m-command each other.

Finally consider the case of result nominals, which are not theta-assigning.

(30) a. *John's examination nude was terrible.
　　 b. *Bill's treatment naked started a riot. (=(4))

If Safir's statement on argument realization (24) is correct, the nominals in (30) are result nominals, for the internal argument is not realized.[13] Accordingly, the relevant representation of (30) would be something like (31) :

(31)

```
(31)                    DP
              _____
            DP                     D̄
            |              _____
          John         D           NP
          Bill         |        _____
                      's     N̄            AP
                             |             |
                             N           nude
                             |           naked
                        examination
                        treatment
```

Since the adjuncts in (31) are dominated by NP, they cannot m-command the DP-SPEC position. The impossibility of adjunct modification in result nominals is accounted for naturally.

Now we are to review the adjunct restriction (5) in terms of our position. The first clause of the restriction (an adjunct can modify a PGNP only if the nominal describes an event or process) is derived from the fact that only process nominals are argument-taking and the other nominals are not. A PGNP occupies the NP-SPEC position at DS when it is an argument, and occupies the DP-SPEC position when it is a modifier. The second clause of the restriction is the result of the condition on argument realiza-

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[13] If *treatment* is a process nominal with a process reading as Safir asserts and *Bill* is a Theme, *naked* can modify *Bill*, because *Bill* is an internal argument in postnominal positiom at DS. This is a problem to be solved.

tion (24).

After all, if we admit the difference in argument structure of three types
of nominals and admit DP-structure, we can account for the seemingly pe-
culiar phenomenon of adjunct modification in a natural and systematic way
without any ad-hoc revision of the condition in predicate linking.

4. Further Implications

4.1. Movement within a Noun Phrase

Anderson (1978) asserts that NP-movement applies in both NP and S
nodes regularly. The advantage of this assertion is that it can be main-
tained that no ad-hoc condition on the domain of transformation is neces-
sary. Chomsky (1970) is the first advocate of such a movement.

(32) a. a photograph of John
   · b. John's photograph

According to Chomsky's account, the surface structure position of *John* is
derived by movement of that NP from postnominal position.

A different analysis has been proposed by Williams (1982), however,
who suggests that examples like (32b) are base-generated as they appear
on the surface. He observes that the prenominal genitive can bear various
thematic relations to the nominal head. For example, *John* could be the pho-
tographer or the owner of the photograph.

In my analysis, a modifier is base-generated as they appear on the sur-
face and internal argument in PGNP position is regarded as being derived
by movement. *John* in (32b) is base-generated because it is a modifier, not
an argument. The account predicts that only process nominals permits
movement of an internal argument. This prediction is borne out.

(33) a. the destruction of the city
     b. the city's destruction

(34) a. the examination of the patient
     b. the patient's examination

Destruction in (33) is a process nominal, and (33b) is derived by movement of *the city* from (33a), because *the city* is an internal argument. On the contrary *the patient* in (34b) is not an argument, but a modifier, as long as we accept Safir's statement (24) as a general condition on argument realization. In fact *the patient* bears various thematic relations to the nominal head ; theme reading, and even agentive reading. In my analysis *the patient* in (34b) is base-generated in PGNP position since it is a modifier.

My analysis of (33b) is different from that of Safir (1987). In his account *the city* is base-generated in PGNP position. Since PGNP position is an A-position (the position an external θ-role is assigned to), the movement to PGNP position from post-nominal position yields a Chain Condition violation.[14] Also he assumes that a *by*-phrase triggers some sort of dethematization of the external argument position of the nominal.

(35) the city's destruction by the enemy

Some sort of dethematization of the external argument position frees PGNP position as a landing site for movement. After all, in Safir's account, *the city* in (33b) is base-generated whereas *the city* in (35) is derived by movement from postnominal position.

Following examples make such an analysis dubious :

(36) a. the city's destruction by John PRO to prove a point
     b. the city's destruction PRO to prove a point

PRO in (36b) is considered to be controlled by some element (implicit argument), even without a *by*-phrase. We will not consider the control by implicit arguments, which itself includes a lot of problems to be clarified (for details, see Roeper (1987), Fukui (1986), Jaeggli (1985), Williams (1985,

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[14] S.-W. Kim(1987) seems to divide the subject position of an NP into two kinds : A-position and A'-position. In his system, the movement of *the city* does not yield a Chain Condition violation since it moves to the A'-position. However, this account seems to be problematic in that it can't rule out the examples like **yesterday's John's destruction of the city*. In DP-structure, since the functional head D is unique, such examples are not generated.

1987b), and Grimshaw (1988)). What is evident here is that the external argument remains somewhere to behave as a controller, not being dethematized.

Safir's problem does not arise in the DP-structure of a noun phrase. The internal argument moves to the DP-SPEC position (θ'-position), not to the NP-SPEC position (θ-position). Hence the movement does not yield a Chain Condition violation in any case. This allows us to analyse *the city* in (33b) and (35) consistently, that is, derived by movement. This means that movement within a noun phrase is possible without the NP-SPEC position being dethematized, which I believe provides a key to the solution for the problems related to the control by implicit arguments.

4.2. Extraction of an Element out of DP

Pustejovsky's (1984) examples repeated here for convenience cause a problem in Chomsky's (1986) definition of barriers.

(37) (=(7)) a. Which theory did you read Kripke's proof of ?
                b. Whose book did you read Bill's comments on ?
                c. The opera that we saw Mary's performance of
                d. The city that I witnessed the enemy's destruction of

(38) (=(8)) a. *What did John eat Bill's loaf of ?
                b. *What did Mary drink John's bottles of ?
                c. *What is John reading Bill's play about ?

As indicated in section 3.2, the difference between (37) and (38) results from whether the nominal takes an external argument, or a modifier. Under Chomsky's (1986) definition of barriers, however, the extraction out of DP must be allowed in all the sentences given above, because DP is L-marked in all the cases.

This section investigates how the difference between the external argument and the modifier is linked to the notion of barrier. I assume that only the saturated category (the maximal projection within which all the theta positions of a lexical category are satisfied) is qualified as a barrier.[15]

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[15] A new definition of barrier will be given in Y.-S. Kim (in preparation), "A Study on Barriers in English : Categorial Saturation and D-Linking".

Higginbotham(1985) assumes that all lexical categories contain non-overt argument positions in their θ-grid, and posits an Event position in all verbs.

(39) a. *walk* ⟨Event, Agent⟩
     b. *kick* ⟨Event, Agent, Patient⟩

As indicated section 3.1, I and D have the same function. The function of I (or tense) is to locate a particular event in time, and that of D is to specify the reference of a noun phrase. In Higginbotham's term, I θ-binds VP's event place and D θ-binds NP's reference place. That is, Event and Reference θ-roles are satisfied through the θ-binding by I and D respectively. On the contrary, thematic θ-roles (Ag, Th,···)are satisfied by being discharged to a syntactic position (θ-marking).

If Higginbotham's assumption is correct, Williams's nominalization equation (17) will be revised like this : [16]

(40) *destroy* ⟨E, Ag, Th⟩ + *ion* ⟨R⟩ ⟹ *destruction* ⟨R, E, Ag , Th⟩

The nominalization principle (40) is true of process nominals, but not of result nominals, because only the former inherits the argument structure of the corresponding verb, which is supported by the fact that only the former retains a process or event reading. The argument structure of *destruction* and *play* would be something like (41a) and (41b) respectively :

(41) a. *destruction* ⟨R, E, Ag, Th⟩
     b. *play* ⟨R⟩

The thematic θ-roles (Ag, Th) of *destruction* in (41a) are satisfied through θ-marking, and the Reference θ-role is satisfied through θ-binding by D. However, the Event θ-role is not satisfied within DP, because there is no INFL to θ-bind it. After all [$_{DP}$ *the enemy's destruction of t*] is not a saturated category and thus not a barrier, which makes it possible to extract an el-

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[16] This idea was suggested by S.-W. Kim (personal communication).

adjectival adjunct can modify only a PGNP of the nominal with an event or process reading. The mutual m-command condition in predicate linking need not be revised in this analysis.

Second, the acceptance of DP-structure does not cause any problems in movement to PGNP position from postnominal position. Since the movement is to the DP-SPEC position, which is a θ'-position, no Chain Condition violation happens.

Third, the classification of nominals according to the difference in argument structure enables us not only to capture the seemingly peculiar phenomenon of adjunct modification, but also to explain the difference in extraction of an element out of DP. Under the revised notion of barrier the DP of a process nominal is not a barrier to movement since the Event θ-role of the nominal is not satisfied and thus the DP is not a saturated category. Since the other nominals do not contain an Event θ-role, the DP of the other nominals is predicted to be a barrier.

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ABSTRACT

DP-Structure and Predication

Yeon-Seung Kim

   This paper purports to derive Safir's (1987) observation (an adjunct can
modify a prenominal genitive NP (PGNP) only if the nominal describes an
event or process) from independently motivated principles. The acceptance
of DP-structure and the classification of nominals into three types make it
possible to achieve the purpose. Only the PGNP of process nominals is an
argument occupying the NP-SPEC position at DS whereas the PGNP of
other nominals is a modifier occupying the DP-SPEC position. This division
enables us to explain why an adjectival adjunct can modify only a PGNP of

the nominal with an event or process reading without any *ad-hoc* revision of the condition in predicate linking.

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서울시 관악구 신림동
서울대학교 인문대학
영어영문학과