.

Three Related Phenomena on Nominal Structures*

Yoshio Endo

Shinji Saito

Daisuke Inagaki

0. Introduction

We will discuss nominal structures through an examination of three superficially different but in fact intricately connected phenomena: θ-marking property, thematic inheritance, and control within NPs.

We will chiefly deal with three types of nominals; -ion forms, -ing forms and picture nouns, such as the followings.

(1) a. John's destruction of the toy

　　b. John's painting of the church

　　c. John's picture of Mary

These nominals show different behavior with respect to passivization, control, and "Theme requirement". In (2) are the passive forms of each type. And the examples in (3) show whether rationale clauses can be controlled by subjects in the specifier positions. The examples in (4) illustrate the possibility of Theme appearing without Agent.

(2) a. the toy's destruction by John

　　b. the church's painting by John

　　c. Mary's picture by John

(3) a. John's destruction of the toy to prove a point

　　b. John's painting of the church to prove a point

　　c. *John's picture of Mary to prove a point

(4) a. John's destruction *(of the toy)

　　b. John's painting (of the church)

　　c. John's picture (of Mary)

These facts are summarized in the following table.

	passivization	control	Theme requirement
-ion	O.K.	O.K.	O.K.
-ing	O.K.	O.K.	*
p.n.	O.K.	*	*

To outline what follows: in section 1, starting with the discussion of Randall's (1984) treatment of θ-marking in NP, we will point out some difficulties with her analysis, and explore the exact property of θ-marking. In section 2, we will be concerned with thematic inheritance in the hope of discovering a principle which accounts for the systematicness of inheritance. Section 3 will be devoted to examining control relation within NPs.

1. θ-marking Property

Randall (1984) claims that internal θ-marking relation obtains in such an [-affect] nominal as the discussion of the topic. Based on various empirical data, it becomes clear that this is not the case. For instanse, it has long been held that extraction out of argument phrase is allowed while extraction out of adjunct phrase is not, as exemplified in the contrast such as the following:

(5) a. Who did you see the king of?
   b. *Who did you see the king from?

It is worth noticing that this contrast can be seen in the three different nominals in question. In (6) are -ion forms, in (7) are -ing forms, and picture nouns are in (8).

(6) a. Which toy do you know the destruction of?
   b. *Which topic do you know the discussion of?

(7) a. Which city did you witness the painting of?

   b.??Which city did you witness the paintings of?

(8) a. Who did you take a picture of?

   b.??Who did you take pictures of?

How can we explain these clear contrast? Here let us assume that [+affect] nominals are committed to θ-marking, and that, on the contrary, [-affect] nominals are not committed to θ-marking and there is just a link between elements (PPs in this case) and θ-grid of the [-affect] nominal head. On this assumption, the fact that the PPs following [-affect] nominals behave as adjunct under the extraction operation can be quite naturally explained.

Assuming with Chomsky (1981) that passive nominals such as the city's destruction by the enemy involves Movement operation, we come to the conclusion that [-affect] nominals resist passive nominals because extraction out of non-θ-marked adjunct phrase is prohibited, exemplified by the following pairs of sentenses in which the (a) examples represent [+affect] nominals and the (b) examples represent [-affect] ones:

(9) a. the toy's destruction by John

   b.*the topic's discussion by John

(10) a. the church's painting by John

    b.*the church's paintings by John

(11) a. Mary's picture by John

    b.*Mary's pictures by John

We can extend our θ-marking system into external θ-marking, which has deduced as a natural consequence new data with respect to asymmetry in binding possibility as in:

(12) a.*They saw John's pictures of each other.   (John=agent)

    b. They saw John's pictures of each other.   (John=possessor)

To sum up this section, we have tried to substantiate our claim that [-affect] nominals are not commited to θ-marking and there is just a link between elements and θ-grid of the [-affect] nominal head, while [+affect] nominals involve θ-marking, by providing examples of how each of the three types of nominals behaves under movement operations. From this perspective, the asymmetry observed in the pairs of sentence above in this section can be ultimately reduced to one difference, i.e, whether each nominal has the [+affect] or the [-affect] feature, more to say, whether the nominal head is V or N.

2. Thematic Inheritance

Randall (1984) proposes a condition on argument structure alternation, the Thematic Inheritance Principle, along with the θ-Hierarchy, to account for the systematicness of argument structure alternation under affixiation. In (13) is the θ- Hierarchy; in (14), the Thematic Inheritance Principle.

(13) θ-Hierarchy : Theme

Agent

Instrument, Sourse, Goal, etc.

(Randall 1984: 76)

(14) Thematic Inheritance Principle

A category-changing operation which blocks the assignment of a θ-role blocks the assignment of all θ-roles lower on the θ-Hierarchy.

(ibid: 77)

In terms of this principle we can account for the fact that the affixes which block the Agent from being assigned also block any other thematic roles from being assigned, exemplified by the following examples (15) and (16).

(15) a. the flyer of the kite (*by experts)

b. the flyer of the kite (*to France)

(16) a. the plane is flyable (*by experts)

b. the plane is fly<u>able</u> (*with a computer)

The <u>result</u> -<u>ing</u> nominals which block Themes apparently block the inheritance of any θ-roles lower on the hierarchy, as her principle (14) predicts. In contrast, the <u>process</u> -<u>ing</u> forms do not block any thematic roles. In (17) and (18) are the examples of this contrast.

(17) a. The cooking (*of Indian food) (*by inexperienced chefs) (*with special techniques) was starchy.

b. The cooking (of Indian food) (by inexperienced chefs) (with special techniques) takes a long time.

(Randall 1984: 75)

(18) a. The typing (*of manuscripts) (*by secretaries) (*on word processors) is on the desk.

b. The typing (of manuscripts) (by secretaries) (on word processors) takes a long time.

(ibid: 76)

However further observation of data reveals that Thematic Inheritance Principle is quite iadequate. In the examples below, operations which block the assignment of a θ-role clearly permit lower θ-roles to be assigned.

(19) the destroy<u>er</u> of the toy (*by John) (with a hammer)
(20) the creat<u>ion</u> (*of the statue) (by John) (with a hammer)
(21) the employ<u>ee</u> (*of John) (at IBM) (from Japan)
(22) the pay<u>ee</u> (of money) (*to John) (at IBM)

Just to summarize at this point, Randall's Thematic Inheritance Principle applies only to some cases of inheritance of θ-roles under affixation and there exist examples which cannot be accounted for by her principle and suggest the need of another condition on thematic inheritance.

It has been held that the Theme requirement can be seen in the well-known fact that Agent cannot appear without an internal argument (Theme). This holds for examples like (23) and (24).
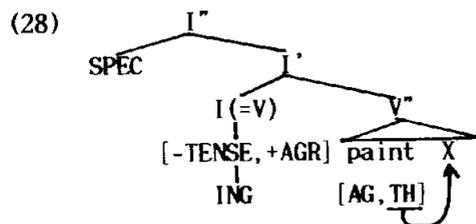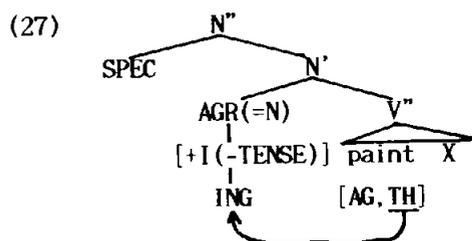
(23) a. John's refusal of the offer

b. *John's refusal

(24) a. the enemy's destructionof the city

b. *the enemy's destruction

The Theme requirement is not quite precise enough. One other set of data is relevant to the finer modification. Consider the cases of (25), cases of result -ing nominals, which contrast with process -ing nominals in (26) in the possibility of occurrence of Agent roles without Theme roles.

(25) a. The painting of the church by John is very expensive.

b. the painting by John is very expensive.

(26) a. The painting of the church by John was witnessed.

b. *The painting by John was witnessed.

Assuming with Abe (1986) that result and process nominals have the internal structures (27) and (28) respectively, it follows that while in the former case the Theme role of θ-grid should be assigned to the head of NP, i.e. AGR; in the latter it should be assigned to the complement position of V, as illustrated in the following structures.

(27)

```
                N"
          SPEC      N'
       AGR(=N)        V"
     [+I(-TENSE)]   paint  X
         ING        [AG,TH]
```

(28)

```
                I"
          SPEC      I'
        I(=V)         V"
    [-TENSE,+AGR]   paint  X
         ING        [AG,TH]
```

Taking these matters into account, we need a slight revision of the Theme requirement; namely, Agent cannot appear in argument position without Theme; conversely, Agent can appear in adjunct position when Theme role is marked to

The head of NP, as in the case of result nominals. Notice that in the latter case there is just a link between elements in PP and θ-grid of the head V. then the Theme requirement can be reformulated as in (29).

(29) THEME Requirement
    The external argument cannot appear in argument position
    without the internal argument.

Further evidence for this revised requirement comes from the examples as follows.

(30) a.*The drawing by John was witnessed.
     b. The drawing by John is very expensive.

(31) a.*The cooking by John was witnessed.
     b. The cooking by John was starchy.

(32) a. the destroyer of the city
     b.*the destroyer

What emerges from the discussion in this section, then, is that Randall's Thematic Inheritance Principle is unsatisfactory for explaining thematic inheritance, and that our revised Theme requirement should be introduced to account for a range of data bearing on thematic inheritance.

3.Control into NP
    Finally, we will briefly examine control relation within NPs. We will show that Agent role of derived nominals such as destruction and that of picture noun type nominals such as picture, story are controlled differently; the former is accessible through PRO control, and the latter through implicit argument control. Evidence for this claim comes from the contrast between (33) and (34).

(33) a. John, enjoyed PRO, preparation of his funeral.

    b. John enjoyed his own funeral's preparation.

<div align="right">(Roeper (1987))</div>

(34) a. They, told stories about each other,.

    b. They, told each other's stories t .

<div align="right">(Williams (1985))</div>

In (33a) there is a clear reading that John prepared his funeral himself, but this cotrolled reading is lost if preposing of <u>his</u> <u>funeral</u> applies, suggesting that there is a PRO in the specifier position. In the case of picture noun type nominals, on the other hand, the controlled reading that they are tellers of stories remains unchanged, regardless of whether preposing of <u>each</u> <u>other</u> occurs or not.

Then let us consider other differences between the two nominal types. Note, first, that in derived nominals Agent cannot appear without Theme as in (35). But this contrast is not seen in the case of picture noun type nominals as in (36).

(35)*the enemy's destruction   (enemy=Agent)

(36) John's picture   (John=Agent,Theme,or Possessor)

Second, rationale clauses are found in derived nominals, while picture noun type nominals do not allow them;

(37) Rome's destruction of the city to make a point

(38)*John's story about Mary to offend her

Our breif examination will lead us to the conclusion that the two differences between derived nominals and picture noun type nominals and the asymmetry observed in (33) and (34) are superficially different but in fact derived from only the difference of values of the parameter [±specification of an external argument] which the two nominal types fix.

4.Summary

To summarize, we have made clear the following three points: (i) While [+affect] nominals are committed to θ-marking, [-affect] nominals involve θ-linking. (ii) The Theme requirement should be revised. (iii) There are two types of control into NP.

NOTES

* This paper is base on our research report presented at the Seventh Annual Meeting of the Tsukuba English Linguistic Society. We are very grateful to Wayne Lawrence for kindly acting as a informant.

REFERENCES

Abe, J. 1986. "The Behavior of Anaphors in Gerands," Tsukuba English Studies 5.

Akimoto, S. 1986. "Countability and Idiomaticity in Deverbal Nouns," The Rising Generation. CXXXII. 8.

Amritavalli, R. 1980. "Expressing Cross-Categorial Selectional Correspondences," Linguistic Analysis 6:3.

Anderson, M. 1987. Noun Phrase Structure. Doctoral dissertation. University of Connecticut.

Cattell, R. 1984. Syntax and Semantics 17. New York: Academic Press.

Chomsky, N. 1987. "Remarks on Nominalization," Jakobs, R.A. and Rosenbaum, P.S.(eds.) Readings in the English Transformational Grammar. Ginn, Waltham, Massachusetts.

-----1981. Lectures on Government and Binding. Dordrecht: Foris.

-----1985. Knowledge of Language. New York: Praeger.

-----1986. Barriers. MA: MIT Press.

Fiengo, R. 1974. Semantic Conditions on Surface Structure. Doctoral dissertation. MIT.

Fukuchi, H. 1979. "Constraining Extraction Transformation in X'-Theory," Studies in English Linguistics 7. Tokyo: Asahi Press.

Higginbotham, J. 1983. "Logical Form, Binding and Nominals," Linguistic Inquiry

14.3.

Inoue, K. et al. 1985. Meishi. Tokyo: Kenkyu-sha.

Iwakura, K. 1982. "Government Theory and Derived Nominal Constructions," Linguistic Analysis 10.

Iwasawa, K. 1983. "A constraint on Passive Nominals in English," Tsukuba English Studies 2.

Jackendoff, R. 1984. "A Deep Structure Projection Rule," Linguistic Inquiry 5.

-----1977. X'-Syntax. MA: MIT Press.

Kayne, R. 1984. Connectedness and Binary Branching. Dordrecht: Foris.

Lasnik, H. 1986. "Subjects and the Theta Criterion." mimeo. The University of Connecticut.

Nakau, M. 1986. "Imiron no genri (23)," The Rising Generation. CXXXII. 1.

Nishigauchi, T. 1984. "Control and the Thematic Domain," Language 60:2.

Oehrle, R.T. 1975. The Grammatical Status of the English Dative Alternation. Doctoral Dissertation. MIT.

Oka, T. 1986. "Inherent Case," Tsukuba English Studies 5.

Randall, J.H. 1984. "Morphological Complementation," mimeo, Northern University.

Roeper, T. 1987. "Implicit Arguments and the Head-Complement Relation," Linguistic Inquiry 18.

Saito, S. 1986. "On Control into NP," Tsukuba English Studies 5.

Sano, M. 1981. "A Constraint on Extraction Operation," Descriptive and Applied Linguistics 15.

Walinska, H.H. 1984. "On Two Types of Derived Nominals," Lexical Semantics CLS.

Williams, E. 1982. "NP-Cycle," Linguistic Inquiry 13.

-----1985. "PRO and Sbject of NP," Natural Language and Linguistic Theory 3:3.