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MULTIPLE NOMINATIVE CONSTRUCTIONS AND THEIR IMPLICATIONS*

1 INTRODUCTION

The goal of this paper is to argue that "θ-role assignment" involves the operation Agree. Particularly, the paper will show that thematic arguments enter into agreement with θ-assigners, with its focus centered on Japanese multiple nominative phenomena including possessor raising constructions (PRCs) and major subject constructions (MSCs).

This introductory section outlines issues that will be discussed in later sections. Let us start with two forms of possessor raising (PR): "nominative PR" and "transitive PR."[1] The examples given in (1) illustrate nominative PR in Japanese:[2]

(1) a. sono hon$_j$-ga (kanzenni) [e_j hyoosi]-ga yabureta
that book-Nom completely cover-Nom tore
'That book's cover became torn completely.'

Cf. [[sono hon]-no hyoosi]-ga yabureta
that book-Gen cover-Nom tore

b. boku-ga John$_j$-ga [e_j atama]-ga tatak-e-na-i
I-Nom J.-Nom head-Nom hit-can-Neg-Pres

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[1] Japanese allows inalienable possession constructions of a different type from what we are concerned with here.

(i) a. Yamada-san-ga asi-no hone-o ot-ta
Y.-Mr.-Nom leg-Gen borne-Acc break-Past
'Yamada-san broke his leg.'

b. Yamada-san-ga kami-o kit-ta
Y.-Mr.-Nom hair-Acc cut-Past
'Yamada-san had his hair cut.'

In the above examples, the predicates are transitive verbs. As will be clear later, our system of θ-role assignment does not apply to cases like (i). See Takezawa (1991) for the type of inalienable possession construction.

[2] The abbreviations used here are as follows: Acc = accusative, Caus = causative, Cl = classifier, Cop = copula, Dat = dative, Foc = focus, Gen = genitive, Hon = honorific, Neg = negation, Nml = nominalizer, Nom = nominative, Pl = plural, Pol = polite form, Pres = present, Past = past, Q = question, Rel = relative marker, Prog = progressive, Stat = stative, Top = topic.

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'I cannot hit John's head.'

Cf. boku-ga [John-no atama]-ga tatak-e-na-i
I-Nom J.-Gen head-Nom hit-can-Neg-Pres

c. Aiko-ga kono hon$_j$-ga [e_j naiyoo]-ga wakar-ana-i
A.-Nom this book-Nom content-Nom understand-Neg-Pres
'Aiko does not understand the content of this book.'

Cf. Aiko-ga [[kono hon]-no naiyoo]-ga wakar-ana-i
A.-Nom this book-Gen content-Nom understand-Neg-Pres

Examples (1b) and (1c) come from Tada (1992: 99) and Morikawa (1993: 29), respectively. In (1a), the so-called inalienable possession (or whole-part) relation is established between the DP *sono hon* 'that book' and the DP *hyoosi* 'cover.' I call such a "raised" possessor DP an *ex(ternal)-poss(essor)-DP*, and the possessor that is contained in the host DP an *int(ernal)-poss(sessor)-DP*. Clearly, the ext-poss-DP and the possessed DP do not form a constituent, but the int-poss-DP and the possessed DP do.[3] I use the terminology "possessor raising" in a theory-neutral sense; this terminology does not necessarily imply that an ext-poss-DP literally moves out of the associated possessed DP. Note here that in (1), the possessed DP as well as the ext-poss-DP is marked with nominative case. I refer to this class of PR as nominative PR. On the other hand, PR may take place in such a way that the possessed DP receives the objective case marking from the verb that governs it. This class is called "transitive PR." The case marking of the ext-poss-DP varies from language to language. The ext-poss-DP and the possessed DP agree in case (at least in active sentences) in Korean. The ext-poss-DP bears the dative case marking in some Romance languages and Hebrew, and the special *ba* marking in Mandarin. Observe (2):

(2) a. John-i Mary-lul phal-ul ttayryessuta
John-Nom Mary-Acc arm-Acc hit
'John hit Mary's arm.' (Korean)

b. Je lave les ceveux a Pierre
I wash the hair to P.
'I wash Pierre' s hair.' (French)

c. Les revisé los informes a los estudiantes
to-them I-revised the reports to the students
'I revised the students' reports.' (Spanish)

d. ha-yalda kilkela le-Dan et ha-radio
the-girl spoiled to-D. Acc the-radio
'The girl broke Dan's radio.' (Hebrew)

e. wo ba Lisi dashangle shou
I BA Lisi hurt hand

[3] An adverb can be placed between the ext-poss-DP and the possessed DP as in (1a), but cannot between the int-poss-DP and the possessed DP as in (i):

(i) * sono hon-no kanzenni hyoosi-ga yabureta
that book-Gen completely cover-Nom tore
'That book's cover became torn completely.'

'I hurt Lisi's hand.' (Mandarin)

(2a, b, e) are cited from Yoon (1990: 502) while (2c, d) are cited from Landau (1999: 3).

Note here that in Japanese, examples paralleled with (2) are somewhat degraded due to the well-known double *o* constraint, which, roughly put, excludes multiple occurrences of DPs marked with accusative *o* in a simple clause (Shibatani 1973, Harada 1973, Kuroda 1978, and other references cited in Miyagawa 1999). Sentences like *Taroo-ga Hanako-o atama-o nagutta* (T.-Nom H.-Acc head-Acc hit-Past 'Taro hit Hanako's head') are judged to be ungrammatical or mildly deviant.[4] In what follows I concentrate on multiple nominative examples like (1) (i.e. nominative PRCs). This is partly because we can avoid analytical complications that stem from double *o* effects (see note 4), and partly because multiple-nominative PRCs, rather than transitive PRCs, bring to light a number of interpreting properties of the grammar of PR.

Nominative PRCs in Japanese share several properties with transitive PRCs from languages such as French. (3) (drawn from Yoon 1990: 505) shows that the objective-marked possessed DP does not successfully undergo such extraction operations as scrambling, topicalization, and relativization in Korean (and Mandarin). In addition, the possessed DP resists non-restrictive modification, as presented in (4–5):

(3) a. * John-i Mary-lul cap-un son
J.-Nom M.-Nom catch-Rel hand
Lit. 'the hand which of Mary John catches.' (Korean, Relativization)

b. ?* son-un John-i Mary-lul capassta
hand-Top J.-Nom M.-Acc caught
Lit. 'Hand(Top), John caught Mary.' (Topicalization)

c. * son-ul John-i Mary-lul capassta
hand-Acc J.-Nom M.-Acc caught
Lit. 'Hand(Acc), John caught Mary.' (Scrambling)

(4) a. ?* John-un Mary-lul yeppun son-ul capassta
J.-Top M.-Acc pretty hand-Acc caught
'John caught Mary's pretty hand.'

b. John-un Mary-lul oyn son-ul capassta
J.-Top M.-Acc left hand-Acc caught
'John caught Mary's left hand.'

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[4] In transitive PRCs, the double *o* effects seem to be relatively mild. This type of judgement is more easily produced when one compares the effect in (i) with those manifested by multi-accusative causatives in (ii):

(i) ?? Taroo-ga Hanako-o atama-o nagut-ta
T.-Nom H.-Acc book-Acc hit-Past
'Taro hit Hanako's head.'

(ii) Taroo-ga Hanako{*-o/-ni} hon-o yom-ase-ta
T.-Nom H.-Acc/-Dat book-Acc read-Caus-Past
'Taro made Hanako read a book.'

For such "weak" double *o* effects, see Kageyama (1993), Saito and Hoshi (2000), Hiraiwa (2000).

(Korean, modification)

(5) a. * Tu lui as photographié la belle bouche
You her have photographed the beautiful mouth
'You photographed her beautiful mouth.'

b. Tu lui as photographié la jambe droite
You her have photographed the leg right
'You photographed her right leg.'

(French, modification)

(4a, b) are drawn from Kayne (1975: 164–65), and (5a, b) from Yoon (1990: 504). The properties presented in (3–5) hold in Japanese nominative PRCs as well. This is illustrated by (6a–c) and (7):[5]

(6) a. * [[Taroo-ga oreta] ude]
T.-Nom break-Past arm
Lit. 'the arm which of Taro broke' (Japanese, Relativization)

b. ??? ude-wa Taroo-ga oreta
arm-Top T.-Nom break-Past
Lit. 'Arm(Top), Taro broke.' (Topicalization)

c. ?* ude-ga Taroo-ga oreta
arm-Nom T.-Nom break-Past
Lit. 'Arm(Nom), Taro broke.' (Scrambling)

(7) a. Taroo-ga (?* hutoi) ude-ga oreta
T.-Nom pudgy arm-Nom break-Past
'Taro's pudgy arm broke.'

b. Taroo-ga [migi-no ude]-ga oreta
T.-Nom right-Gen arm-Nom break-Past
'Taro's right arm broke.'

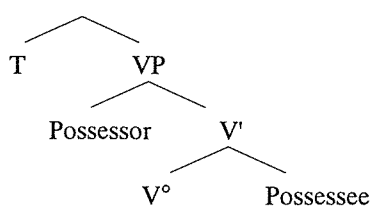
(Japanese, modification)

Despite apparent differences in case marking, nominative PRCs from Japanese share several respects with transitive PRCs from other languages.

Now let us outline empirical issues that will be considered in later sections.

• We will discuss a well-known θ-theoretic problem manifested by PR. Suppose now that the PR sentences we have seen in (1) and (2) have in common the following structure:

(8)



[5] See Yoon (1990) for a proposal. In passing, it seems that the grammaticality judgements for topicalization/scrambling cases are less sharp, whereas those for relativization cases are clear.

When V θ-marks the possessee (i.e., the possessed DP is not an adjunct[6]) and does not lexically select the possessor, a question naturally arises: How is the possessor θ-marked? I call this the θ-theoretic problem. Within the generative paradigm, there has been two approaches to the problem. One approach holds that the ext-poss-DP moves from within the possessed DP. This hypothesis offers a simple solution by arguing that the former is θ-marked within the host DP (Sakai 1994, Ura 1996, Landau 1999, Hiraiwa 2000). The other approach argues that the ext-poss-DP is base-generated in the VP domain, and maintains the idea that the base-generated ext-poss-DP is thematically licensed by being associated with an empty position contained by the possesee, with a wide variety of implementations (Guéron 1985, Cheng and Ritter 1987, Borer and Grodzinsky 1986, Yoon 1990, Vergnaud and Zubizarreta 1992). Our proposal will argue for the latter approach in order to offer a solution to the θ-theoretic problem.

• However, in Japanese, there is a matter to be considered before the θ-theoretic problem is examined. We have to prove that the θ-theoretic problem is a real one in Japanese. Surely, Japanese examples like (1a–c) display some cross-linguistically common properties of PR, but it is not uncontroversial whether we can regard nominative PRCs as a reflex of the structure (8). This is so because Japanese has another kind of multiple nominative construction, which obviously involves no possession relation, and there is the possibility that examples like (1) are special examples of this kind of multiple nominative construction. Observe (9) ((9b) is cited from Sugimoto (1986: 248)):

(9) a. [kono heya]-ga gakusei-ga yoku benkyoosuru
this room-Nom student-Nom well study
'It is in this room that students study hard.'

b. [kono zisyo]$_j$-ga hotondono gakusei-ga e_j riyoosuru
this dictionary-Nom most students-Nom use
'It is this dictionary that most people make use of.'

I refer to examples like (9) as *major subject constructions* and the outermost nominative subject as a *major subject*, though the terminology is used in several different ways (cf. Kuroda 1978, 1986, 1988, Tateishi 1994, Koizumi 1994, 1995, and Ura 1996). In the past literature, it has been argued that the major subject is base-generated in the TP-adjoined position or the (outer) Spec,TP, and is licensed as the "subject" of a "sentential predicate" which contains the logical subject under a "predication" relation (Saito 1982, Takezawa 1987, Heycock 1993, Mihara 1994, Tateishi 1994, Koizumi 1994, 1995, Ura 1996, and Doron and Heycock 1999). Doron and Heycock (1999: 85–87, 88) explicitly argue that the semantic role that major subjects assume is some non-thematic argument role. What is important here is that if the process of "predication" is available to the grammar, the θ-theoretic problem would lose its content as far as Japanese nominative PR is concerned. This is so because there is no *a priori* reason to think that the ext-poss-DP, unlike the major

[6] See Maling and Kim (1992) for some arguments.

subject, is not licensed in that way. On this view, as Doron and Heycock (1999: 82, fn. 11) note, it would not be important at all to tell PRCs from MSCs. I will offer empirical reasons for distinguishing between the two constructions to show that the θ-theoretic problem should be taken seriously even if predication is operative.

• A third issue we are concerned with is a subject/object asymmetry in PR. The structure (8) presupposes that the possessed DP is located in the complement of V. It is often claimed that cross-linguistically, the possessor is easily associated with objects of transitive predicates and subjects of unaccusative predicates but not easily with external arguments (see, for example, Baker 1988). The generalization about the subject/object asymmetry, if correct, requires an account. It is true, however, that we find examples in which a possession relation appears to be associated with external arguments in Japanese and Korean (Choe 1987, Ura 1996). I will argue that the possibility of possessor raising out of external arguments (PR out of EA) in Japanese is merely apparent but sentences of the type should be analyzed to be MSCs.

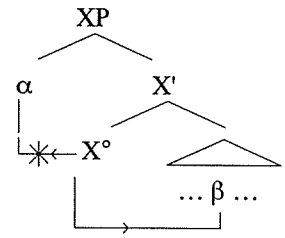
This paper is organized as follows: Section 2 introduces theoretical assumptions, in particular, concerning feature checking. Section 3 presents information MSCs in Japanese. Section 4 shows that the problem about θ-marking of the ext-poss-DP needs to be given a solution and that the subject/object asymmetry requires an explanation. First, I point out unnoticed data involving relativization, which demonstrates there are differences between PRCs and MSCs. Second, I try to derive the differences by proposing that the non-interrogative Complementizer cannot assign Case and attract a relative operator "simultaneously." Third, I present data from Kyushu Japanese case-marking to support the proposed analysis. Fourth, I provide a further motivation for our analysis from the semantic side. In Section 5, I propose a novel theory of θ-role assignment which provides a solution to the θ-theoretic problem. Here the theory predicts that PR out of EA should be barred. I propose some arguments for this conclusion. Section 6 discusses some empirical and theoretical consequences of the proposed θ-theory. Section 7 concludes this paper.

2 SOME THEORETICAL ASSUMPTIONS

In this section, I set out the assumptions that are needed to investigate multiple nominative phenomena in Japanese. Three sets of assumptions concerning feature checking will be presented. First, I assume the probe-goal system proposed by Chomsky (2000: 122–3): (I) Matching is feature identity; (II) The domain of a probe P is the sister of P; and (III) Locality reduces to "closest c-command." As far as Case and agreement are concerned, the choice of Agree (Chomsky 1999, 2000) or feature movement (Chomsky 1995) is immaterial. But I assume that Case/agreement is governed by the basic operation Agree since our proposal about θ-role assignment crucially relies on the Agree-based system of feature checking. Thus, a probe X fails to locate as its goal an item that is merged (directly) into X's specifier position, as schematically illustrated below:[7]

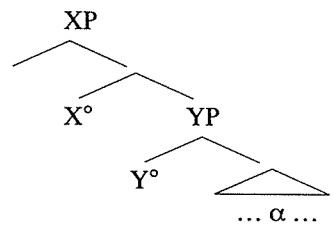
[7] Feature checking of expletives is another matter. Chomsky (2000: 128) assumes that expletives are able to probe their domain.

(10)



Second, I assume the *Earliness Principle*, formulated by Pesetsky and Torrego (2001), which states that uninterpretable features must be deleted as early in the derivation as possible.[8] For the present purposes, it is sufficient to keep in mind that procrastination of checking of a DP is illicit when the DP *can* undergo checking. Consider the following schematic derivation as a representative case:

(11)

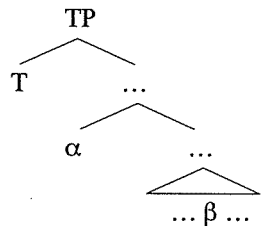


Suppose that α has an uninterpretable Case feature as well as interpretable ϕ-features, and that Y° can be a probe. Given the Earliness Principle, the Case feature of α must be checked by Y° at this stage. Since nothing bars Y° from entering into appropriate checking with α in the configuration (11), the Earliness requires that Y° check the Case of α at the point where YP is constructed. Importantly, if there is a potential Case-assigner X° which c-commands Y° as in (11), α is not permitted to enter into long agreement with X°, nor can the DP move across Y° to receive Case from X°. This is so because since Y° is introduced into the derivation earlier than X°, the uninterpretable feature of α should be checked by Y° rather than X°.

Finally, some comments on "multiple Case checking" are in order. I adopt the well-established assumption that T in Japanese can license more than one nominative Case (see, among others, Takezawa 1987, Koizumi 1994, 1995, and Ura 1996, 2000). Given that the multiple Case checking strategy is available and that the Earliness Principle is correct, it should be the case that the Case features of α and β are necessarily checked by T in the configuration presented below:

[8] See Pesetsky (1989). See also Chomsky (1999: 12) for discussion.

(12)



The multiple feature checking has a potential technical problem in terms of the intervention constraint in Chomsky's (2000) sense. As Hiraiwa (2000) correctly points out, Chomsky's (2000) theory of Case/agreement wrongly predicts that multiple Case assignment always fails due to the defective intervention constraint. In (12), if α enters into checking with T, then α makes T fail to be linked to β (Chomsky 2000: 122). Hence, the second instance of checking would not be completed. Noting that this may be a potential problem, I stipulate that T can enter into checking relations with α and β in languages like Japanese (see Hiraiwa 2000 for a proposal). I assume that Japanese *multiple* nominative Case checking is not confined to the locality condition imposed on Agree.

3 MAJOR SUBJECT CONSTRUCTIONS

This section briefly offers information about Japanese MSCs. (13) lists some proposals about the construction:

(13) a. The major subject is merged directly into the (higher) Spec,TP, and receives a (non-thematic) semantic role from a "predicate" consisting of the logical subject and the lexical predicate under a predication relation. The predicate must be headed by T.

b. The Case of the major subject is structural Case. The DP can be ECMed when the MSC is embedded as the CP complement of an ECM verb (e.g. *omow* 'think').

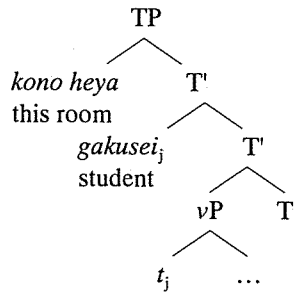
c. The major subject can have coreference with a "resumptive" pronoun in an argument position in T'.

d. The major subject does not necessarily receive the focus interpretation, though the kind of interpretation is likely to obtain when an MSC is used as an independent sentence. Rather, the class of DPs behave like subjects of individual-level predicates (Kuroda 1986, Heycock 1993, and in particular Doron and Heycock 1999; cf. Kuno 1973, Kuroda 1965).

Proposal (13a) is well-accepted in many studies of MSCs (Saito 1982, Takezawa 1987, Heycock 1993, Tateishi 1994, Mihara 1994, Koizumi 1994, 1995, Ura 1996, Doron and Heycock 1999, among many others). Doron and Heycock (1999) propose that MSCs like (9a) , repeated as (14a), with a structure as in (14b):

(14) a. [kono heya]-ga gakusei-ga yoku benkyoosuru
this room-Nom student-Nom well study
'It is in this room that students study hard.'

b.



For simplicity, I assume with Doron and Heycock and other recent sources that the position of 'this room' is Spec,TP.[9] There seems to a general agreement as to how the major subject gains a semantic role. As noted above, the major subject enters into a predication relation with the clause T', which contains the lexical predicate and its thematic arguments (Saito 1982, Heycock 1993, Doron and Heycock 1999; cf. Williams 1980, Rothstein 1983 for "predication"). For Case assignment, there have been proposed several alternatives in the literature. A most influential analysis is that the two different nominative subjects are assigned Case when some syntactic relation is established between each nominative DP and the relevant functional category, e.g., T (Takezawa 1987, Koizumi 1994, 1995, Ura 1996, Doron and Heycock 1999; cf. Saito 1982, Heycock 1993, Mihara 1994). I will depart from this standard view, and propose that the major subject is Case-marked by C.

Properties (13b–d) are exemplified by examples (15a–c), respectively:

(15) a. boku-wa sono kooen-{o/ga} kodomo-ga motto yorokonde
I-Top this park-Acc/Nom child-Nom more enjoying
asobu to omot-tei-ta
play that think-Stat-Past
'I thought that children would play in this park with more pleasure.'

b. ? [kono syu-no hon]$_j$-ga kodomo-tati-ga e_j yomi-tagaru
this kind-Gen book-Nom child-Pl-Nom read-want
'It is this kind of book that children want to read.'

c. i. John-wa [kono heya-ga gakusei-ga yoku
J.-Top this room-Nom student-Nom well
benkyoosuru toyuu] zizitu-o sir-anakat-ta
study that fact-Acc know-Neg-Past
'John did not know the fact that students study hard in this room.'

[9] For the logical subject, on the other hand, it is often assumed to raise to the lower Spec,TP due to the EPP property of T. It clearly yields a violation of "preference of Merge over Move" (Chomsky 1995, 1999, 2000). The logical subject moves before the merger of the major subject. I will leave the problem untouched here since whether or not the logical subject raises does not affect our discussion.

ii. John$_j$-ga zibun-zisin$_j$-no hisyo-ga kubi-ni natta
J.-Nom self-Gen secretary-Nom was fired
'John$_j$ [is such that] his$_j$ secretary was fired.'

(15b) comes from Saito (1982: 13) and the judgement is his; (15cii) is cited from Heycock (1993: 174). Example (15a) shows that major subjects can be ECMed and therefore they have structural Case (cf. Kuno 1976). In (15b), the major subject "binds" a null resumptive pronoun in the object position indicated by *e*, and the empty category is Case-marked by the transitive verb *yomu* 'read' in a usual manner (e.g. Saito 1982, Heycock 1993, Doron and Heycock 1999, to list a few). (13d) is exemplified by (15ci–ii): the focus interpretation for a major subject is considerably weakened in an embedded clause as in (15ci). In (15cii), finally, the firing of John's secretary is an episodic eventuality, which implicates some "property" of John, as observed by Doron and Heycock (1999: 87). Doron and Heycock also note that the clause that follows a major subject expresses some property of the referent of the major subject DP even when a lexical predicate is predicated of a "stage." I agree with their semantic characterization of major subjects.

4 PRCs vs. MSCs

This section aims to argue that PRCs exist in Japanese: PRCs cannot be assimilated to MSCs.

4.1 Relativization of Arguments

Relativization provides a good argument for distinguishing PRCs from MSCs. In MSCs, as observed by Sugimoto (1986), argument(s) of a lexical predicate cannot undergo relativization. The major subject example (16) is the base line, from which the relative clauses in (17a, b) are derived via relativization:

(16) kono heya-ga gakusei-ga yoku suugaku-o benkyoosuru
this room-Nom student-Nom well math-Acc study
'It is in this room that students study math hard.'

(17) a. * Taroo-wa [[kono heya-ga gakusei-ga yoku e_j
T.-Top this room-Nom student-Nom well
benkyoosuru] kyooka$_j$]-o sensei-ni osieta
study subject-Acc teacher-Dat told
Lit. 'Taro told a teacher [the subject [this room, students study __ hard]].'

b. * Taroo-wa [[kono heya-ga e_j suugaku-o yoku
T.-Top this room-Nom math-Acc well
benkyoosuru] gakusuei$_j$]-o sensei-ni osieta
study student-Acc teacher-Dat told
Lit. 'Taro told a teacher [the student [$_{RC}$ this room, __ studies math hard]].'

(17a) and (17b) exemplify relativization of the logical subject and that of the logical object, respectively. These relative clauses are unacceptable. Descriptively speaking, the presence of a major subject blocks relativization of an argument: without the major subject, relativization holds without difficulty. I call this kind of effect a *blocking effect*. The conjecture occurs to mind that a *ga*-marked element which is base-generated in Spec,TP blocks relativization of lexically-selected arguments. If relativization of arguments involves null relative operator movement (Ishii 1991, Kaplan and Whitman 1995), the hypothesis is that major subjects in Spec,TP block null operator movement.

It is worth observing at this point that the nominative object construction (NOC) does not produce a blocking effect. (18) illustrates an NOC, where the potential morpheme *(rar)e* attaches to the ditransitive verb *okuru* 'send':

(18) Hanako$_j$-ga [PRO$_j$ sono zinbutu-ni tegami-ga okur]-e-ru
H.-Nom that person-Dat letter-Nom send-can-Pres
'Hanako can send a letter to that person.'

According to Takezawa (1987), Koizumi (1994, 1995) and Ura (1996), a transitive verb followed by the potential morpheme fails to assign objective Case (though not necessarily), and both the Experiencer and Theme arguments are generated lower than T and can be assigned nominative Case by the finite Infl or Tense (cf. also Saito 1982, Tada 1992). In (19), the Goal argument undergoes relativization:[10]

(19) [Hanako-ga e_j tegami-ga okur-e-ru] zinbutu$_j$
H.-Nom letter-Nom send-can-Pres person
'the person to whom Hanako can send a letter'

If, thus, the Experiencer argument is base-generated within the projection of the lexical head *e* 'can,' the contrast between (17) and (19) demonstrates that it is a *ga*-marked element based-generated in Spec,TP that yields blocking effects.

Having established the descriptive generalization about the blocking effect, let us now turn to cases involving PRCs. Interestingly enough, a number of speakers find no blocking effects with multiple nominative PR. Examples (20a, b) are the base sentences from which the relative clauses (21a, b) are derived, respectively:[11]

[10] An experimental control is needed here. The Japanese potential construction allows the Nom(Experiencer)-Acc(Theme) pattern as well as the Nom-Nom one (and, though irrelevant here, the Dat-Nom pattern). If the Theme argument is extracted, the Nom-Acc and the Nom-Nom patterns are superficially identical. We therefore have to leave the nominative Experiencer and the nominative Theme within a relative clause in order to investigate whether or not blocking effects obtain with of the multiple nominative version of NOC.

[11] Possessed DPs in PRCs cannot be relativized. However, this effect seems irrelevant to the blocking effect we are examining. Such possessed DPs must be non-referential, for which reason the DPs resist various kinds of extraction (Yoon 1990; see also Borer and Grodzinsky 1986), except for clefting (Kayne 1975, Kuroda 1988).

(20) a. kinoo kono ana-ni John$_j$-ga [e_j hidariasi]-ga hamatta
yesterday this hole-in J.-Nom left foot-Nom fell
'Yesterday, John's left foot fell into the hole.'

b. ano gakusei-ni kono ronbun$_j$-ga [e_j naiyoo]-ga wakatta
that student-Dat this article-Nom content-Nomunderstood
'That student understood the content of this article.'

(21) a. [[kinoo e_k John$_j$-ga [e_j hidariasi]-ga hamatta]
yesterday J.-Nom left foot-Nom fell]
ana$_k$]-o osiete
hole-Acc tell me
'Tell me the hole into which John's left foot fell yesterday.'

b.(?) Taroo-wa [[e_k kono ronbun$_j$-ga [e_j naiyoo]-ga
T.-Top this article-Nom content-Nom
wakatta] gakusei$_k$]-o hometa
understood student-Acc praised
'Taro praised the student who understood the content of this article.'

Relativization applies to the locative argument of *hamaru* 'fall (into)' in (21a) and the Experiencer argument of the verb *wakaru* 'understand' in (21b). If our generalization is correct, it follows that (21a, b) do not contain any *ga*-marked DP that is base-generated in Spec,TP since no blocking effect is found. Thus, we are led to the conclusion that the ext-poss-DPs in (20–21) are VP-internally generated via Merge. If we treated major subjects and ext-poss-DPs equally, we could not capture the fact that ext-poss-DPs are grouped with VP-internally generated Experiencer subjects of the NOC.

4.2 Deriving the Blocking Effect

A question may be raised here: Why does relativization disambiguate in that manner between the major subject, on the one hand, and the ext-poss-DP (and the nominative Experiencer DP in the NOC), on the other?

Notice that the blocking effect is limited to cases of argument relativization. When nouns like *riyuu* 'reason' function as the head of a relative clause, the effect disappears, as illustrated below:[12]

[12] Nouns denoting time (e.g. *kisetu* 'season,' *hi* 'day' or *ziki* 'period') seem to behave like *riyuu* 'reason':

(i) [kono heya-ga itiban gakusei-ga benkyoosuru] kisetu
this room-Nom best student-Nom study season
'the season where students study hard in this room'

(22) Taroo-wa [[kono heya-ga gakusei-ga yoku suugaku-o
T.-Top this room-Nom student-Nom well math-Acc
benkyoosuru] riyuu]-o sira-na-i
study reason-Acc know-Neg-Pres
Lit. 'Taro does not know the reason [this room, students always study math hard].'

In (22), the major subject occupies a clause-initial position in the relative clause. It is natural to take the contrast between argument relativization and 'reason' relativization to indicate that the availability of major subjects is related to some property of C. Murasugi (1991: 154) and Kaplan and Whitman (1995: 46–50) point out that 'reason'-headed relative clauses differ from "argument-headed" ones in that only the latter involve null operator movement (see also Miyagawa 1993). Here I simply assume with Kaplan and Whitman (1995) that 'reason'-headed relative clauses are gapless. We are led to entertain the hypothesis that the blocking effect under consideration has a bearing on C's ability to attract null operators.[13] A possible descriptive generalization is:

(23) Major subjects are permitted to occur if and only if the non-interrogative Complementizer lacks a feature that attracts a null operator.[14]

Suppose now that a clause contains a major subject. Under the generalization (23), the existence of the major subject in the clause entails that the Complementizer heading the clause lacks an uninterpretable feature that forces null operator movement, called the "op-feature" here. Therefore, the Complementizer cannot attract an argument operator into its specifier. Consequently, ungrammatical examples like (17a), repeated as (24), are ruled out, correctly:

(24) * Taroo-wa [[kono heya-ga gakusei-ga yoku e_j
T.-Top this room-Nom student-Nom hard
benkyoosuru] kyooka$_j$]-o sensei-ni osieta
study subject-Acc teacher-Dat told
Lit. 'Taro told a teacher [the subject [this room, students study __ hard]].'

Conversely, if a given C bears an uninterpretable op-feature, no major subject is permitted in the clause. For PR, we can expect the absence of the blocking effect if the ext-poss-DP is not a major subject.

The generalization (23) can be captured if we assume (25) and (26):

(25) The non-interrogative Complementizer can either check the uninterpretable Case feature or attract an operator, but not both.

---

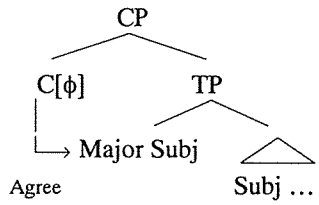
[13] An alternative approach is imaginable. Takahashi (1997, 188) hypothesizes that 'reason'-headed relative clauses contain a null operator but it is directly merged into Spec,CP without movement (cf. Rizzi 1990). Our analysis of the blocking effects is not inconsistent with the alternative as long as base-generation of operators in the Spec,CP is possible without the relevant op-feature.

[14] The interrogative C is of course another matter. Major subjects occur in *wh*- or yes-no questions (cf. Tateishi 1994). I am indebted to Hiroyuki Tanaka and Ken Hiraiwa for this point.

(26) The major subject is assigned Case by C.

In (26), we depart from the standard analysis of MSCs, which assumes that T/Infl assigns Case to major subjects as well as logical subjects. The derivation of MSCs is represented as in (27) (the head parameter is irrelevant):

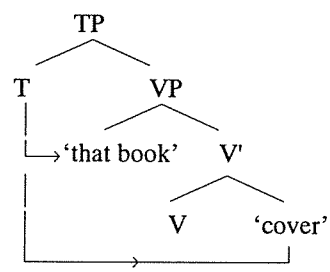
(27)



The major subject is assigned Case under the Agree relation triggered by T's ϕ-features (Chomsky 1999, 2000). On the other hand, it is T that is responsible for Case checking of the logical subject. Under the hypothesis (25), the Case-assigning Complementizer fails to attract a null operator, and therefore it triggers no argument relativization. If an argument operator and a Case-assigning Complementizer are introduced into a derivation, the derivation crashes because the operator is left with its uninterpretable feature unchecked (or because no appropriate operator-variable construction obtains). The hypothesis also explains the absence of the blocking effect in 'reason'-headed relative clauses. The Complementizer utilized for 'reason' relativization does not bear an uninterpretable op-feature, and the functional head can afford to check the uninterpretable Case feature of a major subject.

If the discussion so far is correct, we are led to argue about PR that the ext-poss-DP is introduced in VP via Merge and assigned Case by T. On the assumption that in Japanese T can license more than one nominative argument, it is natural to think that both the ext-poss-DP and the possessed DP receive Case from T, as Ura (1996) argues. The situation is represented as in (28):

(28)



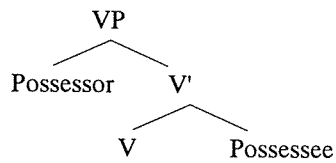
Importantly, C does not play any critical role in licensing the two nominative DPs in (28): the finite T is sufficient to delete the uninterpretable features of these DPs. Since C does not need to check any Case feature in PRCs, it is allowed to bear an op-feature, which derives an argument relative clause. Consequently, relativization may apply to an argument appearing in PRCs. It is also worth noting that the Earliness Principle requires that the linking between C and the VP-internal ext-poss-DP should

not be established: the potential Case-assigner T, which is always selected by C (Chomsky 2000: 102), is forced to assign Case to the DP before C is introduced.

To sum up, we have argued: (I) the major subject, which is base-generated in TP, is Case-marked by C; (II) the ext-poss-DP is base-generated in VP and Case-marked by T; and (III) the non-interrogative Complementizer cannot bear a Case-assigning feature and an operator-attracting feature at the same time. The set of proposals correctly captures the distribution of the blocking effect. In any analysis assimilating the PRC to the MSC, the facts that I pointed out above are less likely to follow.

The conclusion that the configuration of PR in (29) is allowed in Japanese is fairly natural under the view that θ-theory universally allows (29):

(29)



Yoon (1990), who discusses transitive PRCs from Korean, Mandarin and French, suggests that languages do not differ in θ-theory and therefore (29) is almost universally permitted, but whether or not it surfaces in a particular language depends on Case theory of the language (see Baker 1988). For example, the possessive dative construction is found in Hebrew and Romance languages including French and Spanish since the dative case is available within verb phrases in these languages. In Korean, the ext-poss-DP bears the direct object case marking since multiple Case checking is an option for *v* or Agr-O in the language. In Mandarin, the availability of the dummy case marker *ba* enables (29) to be licensed. If Yoon's view is on the right track, (29) must hold in Japanese, and multiple nominative PR must be allowed due to the availability of a multiple Case checking strategy. Thus, the θ-theoretic problem is likely to hold in Japanese even if the predication process is indeed utilized by the language.

4.3 Case Marking in Kyushu Japanese: Case Assignment by Complementizer

The hypothesis that the base position for ext-poss-DPs differs from that for major subjects is independently evidenced by case marking from some dialects of Japanese spoken in Northwestern part of Kyushu Island, e.g. Saga, Nagasaki or Kumamoto (Kanbe 1992).[15] Yoshimura (1994a, b) reports that in Kumamoto Japanese, logical subjects and nominative objects are marked with *no* while major subjects are marked with *ga* (see also Koizumi 1995). Let us cite the following Kumamoto Japanese paradigm from Yoshimura (1994a: 170–71). For convenience, I gloss *ga* with M(ajor)S(ubjet) and *no* with Nom(inative):

[15] The observations presented in the text are based on Nagasaki and Saga Japanese, unless otherwise indicated. Nagasaki Japanese is my native dialect. I am particularly grateful to Akira Hiroe for his help.

(30) a. natu-ga kankookyaku-no ooka
summer-MS tourist-Nom numerous-Pres
b. * natu-ga kankookyaku-ga ooka
summer-MS tourist-MS numerous-Pres
c. * natu-no kankookyaku-ga ooka
summer-Nom tourist-MS numerous-Pres
d. * natu-no kankookyaku-no ooka
summer-Nom tourist-Nom numerous-Pres
'It is in summer that tourists are numerous.'

To all appearance, the sentence-initial DP *natu* 'summer' serves as a major subject since this nominal is obviously not a lexically selected argument. Under the structure (27) for the MSC, the data in (30) are accounted for if we assume that the Case assigned by C is realized as *ga* while the Case assigned by T is realized as *no*. This assumption accommodates the case pattern that is exhibited by the NOC in the Kumamoto dialect (from Yoshimura 1994b: 21):

(31) an amerikazin-no nihongo-no/*-ba/*-ga wakar-asi-ta
that American-Nom Japanese-Nom/*Acc/*MS understand-Hon-Past
'That American understood Japanese.'

The fact that the NOC allows the *no-no* (Nom-Nom) pattern shows that it is plausible to think that only VP-internally-generated phrases can and therefore must enter into agreement with T, being marked with nominative *no*. Note the account of (30) and (31) presupposes the definition of the domain of probes and the Earliness Principle.

Having demonstrated that the *no* marking is only available for VP-internally-generated DPs, let us consider the PRC in the relevant dialect (Yoshimura 1994a, b does not investigate this kind of inalienable possession construction):

(32) a. Tooru-kun$_j$-ga tyotto [e_j se]-no nobita
T.-MS a little height-Nom grew
b. * Tooru-kun$_j$-ga tyotto [e_j se]-ga nobita
T.- MS a little height-MS grew
c. * Tooru-kun$_j$-no tyotto [e_j se]-ga nobita
T.-Nom a little height -MS grew
d. Tooru-kun$_j$-no tyotto [e_j se]-no nobita
T.-Nom a little height-Nom grew
'Toru-kun has grown a little taller.'

Of particular interest here is that in (32d) the *no* marking on the ext-poss-DP is perfectly grammatical for all of my consultants. Thus, the grammaticality of (32d) counts as evidence in support of the claim that the ext-poss-DP is base-generated in VP and enters into agreement with T.[16] Obviously, any analysis which analyzes the

[16] For (32a), the "possessor DP" is base-generated in Spec,TP, hence a major subject. Presumably, in the VP exits null *pro*, which is coreferential with the major subject. Our analysis does not exclude this option.

two types of subject marking, *ga* and *no*, as associated with one functional category, needs to appeal to some stipulation about Case checking and morphological Case realization (cf. Koizumi 1994, 1995). The data from Kyushu Japanese thus lend independent support for the proposal about the non-interrogative Complementizer.

4.4 A Note on Interpretation of Nominative Phrases

Before concluding this section, let us take a brief look at a semantic difference between major subjects and ext-poss-DPs. As noted earlier, the major subject typically has the interpretation in which the referent of the DP has the property denoted by the clause that follows it. In this connection, Doron and Heycock (1999: 86–7) argue that the major subject can be treated as if it is the subject of an individual-level predicate (cf. Carlson 1977, Kratzer 1996, and Diesing 1992, etc.):

(33) kono heya-ga gakusei-ga issyookenmei benkyoosuru
this room-Nom student-Nom hard study
'It is in this room that students study hard.'

The example (33) sounds natural when the habitual event of students' studying hard is interpreted as implicating some property of a particular room. The sentence is, for instance, compatible with the pragmatic context that the room in question is so well-conditioned that even idle students study hard there. In other words, the sentence lacks the interpretation in which the sentential predicate 'students study hard' is predicated of a "stage" or "instantiation" of that room. Major subject DPs are always interpreted as individuals rather than as stages of individuals, as has been pointed out in various terms (see also Kuroda 1965, 1986, Kuno 1973). The kind of interpretation that major subjects are required to have almost corresponds to Kuno's (1973: chapters 2 and 3) exhausting listing.

The opposite holds in PRCs. Interestingly, implication of some property of an individual is not mandatory for ext-poss-DPs. (34) illustrates this:

(34) (sakki) [John-no hon]$_j$-ga [e_j hyoosi]-ga yabureta (koto)
a little while ago J.-Gen book-Nom cover-Nom tear-Past
'John's book's cover became torn (a little while ago).'

The verb *yabureru* is typically used as a stage-level predicate, denoting the event of something's becoming torn. If it were an MSC, (34) would have to be interpreted as denoting some property of a book. In my judgement, the sentence can mean instead that the event of the cover's becoming torn is predicated of a particular stage of a book of John's. and the meaning obtains more straightforwardly with such a temporal adverb as *sakki* 'a little while ago.' This kind of interpretation is analogous to the neutral description in Kuno's (1973) term.

Recall now that under our analysis, ext-poss-DPs can be merged in VP whereas major subjects must be directly merged in TP. The observed interpretive difference between the two kinds of nominative DP supports our analysis if Nishigauchi's

(1999) is on the right track in suggesting that the nominative DP with the exhaustive listing reading is interpreted in IP (i.e. TP in our terms) while the nominative DP with the neutral description one is in VP (Nishigauchi attributes this idea to unpublished work by Nishigauchi and Uchibori). Thus, any analysis which tries to assimilate PRCs to MSCs will make a wrong predication.

4.5 Summary of Section 4

This section has argued that PRCs should not be identified with MSCs: the ext-poss-DP is in the lower VP while the major subject is base-generated in TP. The results we obtained are as follows:

(35)

	Blocking Effect	Case marking in Kyushu Japanese	Interpretation of the higher nominative
MSC	yes	*NOM-NOM	done in TP
PRC	no	✓NOM-NOM	done in VP
NOC	no	✓NOM-NOM	N/A

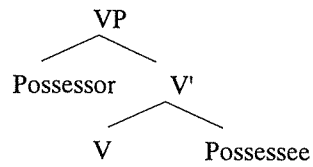
Summing up, I pointed out in 4.1 that relativization distinguishes between the two constructions in the way the presence of major subjects makes the grammatical process to fail. In 4.2, I derived the contrast between PRCs and MSCs by appealing to the nature of the non-interrogative Complementizer. My proposal is that the functional category can license either the Case of major subjects located in TP or null argument operators. This property of C and the c-command requirement imposed on probe-goal relation do not only accommodate the complementary distribution of major subjects and argument relativization, but also the fact that major subjects do not block 'reason' relativization which does not involve null operator movement. For PRCs, where T is responsible for the Case of the ext-poss-DP (and the possessed DP), no blocking effect is expected to obtain since C is available for checking of a relative operator. 4.3–4.4 discussed the distribution of the case markers *no* and *ga* in Kyushu Japanese and an interpretative difference between major subjects and ext-poss-DPs. Both of the observations can be regarded as reflecting the clause structures of the two constructions.

5 θ-ROLE ASSIGNMENT

5.1 θ-Role Assignment As an Instance of Agree

In the discussions so far, we have reached the conclusion that in Japanese as well as other languages, it is a real question to ask how the ext-poss-DP is θ-marked. Continuing to limit our attention to cases with unaccusative predicates, let us consider the configuration of PR (36):

(36)



Assuming that in (36) V θ-marks the possessee (Maling and Kim 1992 and references contained by their paper) and that V is able to assign only one θ-role, the source of θ-marking of the possessor is unclear.

Let me now propose a new θ-theory to solve this θ-theoretic problem. In particular, I claim below that θ-role assignment involves the relation Agree, proposed by Chomsky (1999, 2000). I call Agree of this kind "θ-Agree" to distinguish it from Agree triggered by uninterpretable φ-features. In the present theory, when an argument α enters into an Agree relation with a predicative head π, α is θ-marked by π. The assumptions are as follows: (I) Matching is feature identity; (II) The domain of a probe P is the sister of P; and (III) Locality reduces to "closest c-command" (Chomsky 2000: 123).

The present theory proposes that θ-agreement involves three types of features: *θ-features*, *r(eference)-features*, and *a(rgument)-features*. First, the uninterpretable θ-feature on an argument probes the interpretable θ-feature in the θ-assigning head.[17] [18] Consider the sentence *Bill will leave* as an example. In (37), the subject *Bill* is θ-marked by *v* only if the θ-feature of the subject locates the matching feature in *v* (I refer to uninterpretable θ-features as "*u*θ" and interpretable θ-features as "θ"):

(37) $[_{vP}$ *Bill*[*u*θ] $[_{v'}$ *v*[θ] $[_{VP}$ *leave*]]]
Agree

Just as in agreement triggered by φ-features, a probe must c-command a goal. It is worth noting here that the asymmetry with respect to interpretability between θ-features of arguments and those of predicates reflects our intuition about argument-predicate relations. It does not make any sense to ask about the role of an argument when it is isolated from particular syntactic contexts. On the other hand, the thematic information of a predicate is predictable, given the item's intrinsic properties. The hypothesized asymmetry thus seems to make an intuitive appeal.

Turn to r-features and a-features. R-features simply are the features indicating arguments' "reference." The item *Bill* has one r-feature, say, *b*. On the other hand, a-features are variables carried by predicative heads, and the features have to be "satisfied" by arguments. Put more concretely, the light verb *v*, for example, has the a-feature *x*, which is to be filled by a subject DP. The notion of a-feature may be analogous to that of "argument slot," utilized in theories of lexical representation including Grimshaw's (1990). (38), from Grimshaw (1990: 8), represents a lexical

[17] The proposal that θ-roles are formal features in the sense that the features are utilized by computation has been made in different forms (see Lasnik 1995, 1999, Bošković and Takahashi 1998, Hornstein 1999, Saito and Hoshi 2000).

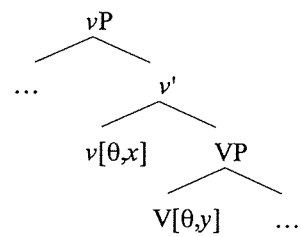
[18] This is a departure from the assumption that only X°-level categories can be probes or attractors. See Chomsky (1995, 2000).

structure of the verb *murder*:

(38) murder (*x* (*y*))
Agent Theme

Representations like (38) contain information about the number of arguments that a particular predicate requires and, roughly put, some hierarchical relation between thematic roles. Under our system, such kind of information is represented in the fashion of (39):

(39)



How is the conception "satisfy a-features" formulated in terms of Agree? The proposal is as follows: if an argument enters into agreement with a predicative head, then the a-feature in the goal predicate is *valued* according to the r-feature of the argument. The value assignment to a-features of predicates is analogous to Chomsky's (2000) structural Case assignment and verbal agreement. Chomsky (2000: 124) notes:

> For both probe and goal, the form of uninterpretable features is determined by Agree. To rephrase in traditional terms, verbs agree with nouns, not conversely, and Case is assigned. (p.124)

In θ-Agree, too, the value of the r-feature on an argument is "copied" onto the a-feature of the predicate that the argument agrees with. In the same vein, uninterpretable θ-features of arguments are valued by Agree: namely, the θ-role of an argument is assigned a label by the associated predicate. (40) schematically illustrates the process of θ-role assignment (Bold features are those affected by Agree):

(40) [*Bill*[***u*θ**, *b*] [*v*[θ, ***x***] ...]]
Agree
↓
[*Bill*[θ, *b*] [*v*[θ, ***b***] ...]]

The DP *Bill* θ-agrees with *v*, with the DP's θ-feature labeled as Agent, and with *v*'s a-feature valued with the feature *b*. To put it in terms of interpretability, θ-features on arguments and a-features of predicates are rendered to be interpretable. I assume that these processes meets the Principle of Full Interpretation. The requirement that a-features and θ-features (of arguments) be interpretable is designated to produce the

effects of Chomsky's (1981) θ-criterion (see also Chomsky (1995: 315)).[19] [20]

Furthermore, θ-agreement has another important property reflecting Chomsky's original formulation of Agree: "uninterpretable features render the goal *active*, able to implement an operation" (Chomsky 2000:123). In the present case, an argument agrees with a predicate only if the predicate is active in the sense that its a-feature contains an uninterpretable variable. It is therefore impossible for *v*[θ,*b*] in (40) to be a goal of Agree, a desirable result.

Note finally that θ-agreement is expected to obey the locality constraint imposed on Agree (Chomsky 2000: 122): an uninterpretable θ-feature probes a *closest* and active goal. I define the notion *closeness* as follows: if β *asymmetrically* c-commands (or dominates) γ and α is the probe, β is closer to α than γ. Then, the *intervention constraint* holds in the way illustrated by (41), where < is asymmetrical c-command:

(41) $\alpha[u\theta]$ < $\beta[\theta]$ < $\gamma[\theta]$
└──→─✱──────┘ Agree

Crucial here is that α matches β in feature identity. A priori, β may be an argument or a predicate in θ-agreement. θ-features of predicates are intrinsically interpretable, and θ-features on arguments can be rendered interpretable with value assignment, hence visible to computation.

The set of proposals is summarized as follows:

(42) a. An argument has the set of an uninterpretable θ-feature and an interpretable r-feature; A predicative head has the set of an interpretable θ-feature and an uninterpretable a-feature;
b. The uninterpretable θ-feature on an argument triggers Agree, seeking its domain for a matching feature, the θ-feature of a predicate. The uninterpretable a-feature of a predicate (goal) is assign value according to the interpretable r-feature of an argument (probe);
c. θ-agreement is possible only if A predicate is active, i.e. contains a variable;
d. The θ-feature on an argument becomes interpretable after undergoing Agree, and it induces no further Agree;[21]
e. θ-agreement obeys the intervention constraint.[22]

[19] Chomsky's (1981: 36) θ-criterion: Each argument bears one and only one θ-role, and each θ-role is assigned to one and only one argument.

[20] A-features are not licensed with respect to Full Interpretation only by being marked with "constants," as in (40). This is evident when we take into consideration cases in *wh*-phrases, quantified DPs or null operators serve as arguments. I leave untouched such expressions here.

[21] Therefore, arguments cannot be doubly θ-marked via movement (Chomsky 1995:143, note 35). For movement into a θ-position, see Boškovic (1994), Lasnik (1995, 1999), Hornstein (1999), Watanabe (1999).

[22] I assume that Minimality is calculated at each step of derivation, contra Chomsky (1999).

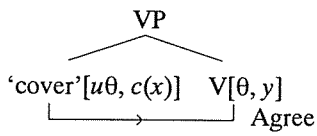
5.2 A Solution to the θ-Theoretic Problem

Having introduced the mechanism, I am now in a position to provide a possible solution to the θ-theoretic problem: how the ext-poss-DP is θ-marked in examples like (43):

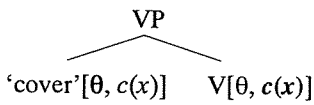
(43) [kono hon]$_j$-ga [e_j hyoosi]-ga yabureta
this book-Nom cover-Nom tear-Past
'This book's cover became torn.'

The key to the θ-theoretic problem is the fact that the possessed DP lacks reference, or gives rise to a type interpretation (Guéron 1985, Cheng and Ritter 1987, Yoon 1990, Vergnaud and Zubizarreta 1992). To capture this property of possessed DPs under the framework outlined above, I assume that r-features of possessed DPs, unlike those of full DPs, contain a variable. The r-feature of *hyoosi* 'cover' is proposed to be $c(x)$, which is designated to represent the interpretation "the cover of x." If, therefore, the nominal headed by *hyoosi* is merged with the verb *yabureru* 'be.torn,' (44i) obtains. And, if 'cover' agrees with V, we get (44ii):

(44) i.

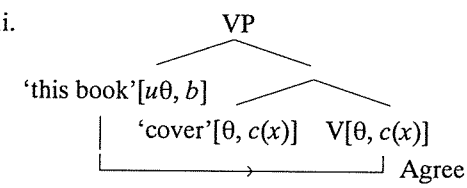


ii.



In (44ii), the uninterpretable θ-feature "deletes" while the a-feature of V is assigned the value, $c(x)$. Note that in (44ii) V is still active because of the presence of variable x in its a-feature. V can therefore be a goal for another instance of Agree. Consequently, the DP 'this book' is allowed to be introduced into the structure as a grammatical argument, as in (44iii). Finally, Agree ('this book',V) results in (44iv):

(44) iii.



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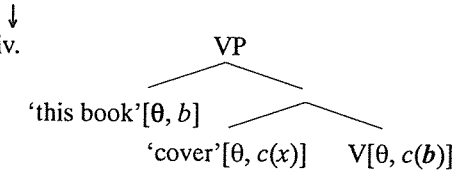


Thus, the θ-theoretic problem is now solvable. In the system I am proposing, the θ-marking of the ext-poss-DP is possible only if the possessee is not referential. Note also that the feature set [θ,*c*(*b*)] in V represents the interpretation in which the cover of the book is the theme of the event denoted by the verb, and that the representation contributes to the interpretation at LF (see section 6).

Although I will neither provide a full analysis of the notion of "lack of reference" nor determine the source of it (see Appendix to this section), I attempt to factor out empirical facts that can be related to this property. I will point out two kinds of descriptive fact as indicators of lack of reference of DPs. Recall first that the possessed DP resists non-restrictive modification (Kayne 1975, Guéron 1985, Cheng and Ritter 1987, Yoon 1990). Consider (45):

(45) a. ?* John-un Mary-lul **yeppun** son-ul capassta
J.-Top M.-Acc pretty hand-Acc caught
'John caught Mary's pretty hand.'

b. * Tu lui as photographié la **belle** bouche
you her have photographed the beautiful mouth
'You photographed her beautiful mouth.'

The Korean example in (45a) is drawn from Yoon (1990: 504), and the French example in (45b) from Kayne (1975: 164). In contrast, grammatical examples obtain with restrictive modification. Cf. *Tu lui as photographié la jambe* ***droite*** 'You photographed her **right** leg' (from Kayne 1975:165); *John-un Mary-lul* ***oyn*** *son-ul capassta* 'John caught Mary's **left** hand' (from Yoon 1990: 504). Guéron (1985), Cheng and Ritter (1987) and Yoon (1990) argue that the possessed DP lacks reference and the fact that non-restrictive modification presupposes that the reference of the modified nominal is established. Then the ungrammaticality of (45a, b) naturally follows if the possessed DPs are non-referential. (46) shows that the same point holds in Japanese:

(46) ?* Taroo-ga **hutoi** ude-ga oreta
T.-Nom pudgy arm-Nom broke
'Taro's pudgy arm broke.'

Again, restrictive modification is possible: *Taroo-ga* ***migi-no*** *ude-ga oreta* 'Taro's **right** arm broke.' Since full DPs allow descriptive modification without difficulty, the restriction on non-restrictive modification can be taken to be an indicator of the lack of reference of nominals.

Another indicator of the non-referentiality of nominals comes from the behavior of demonstratives. As (47) illustrates, the demonstratives, *kono* 'this,' *sono* 'that,' *ano* 'that ... there,' are permitted to occur within an independent, "full" argument:

(47) John-ga tegami-o [**kono/sono/ano** sasidasinin]-ni watasi-ta (koto)
J.-Nom letter-Acc this/that/that sender-to hand-Past
'John handed a letter to this/that/that sender.'

In (47), the three arguments of the ditransitive verb occupy appropriate argument positions. Thus, the form "*kono/sono/ano* + N," unlike possessed DPs, does not license additional arguments: the number of arguments does not increase. Interestingly, PR is degraded when a demonstrative occurs with the possessed DP, as in (48):

(48) ?* kinoo [kono hon]-ga **[kono/sono/ano** hyoosi]-ga
yesterday this book-Nom this/that/that cover-Nom
yabureta (koto)
became torn
Lit. 'This book, this/that/that cover became torn yesterday.'
Cf. kinoo [kono hon]-ga hyoosi-ga yabureta (koto)
yesterday this book-Nom cover-Nom became torn
'This book's cover became torn yesterday.'

The contrast found between (47) and (48) shows that the DP "demonstrative + N" must be used as an independent argument and therefore cannot occur as possessee. In French and Mandarin, a similar restriction is observable, as in (49) (from Cheng and Ritter 1987: 69):

(49) a. * Je lui ai casse **ce** nez
I him have broken this nose
'I have broken this nose of his.'
b. * Wo ba zhi-men ti-le **na-ge** dong
I BA paper-door kick-Asp that-Cl hole
'I kicked that hole in the paper-door.'

These two sets of fact will help us determine whether or not ext-poss-DPs can "raise" out of external arguments in the next section.

5.3 An Intervention Effect: Evidence Against Possessor Raising from External Arguments

This section discusses possessor raising out of external arguments (PR out of EA). Recall that we have examined so far cases of PR in which the possessed DP is the Theme argument of an unaccusative verb. I use "PR out of DO" to refer to cases like (50):

(50) Aiko-ni kono hon$_j$-ga [e_j naiyoo]-ga wakar-ana-i (koto)
A.-Dat this book-Nom content-Nom understand-Neg-Pres
'Aiko does not understand the content of this book.'

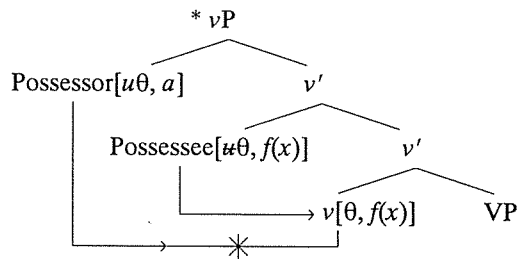
Payne and Barshi (1999) notes:

> Cross-linguistically, [possessor raising] is preferentially associated with direct objects and/or subjects of unaccusative verbs, ... The involvement of unergative

subjects is attested but less common; transitive subject possessa appear to be extremely rare. (p.10)

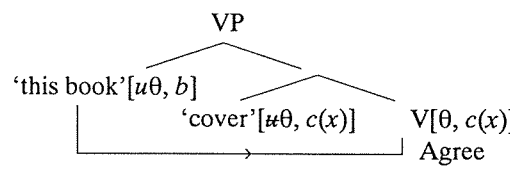
See also Baker (1988), Massam (1985), Borer and Grodzinsky (1986), Landau (1999) for a similar generalization. Our theory of θ-role assignment predicts that the possessed DP should not occur in an external argument position. The spurious derivation for PR out of EA is represented as in (51), where the ext-poss-DP and the possessed DP have the feature sets $[u\theta,a]$ and $[u\theta,f(x)]$, respectively:

(51)



The possessed DP in the lower Spec,vP enters into θ-agreement with v, and v's a-feature remains active, as our hypothesis requires. Next, the ext-poss-DP is merged into the higher Spec,vP. Significantly, as shown in (51), Agree (Possessor,v) is not completed because the possesee is closer to the probe than v. The θ-feature of the possessed DP, which has already undergone Agree, is inactive but remains visible to computation for Full Interpretation. The ext-poss-DP asymmetrically c-commands the possessed DP, and further the latter asymmetrically c-commands v. Consequently, the ext-poss-DP should fail to agree with v. Since, in contrast to this, the possessed DP c-commands V and vice versa in PR out of DO, it does not count as an intervening element for Agree:

(52)



However, as sometimes pointed out, it appears that PR out of EA is allowed in Japanese (and Korean) (see, for example, Ura 1996: 109, and Payne and Barshi 1999: 10). (53a, b) are potential counterexamples to our prediction:

(53) a. Taroo-ga musuko-ga Mary-to kekkonnsita
T.-Nom son-Nom M.-with married
'Taro's son married Mary.'

b. kono terebibangumi-ga naiyoo-ga kodomo-o okor-ase-ru
this TV-program-Nom content-Nom child-Acc angry-Caus-Pres
'This TV program's content makes children angry.'

In these examples, the lower nominative DP obviously serves as an external argument. In the a-example, the DP *musuko* 'son' is the Agent argument of the verb *kekkonsuru* 'marry,' while in the b-example, the DP *naiyoo* 'content' is the Causer argument of the causative morpheme *(s)ase*. If (55a, b) are indeed cases of PR of EA (or, more precisely, if the ext-poss-DP in *v*P agrees with *v*), our hypothesis would be falsified.

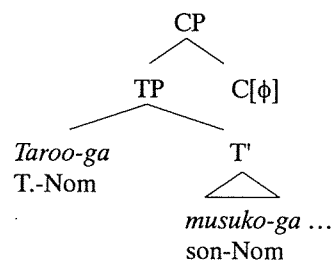
However, there is evidence showing that PR does not take place in (53a, b). First, kinship terms such as *musuko* 'son' seem to be not qualified as possessee in Japanese as well as in Korean and Mandarin (Cheng and Ritter 1987, Maling and Kim 1992). (54) and (55) demonstrate that this is the case:

(54) * [Taroo-ga imooto-ga e_j tukiat-tei-ru] amerikazin$_j$
T.-Nom sister-Nom keep company-Stat-Pres American
Lit. 'the American who Taro's sister has kept accompany with'
(Standard Japanese)

(55) * an hito-no kyoo musuko-no akaka kuruma-ba kaw-asi-ta
that person-Nom today son-Nom red car-Acc buy-Hon-Past
Lit. 'That person's son bought a red car today.'
(Kumamoto Japanese)

(54) is cited from Sugimoto (1986: 237); (55) is adapted from Yoshimura (1994b: 19). The deviance of argument relativization and the impossibility of the *no* marking on the "possessor DP" show that cases like (53a) are MSCs, not PRCs, as represented in (56):

(56)



Let us turn to (53b), where the nominal *naiyoo* 'content,' the inanimate Causer argument of the causative morpheme, appears to function as a possessed DP. Unfortunately, relativization and Kyushu Japanese case marking are not so releasable diagnostics as in the cases we have examined above. This is because, first, it seems to me that when relativization applies to the Experiencer object of the causative construction with an inanimate Causer, the resulting relative clause is somewhat unnatural for unknown reasons even if no major subject is involved. The unnaturalness of (57b) below suggests that the badness of (57a) cannot be attributed simply to its double nominative structure, although there seems to be a contrast between (57a) and (57b):

(57) a.?*/* [[sono terebibangumi-ga naiyoo-ga e_j
that TV-program-Nom content-Nom

okor-ase-ru/ta] hito$_j$]
angry-Caus-Pres/Past person
Lit. 'the person [whom the content of that TV program makes/ made angry]'

b.?/?? [[sono terebibangumi-ga e_j okor-ase-ru/ta] hito$_j$]
that TV-program-Nom angry-Caus-Pres/Past person
Lit. 'the person [whom that TV program makes/ made angry]'

More mysteriously, the unnaturalness of single-nominative (57b) is entirely eliminated if the inanimate Causer argument replaces with an animate one, as in (58):[23]

(58) [Taroo-ga okor-ase-ta] hito
T.-Nom angry-Caus-Past person
'the person whom Taro made angry.'

In addition, we cannot resort to the *ga/no* distinction in Kyushu Japanese to discover what is going on in (53b), because inanimate causatives are very rare in the dialect.

Notice here that there are more reliable tests available for the present purpose. We have shown above that in PRCs, the possessee must lack reference in order for the ext-poss-DP to be licensed. Particularly, the restrictions on non-restrictive modification and the demonstrative *sono* are taken as reflecting this property. If, as predicted, PR out of EA does not occur, the multiple nominative inanimate causative in (53b) should not involve PR and therefore should allow non-restrictive modification and the demonstrative *sono*. This is born out as in (59a, b):

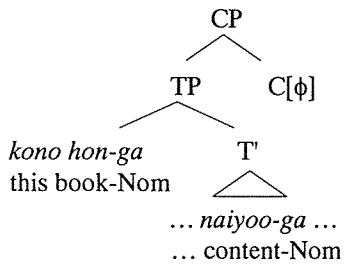
(59) a. kono terebibangumi-ga **tumaranai** naiyoo-ga kodomo-o
this TV-program-Nom boring content-Nom child-Acc
okor-ase-ta
angry-Caus-Past
'This TV program's boring content made children angry.'

b. [kono terebibangumi]-ga **[kono/sono/ano** naiyoo]-ga
this TV-program-Nom this/that/that content-Nom
kodomo-o okor-ase-ta
child-Acc angry-Caus-Past
Lit. 'This TV program, this/that content made children angry.'

(59a, b) robustly show that the "possessed" nominal *naiyoo* is referential in these cases. Our interpretation of the data given in (53b) and (59a, b) is as follows: the nominal 'content' has reference and is θ-marked as an independent argument, and 'this TV program' is a major subject. (53b) is thus assigned the structure (60):

[23] See Pesetsky (1995: 48–49, 69) for other peculiarities of Japanese inanimate causatives.

(60)



Let me summarize the observations we have made as follows:

(61)

	Argument relativiza-tion	Case marking in Kyushu Japanese	Reference of "possessed DPs"
MSC	*no*	*NOM-NOM	N/A
"PR out of EA"	(*no*)	(*NOM-NOM)	referential
PR out of DO	*yes*	✓NOM-NOM	non-referential
NOC	*yes*	✓NOM-NOM	N/A

There is no empirical evidence to believe that PR out of EA is allowed in Japanese. It is then maintained that Japanese data fall under the cross-linguistic generalization that possessed DPs cannot be external arguments (Baker 1988, Massam 1985, Borer and Grodzinsky 1986, Landau 1999).

Appendix to Section 5

Some questions could be raised about the derivation for the PRC sketched above (e.g. (52)). A first question is why the ext-poss-DP can be allowed to undergo merger outside the host DP. Obviously, "internal possession" constructions are possible as in *[hon-no hyoosi]-ga yabureta* (book-Gen cover-Nom became torn) 'the cover of a book became torn.' One might wonder if "Earliness" forces the poss-DP to be merged within the host DP. However, this is not the case. In their extensive study of French inalienable possession constructions, Vergnaud and Zubizarreta (1992) propose that type-denoting (non-referential) DPs are headed by the D that functions as an "expletive" in denotation (realized as the definite article in French) whereas token-denoting (referential) DPs are headed by the non-expletive D. The fact they observe is that inalienable possessed DPs in the possessive dative construction give rise to a type (or non-referential) interpretation while those in the internal possession construction give rise to a token (or referential) interpretation (for their terminology see Vergnaud and Zubizarreta 1992: 611). They argue that only the non-expletive D projects Spec,DP, where the int-poss-DP is generated (Vergnaud and Zubizarreta 1992: 618, 623).[24] Given their determiner system motivated by semantic interpretation

[24] Yoon (1990) proposes that non-referential, possessed nominals are projected only to N'. Note that

of nominals, it follows under our system that in PRCs, the poss-DP is not allowed to be merged in the host DP due to the expletive function of the D. When the non-expletive D is given in the L(exical) A(rray), "Earliness" forces the poss-DP to be merged within the host DP. The DP which contains the int-poss-DP lacks a "gap" (i.e., the DP is rendered referential) since the gap is "bound" by the int-poss-DP, and then Spec,VP, which the ext-poss DP would occupy, is not projected.

A second question as to the derivation of PRCs is what will happen if the ext-poss-DP is merged in Spec,TP. My answer is that such a situation never happen because "Earliness" requires that an ext-poss-DP with an uninterpretable θ-feature be merged to induce θ-agreement earlier than TP is constructed. Thus, the poss-DP *must* be introduced to Spec,VP when the expletive D is given in the LA, or when PR takes place.

If Vergnaud and Zubizarreta's (1992) proposal is on the right track, the bans on demonstratives and non-restrictive modification, which we have seen in sections 5.2–5.3, can be reduced as effects from the expletive D. When a DP is headed by the expletive D, the DP is type-denoting, or non-referential. Therefore, non-restrictive modifiers do not co-occur with the expletive D. For the ban on demonstratives within possessed DPs in PRCs, it is natural to say that the function in denotation of the expletive D conflicts with that of demonstratives.

6 Some Empirical and Theoretical Implications

6.1 Identifying the Restrictions on Possessor Raising Constructions

The analysis we have proposed so far brings some consequences.

Let us consider two questions which were raised in section 1. One is whether or not the configuration of PR is derived via overt movement. Another is where the ban on PR out of EA comes from.

The movement hypothesis is one of the simplest solutions to the θ-theoretic problem. The ext-poss-DP is overtly raised from within the possessed DP (or DP) to the specifier of a functional head higher than V or Spec,VP (see Ura 1996, Landau 1999, Hiraiwa 2000). The ext-poss-DP is θ-marked in its underlying position. Here I would like to point out that the "movement hypothesis" has a potential difficulty under current assumptions. If the ext-poss-DP undergoes A-movement rather than A'-movement, the hypothetical movement of the possessor may violate an A-over-A principle (cf. Fukui 1999 for an A-over-A perspective on locality). Suppose the movement under consideration is EPP-driven. The locality constraint is clearly violated. Suppose, on the other hand, that movement of the possessor is Case-driven (Ura 1996, Landau 1999). Under a strict interpretation of the A-over-A condition, the Case-driven movement does not suffer from an A-over-A violation in languages where the case marking for the ext-poss-DP differs from that for the possessed DP. Landau (1999) argues that in Hebrew, for example, the hypothetical Case-driven movement of the possessive dative out of the accusative object does not apply in an

Vergnaud and Zubizarreta and Yoon share the view that there is no empty *category* that is the source for non-referentiality, contra Guéron (1985), Cheng and Ritter (1987).

A-over-A fashion, as in (62) (from Borer and Grodzinsky 1986: 179):

(62) ha-yalda 'axla li 'et ha-tapu'ax
the-girl ate to-me Acc the-apple
'The girl ate my apple.'

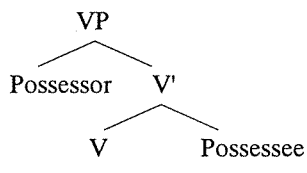
However, the "case-driven movement" turns out to be problematic if we look at examples like the following:

(63) boku-ni John$_j$-ga [e_j atama]-ga tatak-e-na-i (koto)
I-Dat J.-Nom head-Nom hit-can-Neg-Pres
'I cannot hit John's head.'

In (63), PR takes place from the nominative object. If Takezawa (1987) and Ura (1996, 2000), among others, are correct in that Spec,TP is occupied by the dative Experiencer, we have to take (63) to indicate that movement is driven by nominative Case checking *within* the domain of a lexical head. The analysis is clearly inconsistent with the prevailing assumption that nominative Case is associated with T (cf. Tada 1992). Therefore, it is reasonable to claim that the ext-poss-DP base-generated in Spec,VP.

Let us turn to the second question: Where does the subject/object asymmetry come from? I insisted earlier that, viewed from θ-theory, any language should allow the configuration (64a) for PR out of DO. We are now in a position to ask whether (64b) is ruled out by Case theory or/and θ-theory.

(64) a.



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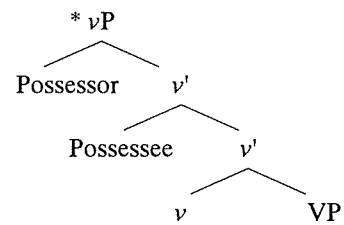


In his extensive analysis of the possessive dative construction, Landau (1999) argues that the possessee cannot be an external argument because, roughly put, dative Case assignment is available only in VP (Landau 1999: 11–12). While I have no direct empirical evidence against excluding PR out of EA in the possessive dative construction in terms of Case theory, it is mandatory to state that (64b) does not satisfy the θ-theoretic conditions. As I discussed in section 2, Japanese employs a multiple nominative Case-checking strategy: when both the possessor and the possessee enter into checking with a Case-assigner, no intervention effect should not arise in the spurious configuration (64b) with regard to Case assignment, as many studies have argued. Then, there is no imaginable Case-theoretic factor barring (64b) in Japanese.

The data from Japanese does not merely support the base-generation approach to PR but also demonstrate that θ-theory, rather than Case theory, governs the range of possible PR configurations. Put in another way, this view claims that θ-theory,

which does not differ from language to language, allows (64a) but disallows (64b), and that Case theory, which is subject to prametrization, is responsible for whether or not (64a) materializes and how it materializes in a particular language.

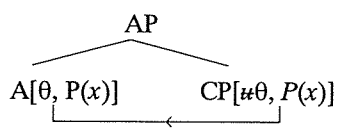
6.2 θ-Agreement in the Tough *Construction in English*

We have been proposing that one predictive head thematically licenses two arguments if and only if (I) the argument is the sister of the θ-assigner; (II) the r-feature of the inner argument contains a variable. Of course, the "multiple θ-role assignment" is possible only if the two arguments are successfully assigned Case. In Japanese, T is given a multiple Case checking strategy, hence the possibility of nominative PRCs. In some other languages which allow transitive PRCs, a special case marking is available in VP: the possessive dative in Romance languages, multiple accusative case marking in Korean, and the *ba* marking in Mandarin. Consequently, we have the following prediction: if a language allows the properties (I) and (II) on the one hand, and a situation in which arguments need no Case on the other hand, then the language should allow for multiple θ-role assignment in our sense even if the language has no potential of a special case marking such as the possessive dative. We have a good candidate for such kind of argument phrase in languages like English: CP appearing in the *tough* construction, which is presented in (65):

(65) Bill_j is difficult [for Mary_k] [$_{CP}$ Op_j C [$_{TP}$ PRO_k to get along with t_j]]

Given our θ-theory, the subject of the *tough* construction (TS) can analyzed to be an additional argument in the sense that predicates of the class are intrinsically two-place predicates, but the surface structure appears to allow three arguments (i.e. the TS, the Experiencer *for*-phrase, and the CP). If we assume with Williams (1981, 1987) that clauses have referential values just as nouns do, the CP in (65) has r-feature $P(x)$, in which the source of variable x would be a null operator. It seems to be the case that clauses of the form [$_{CP}$ PRO to V e] do not occur in argument positions in other contexts than those provided by the *tough* construction. Part of the derivation for (65) is illustrated as follows:[25]

(66) i.



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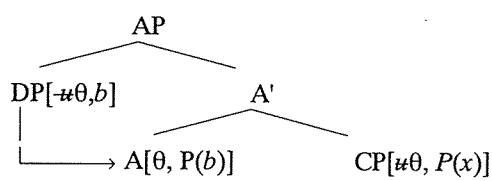


[25] I ignore the (optional) Experiencer argument for simplicity.

At the point of the derivation (i), the adjectival head *difficult* is merged with the CP *to get along with*. The uninterpretable θ-feature on the CP triggers Agree (CP,A), where the a-feature of A is assigned $P(x)$, as in (66i). Next, when it is introduced into the structure via Merge, the TS with an uninterpretable θ-feature probes a matching feature in A. Thus, the TS *Bill*, which is qualified to be an additional argument of *difficult*, successfully "receives a θ-role."

Note that in Agree (TS,A) in (66ii), the goal A is active for Agree since its a-feature bears the variable x at the point of (66i). The prediction is that if the CP does not contain any gap, Agree (TS,A) is not established since A must have been made inactive through Agree triggered by the referentially-complete CP. This expectation is empirically correct.

(67) * Bill_j is difficult for Mary [$_{CP}$ to get along with $\text{John/him}_{j/k}$]

The present analysis of the *tough* construction solves a long-standing paradox concerning the lexical subcategorization of the class of predicate. Let us briefly review the paradox. Lasnik and Fiengo (1974) convincingly argue, against the so-called *Tough* Movement analysis, that predicates of the class assign their surface subject position a θ-role. The TS is indeed θ-marked as is evidenced by (68) and (69), which Lasnik and Fiengo (1974: 541, 543) observe:

(68) a. * Tabs_j were easy to keep t_j on Mary
b. * Advantage_j was easy to take t_j of Bill
(69) a. Bill is being easy to please
b. * Bill is being certain to win the race

The idiom test in (68a, b) suggests that the TS is thematic. In addition, (69) counts as potential evidence for the thematic TS. This is so if it is correct that the progressive form of *be* is allowed in front of adjectives only if adjectival predicates assign θ-roles to its surface (animate) subjects Paradoxically, the expletive *it* is allowed in the subject position as in (70):

(70) It is difficult for Mary to get along with Bill

Lasnik and Fiengo then conclude that predicates like *tough, difficult*, and *impossible* etc. have the subcategorization frame whose subject position is a non-theta-position. (68) and (69) are used by Lasnik and Fiengo to support the dual subcategorization hypothesis. The paradox thus disappears.

Note that a θ-theoretic paradox is taken seriously when we are aware that predicates of the class are, ideally, uniformly two-place predicates. Chomsky (1981) remarks:

> There is no contradiction in the assumption of dual lexical entries, though it seems questionable and is a departure from the optionality assumption that we have so far found to be tenable in discussing the projection principle and the θ criterion.

(p.311)

Along this line, Chomsky (1981: §5.4) provides an alternative against the dual subcategorization, that the TS position is not a θ-position either in *Bill is difficult for John to get along with* or *it is difficult for John to get along with Bill.* Chomsky's account is that the θ-role is transmitted from the trace of the null operator to the lexical subject position, which is made possible through some sort of 'reanalysis' presented in (71):

(71) John$_j$ is [easy to please] t_j

The reanalysis process forces the trace to be interpreted as an anaphor (cf. Chomsky 1981: § 2.4), rather than a bound variable.

Obviously, the status of the process of reanalysis in grammar is unclear under a recent framework of assumptions. On the other hand, there is a potential problem with Lasnik and Fiengo's approach: if predicates like *tough* can take three arguments, one would have to answer why the infinitival complement is required to contain a null operator only when used in the *tough* construction, as shown by the ungrammaticality of (67). Fortunately, our theory does not suffer from the paradox pointed out by Chomsky, and offers a simple explanation for the need of null operator movement in the infinitival CP. Under the analysis given in (66), the fact that the TS is a θ-position follows as a consequence of the referential property of the clausal argument CP. Significantly, the CP contains a variable, and therefore the adjective remains active after the first θ-Agree. As a result, the adjective can undergo a further θ-Agree. Thus, we conclude that predicates of the *tough* type uniformly take the Experiencer and the Theme as their intrinsic arguments. The TS is a θ-position due to the mechanism of θ-Agree I am proposing.

6.3 Some Theoretical Implications

Our θ-theory assumes θ-features to be formal features in the sense that they induce feature matching effects in the operation Agree. As is now clear, if we did not take θ-features to be formal features, we would lose a θ-theoretic explanation for the subject/object asymmetry in Japanese, which we demonstrated comes from the intervention constraint imposed on Agree in general. The idea that θ-roles undergo syntactic operations like Checking or Agree is seen in recent studies including Lasnik (1995, 1999), Bošković and Takahashi (1998), Hornstein (1999), Saito and Hoshi (2000). Our analysis supports the idea.

Let me here take up an issue concerning the interaction between traces of A-movement and θ-role assignment. While arguing that A-movement does not leave a trace, Lasnik (1999: 207) points out that elimination of A-traces requires us to find a way to ensure thematic interpretation of arguments at LF without appealing to their initial traces (cf. Chomsky 1995, Baker 1997). Lasnik notes:

> θ-roles are "checked" in the course of derivation. The moved element is itself

then a record of the crucial part of the history of its derivation. (p. 207)

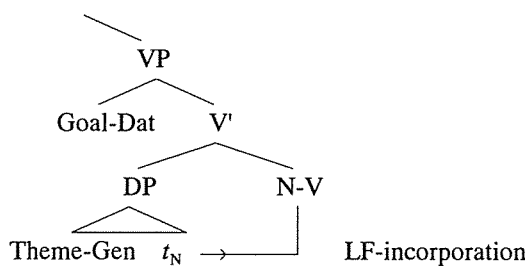
Saito and Hoshi (2000, 286) independently reach the same conclusion. Lasnik's statement seems to amount to saying that a θ-role is "transferred" from a predicate to its argument (or the θ-role is literally "assigned" to an argument by a predicate) in some manner. For approaches of the kind that Lasnik (1999) and Saito and Hoshi (2000) propose, some local operation for θ-role assignment must be available.

Our θ-theory offers an alternative view while maintaining that A-traces are not permitted. "Base properties" are recorded in the course of derivation in a different way under the proposed θ-theory. Recall that the proposed mechanism argues that predicative heads record thematic information that is read off at LF. As introduced in section 4, a predicative head π is located by Agree triggered by an argument α, and, as a result, π is given a pair of an interpretable θ-feature and an interpretable a-feature. For example, in the sentence *Bill will leave*, *v* gains the pair of features [θ,*b*] after Agree (*Bill*,*v*), which contributes to the interpretation of the sentence. Thus, without chains of arguments, base properties are "checked" at LF.[26]

Consider here PR under the approach presupposing θ-role transfer. For the present purposes, we will limit our attention to the possibility of PR out of DO and the failure of PR out of EA. A conceivable analysis comes from the θ-theory proposed by Saito and Hoshi (2000). In their extensive analysis of the Japanese light verb construction (LVC), Saito and Hoshi argue that a θ-role assigning noun is incorporated into the dummy light verb *su*, and that the N-V complex θ-marks a specifier of the light verb, on the assumption that an argument can be θ-marked within the maximal projection of a lexical predicate (see also Grimshaw and Mester 1988 for the LVC). Consider the light verb example (72), with a derivation as in (73i) and (73ii):

(72) Taro-ga Hanako-ni [$_{DP}$ toti-no zyooto]-o sita
T.-Nom H.-to land-Gen giving-Acc did
'Taro gave a piece of land to Hanako.'

(73) (i)

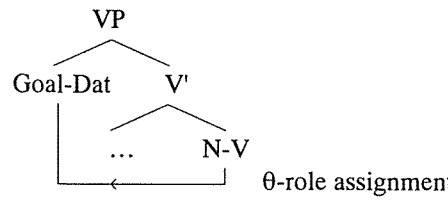


In (73i), the Goal and the Theme are projected outside and inside the projection of the θ-assigning nominal *zyooto* 'giving,' respectively. The Goal is θ-marked by the

[26] The proposed value assignment mechanism leads us to a further speculation. *Wh*-phrases, null operators, or quantified expressions might differ from *John* or *her* with respect to "referentiality." If r-features of expressions of the former group contain variables, then the a-features of goal predicates gain variables. If, furthermore, such variables are utilized for constructing operator-variable pairs, the possibility arises that even (some instances of) A'-movement need not leave traces.

light verb into which the θ-role assigner is incorporated as in (73ii):

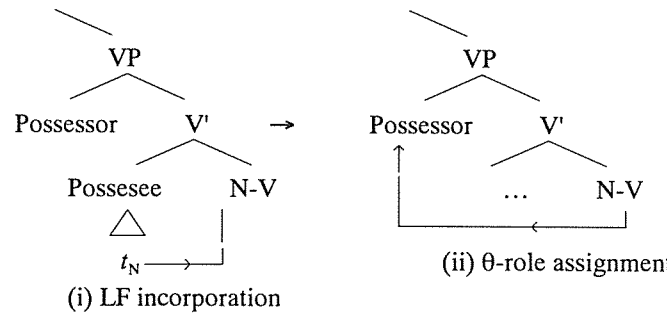
(73) (ii)



Note further that, for Saito and Hoshi, that the instance of noun incorporation respects Last Resort in the way the incorporation is motivated by θ-role assignment to an argument, located outside the projection of the original θ-assigner.

The analysis of the LVC in (73) extends directly to PR. (74) represents a possible application of Saito-Hoshi's theory:

(74)



In (74), The θ-assigner N, incorporated into V, θ-marks the ext-poss-DP (see for a similar approach Cheng and Ritter 1987). Thus the analysis offers another possible solution to the theta-theoretic problem. The LF incorporation analysis of PR also derives the absence of PR out of EA in a manner familiar from Baker's (1988) analysis of noun incorporation. If lowering is totally prohibited, the θ-role assigning head is not permitted to move from within the EA position to a verbal head.

However, there is a conceptual reason to think that our approach is preferred under recent assumptions . The LF-incorporation approach clearly requires "look ahead" (see Chomsky 1995, 2000).[27] Crucially, Saito and Hoshi (2000: 276) assume that "θ-role assignment motivates the LF incorporation." As (74) illustrates, θ-role assignment to the ext-poss-DP is twofold: LF incorporation in (74i) and θ-marking in (74ii). Since each operation is independent of the other, the motivation of the LF incorporation remains unclear, hence "look ahead." In contrast, θ-Agree can be determined locally in the way that an uninterpretable θ-feature starts to search for a matching feature (see Chomsky 2000: 127). No "look ahead" is required under our assumptions.

Thus, our agreement-based θ-theory does not only offer a way to ensure thematic interpretation without appealing to A-chains, but also avoid "look-ahead." At the

[27] I am indebted to discussions with Ken Hiraiwa (p.c.) for this point.

same time, our proposal lends support to Chomsky's (2000: 119) claim that features are not movable. The remaining task is to examine whether or not the proposed theory applies to the LVC, which Saito and Hoshi discuss. I will leave it for future research, though.

7 CONCLUSION

This paper has proposed a possibility that θ-role assignment, like structural Case assignment, is taken to be an instance of Agree. It has argued that the uninterpretable θ-feature on an argument probes and agrees with the matching feature of a predicative head, when the goal's a-feature is valued according to the referential value of the probe's r-feature. This proposal was empirically motivated by the fact that possessor raising from direct objects or unaccusative subjects (PR out of DO) is found in many languages whereas possessor raising from external arguments (PR out of EA) is almost universally excluded. The subject/object asymmetry manifested by PR is straightforwardly captured if we assume that θ-Agree is subject to the intervention constraint that Agree obeys.

Our proposal implies that the impossibility of PR out of EA should be accounted for by θ-theory rather than Case theory. This empirical statement is evidenced by the data from nominative PR in Japanese. If Case theory should rule out PR out of EA in other languages, PR out of EA would be allowed in Japanese because T in the language has the potential to check an unlimited number of nominative case features in principle. In Romance languages and Hebrew, the θ-theoretic restriction on possessor raising is disguised with a property of the possessive dative, which is only permitted to appear within verb phrases. These comparative considerations revealed that the ext-poss-DP is base-generated outside the projection of the possessed DP, or it is not true that the ext-poss-DP is raised out of the possessed DP by syntactic movement. If one assumes extraction of the ext-poss-DP from the possessed DP, it would be harder to capture the fact that the nominative object, which is widely assumed to undergo checking at LF, launches the possessor.

Note that our arguments crucially depend on the assumption that Japanese does not have PR out of EA. Nevertheless, the impossibility of PR out of EA was not directly observable, because in standard Japanese, PR occurs in the Nom-Nom form, and the language has a syntactically distinct construction with the same case array, i.e. the major subject construction (MSC). Sections 3–4 were devoted to detecting basic differences between PRCs and MSCs. In the existing literature, it was often maintained that every multiple nominative construction has the same structure, in which the higher nominative phrase (namely, major subject) has been regarded as non-θ-related and base-generated in TP. However, our observations discovered that such a structural property is limited to MSCs and that there is a sentence form in which the higher subject, like regular thematic arguments, is base-generated in Spec,VP. This structural distinction was supported with ample evidence: relativization, Kyushu Japanese case marking, and interpretation of nominative phrases.

Having established that the ext-poss-DP is merged in Spec,VP, I attempted to explain the fact that both the ext-poss-DP and the possessed DP are θ-marked within a

verb phrase, proposing the above-mentioned Agree-based theory of θ-role assignment. An important point is that the data reveals that the possessed DP's being non-referential renders it possible for an additional argument (i.e. the ext-poss-DP) to occur in VP. Section 5 demonstrated that in apparent PR out of EA, the possessed DP does not lack reference. From this, it was concluded that in such cases, the higher nominative DP which enters into a possession relation with an external argument, is not licensed by θ-agreement but is a major subject in reality. Thus the possibility of PR out of EA is epiphenomenal. Our theoretical claims are empirically supported to the extent that the observations are correct.

In conclusion, both Case assignment and θ-role assignment were considered to involve the notion "government" in GB frameworks (e.g. Chomsky 1981). Roughly speaking, α assigns a Case/θ-role to β when α governs β. As Chomsky (1981: 36) remarks, "government" is "the fundamental concept unifying various subtheories." In Chomsky (1995, 2000), θ-role assignment is a totally different process from Case assignment/agreement. The report presented above is in favor of the older approach in the sense that the Case/agreement system and the θ-system utilize the same mechanism. The two systems differ only in the X'-theoretic status of probe and goal. "Phrases" serve as probes and X° elements serve as goals in the θ-system, whereas the reverse relation holds in the Case/agreement system. This asymmetry, a departure from the assumption that only X° elements function as probes, raises interesting questions about phrase structure (cf. Chomsky 1999, 2000, Collins 1999, Carnie 2000). To formulate and answer such questions is beyond the scope of the paper.

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