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THE ANALYSIS OF JAPANESE CASE PARTICLES AS DETERMINERS

By

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ABSTRACT

THE ANALYSIS OF JAPANESE CASE PARTICLES AS DETERMINERS

By

Tomomi Kakegawa

This dissertation analyzes various kinds of Japanese noun phrases - noun phrases containing numeral classifier phrases (NCPs), the NPI *dare-mo* 'anyone', the generic *dare-mo* 'all people', the universal *dare-mo-ga/o* 'everyone-Nom/Acc', and noun phrases that involve modifiers with the particle *no* - and argues that Japanese Case particles *ga* and *o* are syntactic determiners while the particle *no* is a complementizer.

By treating the Case particles *ga* and *o* as Ds, the present analysis accounts for a number of phenomena: first, the contrast between the indefinite and the definite interpretations of numerically quantified noun phrases; second, distributional differences between the numerically modified noun phrases of the form NP-Case-NCP (the Case-medial form) and NP-NCP-Case (the Case-final form), their modification facts, and various asymmetry phenomena associated with the Case-medial form; third, the contrast between the NPI *dare-mo* 'anyone' and the non-NPI *dare-mo* 'everyone', that is, the NPI *dare-mo* cannot take a Case particle and it requires a negation, whereas the universal *dare-mo* 'everyone' must have a Case particle and it does not require a negation; and fourth, differences between the NPI *dare-mo* 'anyone' and the universal *dare-mo* 'everyone' with regard to modification facts.

My research shows that the Case-medial form constitutes NumPs rather than DPs, whereas the Case-final form projects DPs with an overt NumP and a D filled with a Case

particle. I suggest that the combination of number and the overt D gives rise to a definite reading. I also argue that the NPI *dare-mo* 'anyone' is a DP with a null D head that is a variable bound by a negative operator, while the universal *dare-mo* 'everyone' is a DP whose head is filled by a Case particle, and hence, not bound by a negative operator.

To my family

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I thank my fellow Japanese graduate students and their families for lending me their native intuitions and putting up with my annoying syntax questions. I cannot list all of them but the following people came to my mind as I write this: Akiko Hagiwara, Terumi Imai, Sachie Miyazaki, Miki Motohashi, Chisato Murakami, Masahiko and Yoko Mutsukawa, Nao Nakano, Yoshimi Sakakibara and Midori Yonezawa. I am sure there were more victims that crossed my way as I pondered upon various sentences. I appreciate all their help.

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I cannot end this acknowledgement without thanking my parents in Japan (although they won't be able to read this), who don't know anything about linguistics but have nonetheless always been supportive of my studies.

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Last but not least, I thank my little Taiyo for arriving unexpectedly early, literally lifting the weight off my back before my defense so that I could defend my dissertation comfortably. He has already brought many joys in my life in many ways.

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LIST OF ABBREVIATIONS

Acc	accusative
Adnm	adnominal form
Cl	classifier
Cntr	contrastive focus marker
Comp	complementizer
Cop	copula
Dat	dative
Def	definite
DST	distributive operator
Gen	genitive
GEN	generic operator
Hon	honorific
Indef	indefinite
Lit	literal translation0
Loc	location
MOD	modification marker
Neg	negation
Nmlz	nominalizer
Nom	nominative
OP	operator
Past	past tense
Pres	present tense
Spec	specifier
Top	topic marker
TQ	tag question
Q	question marker

CHAPTER 1

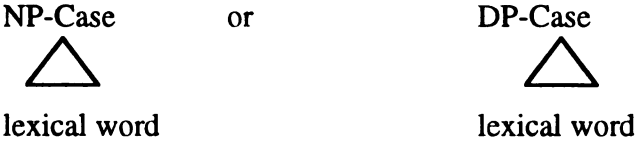
INTRODUCTION

1.1 Purpose and scope

This dissertation examines Japanese noun phrases with a goal of identifying the syntactic status of Case particles in Japanese. Of particular interest is the structure of numeral classifier phrases (NCPs), the structures of the negative polarity item (NPI) *dare-mo* 'anyone' and the universal *dare-mo-ga/o* 'everyone-Nom/Acc' and the role of Case particles in the interpretation of those noun phrases. The aim of the present research is to demonstrate the significance of Case particles in the internal syntax of Japanese noun phrases and to motivate their status as syntactic determiners.

There are two major views about Japanese Case particles. Under one view, a Case particle is a morpheme that marks morphological Case, possibly inserted post-syntactically, and therefore, it does not have any syntactic position (Saito 1985, Murasugi 1991, Miyagawa 1989). In such an approach, noun phrases have the schematic structure shown in (1).[1] Under the second view, Case particles are analyzed as functional heads and are given a syntactic position, and hence noun phrases have the structure shown in (2).[2]

(1) a.



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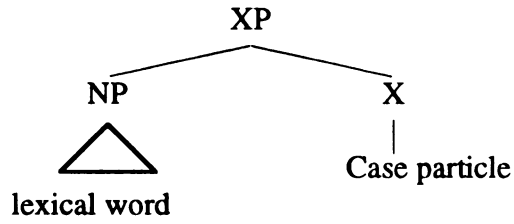
[1] The idea that noun phrases form determiner phrases (DPs) will be introduced shortly.

[2] Grammatical categories are divided into lexical and functional categories. Lexical categories are V(erb), N(oun), A(djective), Adv(erb) and P(ost/reposition). Functional categories include C(omplementizer), T(ense), and other inflectional elements, and D(eterminer), etc.

(2)



This dissertation is in support of the second view, and in particular, it argues for the category X in (2) as a D. My arguments for an analysis of Case particles as determiners are built on the syntactic distribution and the semantic contribution of the Case particles *ga* (Nominative) and *o* (Accusative) and *no* (Genitive) in relation to Numeral Classifier Phrases (NCPs), the Negative Polarity Item (NPI) *dare-mo* 'anyone' and the non-NPI *dare-mo* 'everyone', and modified noun phrases. I argue that a proper account of the syntactic distributions of Case particles and their semantic effects on noun phrases calls for the analysis of Case particles as Ds.

1.2 Problems to be dealt with

In section 1.2.1-1.2.3, I will describe some of syntactic and semantic issues that I will investigate in my dissertation. These phenomena can be best analyzed by taking the Case particles to be Ds. A more detailed introduction and discussion of each problem will be offered in subsequent chapters.

1.2.1 NP-Case-NCP vs. NP-NCP-Case

The position of a Case particle in relation to the NCP and its associate NP may vary, and different placements give distinct meanings to the quantified noun phrases, as shown in (3).

(3) a John-ga [hon-**o** san-satu] katta. (indefinite)
J-Nom book-Acc 3-Classifier bought
'John bought three books.'

b. John-ga [hon san-satu -**o**] katta. (definite)
J-Nom book 3-Classifier-Acc bought
'John bought the three books.'

In (3a), *hon-o san-satu* 'three books' has an indefinite reading, whereas *hon san-satu-o* 'the three books' in (3b) gives a definite reading. An important point to note is that the Acc Case particle *o* appears between the NP and the NCP in (3a) whereas the Case particle appears after the NP and the NCP in (3b). The examples in (3) suggest that the position of Case particles with respect to the NCP determines whether the noun phrase has an indefinite or a definite reading. In Chapter 2, I will propose a structural analysis of the NP-Case-NCP phrase and the NP-NCP-Case phrase that accounts for their semantic differences syntactically by taking Case particles as Ds.

1.2.2 NPI and non-NPI *dare-mo*

Japanese *dare-mo* has two different interpretations depending on whether it is Case-marked. *Dare-mo* without a Case marker is a Negative Polarity Item (NPI) and cannot occur without a negation, as shown in (4a,b).[3] Importantly, when it is Case-marked it cannot retain its NPI interpretation, as in (4c).

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3 The NPI and non-NPI *dare-mo* have different pitch accent patterns. I use the upper case letter to express high pitch and the lower case letter to indicate low pitch.

(4) a. daRE-MO ko-**nai**.
who-also come-**Neg**-Pres
'Nobody will come.'

b. * daRE-MO kur-u.
who- also come-Pres
Intended: 'Anyone will come.'

c. * daRE-MO-**ga** ko-**nai**.
who-also-Nom come-**Neg**-Pres
Intended: Nobody will come.'

On the other hand, *dare-mo* with a case marker is interpreted as 'everyone' and it is not an NPI. Therefore, unlike the non-Case-marked *dare-mo*, the universal *dare-mo* may be used without negation as in (5a) but must be case-marked as in (5b).

(5) a. DAre-mo-ga ki-ta.
who- also -Nom come-Past
'Everyone came.'

b. * DAre-mo ki-ta.
who- also come-Past
Intended: 'Everyone came.'

In Chapter 3 I will argue that semantic and syntactic differences of the NPI and non-NPI *dare-mo* come from the distinct DP structures that they form. I will show that the distributional differences between the non case-marked *dare-mo* 'anyone' and the case-marked *dare-mo* 'everyone' can be accounted for with the crosslinguistic variation of DP structure proposed in Depréz 2000 if Case particles are analyzed as Ds.

1.2.3 Modifier-*no* NP

I will analyze the particle *no* that appears with modifiers of noun phrases, as shown in (6).

(6) a. Kore-wa Bill-**no** hon desu.
this-Top Bill-NO book Cop
'This is Bill's book.'

b. John-wa yasui-**no**-o katta.
J-Top cheap-NO-Acc bought
'John bought a cheap one.'

The *no* in (6a) is generally analyzed as a genitive Case marker and the one in (6b) as a pronoun. In Chapter 4 I will show that *no* behaves differently compared to the syntactic and semantic functions of Case particles *ga* and *o* identified in Chapter 2 and 3. Therefore, based on more data that involve *no*, I argue that Japanese *no* is uniformly a complementizer (C).

1.3 A brief introduction to Japanese

In this section I will briefly introduce some properties of the Japanese language, namely, use of particles, classifiers, *pro* arguments, and scrambling, and lay out some of the assumptions that I make regarding its structure.

1.3.1 Particles

An important characteristic of Japanese is the use of particles, which indicate various syntactic and semantic properties. The following examples depict some of the common particles in Japanese:

(7)
a. John-**ga** uchi-**de** syukudai-**o** sita.
J-**Nom** home-**at** homework-**Acc** did
'John did homework at home.'

b. Mary-**wa** mai niti gakkou-**e** iku.
M-**Top**every day school-**to** go
'Mary goes to school every day.'

c. John-**no** imouto-**kara** tegami-**ga** kita.
J-**Gen** younger sister-**from** letter-**Nom** came
'A letter came from John's younger sister.'

d. Amy-**ga** John-**ni** atta.
A-**Nom** J-**Dat** met
'Amy met John.'

e. Amy-**ga** John-**ni-wa** atta.
Amy-Nom J-Dat-**Cntr** met
'Amy met John (but not others).'

As you can see from the glosses, particles like *ga, o, no* and *ni* are considered to be morphological Case markers for nominative, accusative, genitive and dative Case,

respectively.[4] The particle *wa* is a Topic marker in (7b), or a Contrastive focus marker in (7e), and it can follow other particles and co-occur with them, except with *ga* and with *o*, which *wa* replaces. Others like *de* 'at' and *kara* 'from' are considered to be postpositions. The previous studies on the syntactic status of particles will be discussed in section 1.6.

1.3.2 Classifiers

Numerals must co-occur with a classifier phrase (Cl) when quantifying a noun phrase in Japanese, as shown in (8).

(8) a. John-ga hon-o san-**satu** katta.
J-nom book-Acc 3-**Cl** bought
'John bought three books.'

b. Mary-ga toohu-o san-**tyoo** tabeta.
M-Nom tofu-Acc 3-**Cl** ate
'Mary ate three pieces of cheese.'

c. * John-ga hon-o san katta.
J-nom book-Acc three bought

d. * Mary-ga toohu-o san tabeta.
M-Nom tofu-Acc 3 ate

The absence of the classifiers in (8c,d) causes the sentence to be ungrammatical. In non-classifier languages, for example in English, something similar to classifiers is used when counting entities expressed with mass nouns as shown in (9a), but nothing other than a numeral phrase and a plural marker are required when the quantity of count nouns is expressed as shown in (9c).

(9) a. three **pieces** of cheese
b. * three cheese
c. three books/pencils/computers

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[4] However, some instances of *ni* have different distributions and they are considered to be postpositions. See Sadakane and Koizumi (1995) and Muromatsu (1998) for discussions. As for the particle *no*, in Chapter 4, I will propose that it is not a Case particle.

The choice of classifier depends on the object that is enumerated by the numeral. Therefore, the sentence becomes ungrammatical if the noun phrase and its classifier do not match, as shown below.

(10) * Mary-ga toohu-o san-**tyoo** tabeta.
M-Nom tofu-Acc 3-**Cl** ate
Intended: 'Mary ate three pieces of cheese.'

(10) is not acceptable because the classifier *satu* is for bound materials such as books and magazines, and hence, it cannot be used to count pieces of cheese. I will assume that the matching of noun phrases and their classifiers needs to be established syntactically. The syntactic status of classifiers will be discussed in section 1.4.1.3 in this chapter.

1.3.3 *Pro* arguments

Another characteristic of Japanese to note is that it is a *pro*-drop language, and hence, it allows contextually recoverable elements of the sentence to be covert, as shown in (11) and (12).

(11) John-ga$_i$ piza-o$_j$ katta. Sosite *pro*$_i$ *pro*$_j$ tabeta.
J-Nom pizza-Acc bought. and pro pro ate
'John$_i$ bought a pizza$_j$. And *pro*$_i$ ate *pro*$_j$.'

(12) John-wa CD-o$_i$ ni-mai katta. Bill-wa *pro*$_i$ san-mai katta.[5]
J-Top CD-Acc 3-Cl bought B-Top pro 3-Cl bought
'John bought 2 CDs$_i$. Bill bought two *pro*$_i$.'

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[5] In Japanese the subject of the sentence is generally topicalized and marked with a topic marker *wa*. As a result, *ga*-marked subjects are less common. Therefore, in the literature, examples are often embeded in *koto* 'fact' phrase in order to make *ga* marking of the subject sound more natural, since the topic marker *wa* cannot appear inside a modifying clause, as shown in (i).

(i) a. * [John-wa kinoo piza-o tabeta] koto
J-Top yesterday pizza-Acc ate fact
Intended: 'the fact that John ate pizza yesterday'
b. [John-ga kinoo piza-o tabeta] koto
J-Nom yesterday pizza-Acc ate fact

Following Déchaine and Wiltschko (2002), I will assume that not all *pro* have the same syntactic structures, i.e., some *pro* may have more complex noun phrase structures than others. This assumption will become especially important for the analysis of modified noun phrases, which will be discussed in Chapter 4.

1.3.4 Scrambling

Japanese sentences have an unmarked surface order of SOV, but dislocation of various phrases is possible due to scrambling, as long as V remains in the clause-final position.[6] This is illustrated in (13):

(13) a. John-ga Mary-ni hana-o age-ta.
J-Nom M-Dat flower-Acc give-past
'John gave flowers to Mary'

b. John-ga hana-o Mary-ni age-ta.
J-Nom flower-Acc M-Dat give-past

c. Hana-o John-ga Mary-ni age-ta.
flower-Acc J-Nom M-Dat give-past

d. * Mary-ni John-ga age-ta hana-o.
M-Dat J-Nom give-past flower-Acc

(13a) shows the unmarked order. In (13b), the direct object precedes the indirect object, and it can also precede the subject as in (13c). There are other possible orders as well. The sentence (13d) is, however, not acceptable, because the verb is not in the clause final position. I will discuss the assumptions I make in this dissertation with regard to the analysis of scrambling in Chapter 2.

'the fact that John ate pizza yesterday'
For simplicity, however, I will use examples with *ga* without embedding it inside the *koto* 'fact' phrase.

[6] However, post-posing of some phrases are possible in spoken Japanese, which may derive non-V-final sentences. See Simon (1990) for a syntactic analysis of Japanese post-posing.

1.4 Theoretical Assumptions

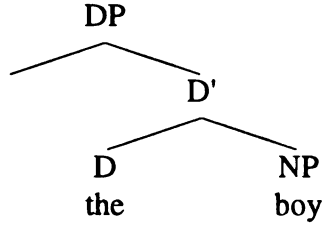
1.4.1 Structure of Noun Phrases

In analyzing Japanese noun phrases and identifying a syntactic position for Case particles, it is important to examine what has been proposed for noun phrases in other languages so as to keep my analysis compatible with crosslinguistic analyses. This will lead us to a greater uniformity for the syntax of noun phrases. Therefore, in this section I review some recent proposals for structures of noun phrases and lay out the assumptions I adopt in my analysis.

1.4.1.1 Determiner Phrase (DP)

Many researchers have argued for a structural parallel between clauses and noun phrases in analyses of various languages such as English, Hungarian, and Thai (Abney 1987, Valois 1991, Szabolcsi 1994, Visonyanggoon 2000).[7] They propose that the determiner heads argument noun phrases, forming a determiner phrase (DP), rather than an NP. Under this approach, a phrase like 'the boy' is analyzed as in (14a), instead of (14b).

(14) a.



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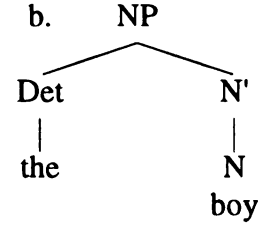
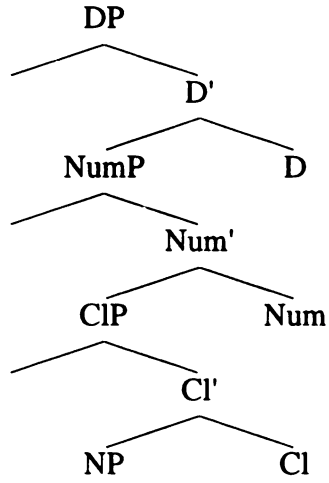


[7] Szabolcsi illustrates the parallel between D and C with the following: both are functional categories, have their Spec positions for an operator and they work as an escape hatch for movement. In addition they both function as a 'subordinator', which creates an argument for predicates. This idea will be discussed in more detail shortly.

In addition, various functional heads between NP and D have been proposed, which also parallel functional projections between VP and C, such as Agreement (Agr) or Tense (T). In this dissertation, I will assume the following structure for fully projected noun phrases, and in what follows, I examine each one of the functional heads assumed; determiner (D), number (Num) and classifier (Cl).[8/9]

(15)



Many researchers have proposed the same structure for noun phrases in other classifier languages (Cheng and Sybesma 1999, Li 1999, Visonyanggoon 2000).

Following Szabolcsi (1994), I assume that there are at least two functions of Ds, a 'subordinator' and quantifiers/demonstratives, though not all Ds have both functions. Szabolcsi argues that in some languages, D is a purely syntactic element which functions as a 'subordinator'. A subordinator creates an argument for a predicate by combining with some phrase that cannot otherwise be an argument of a

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[8] Functions/motivations for each node will be discussed shortly.

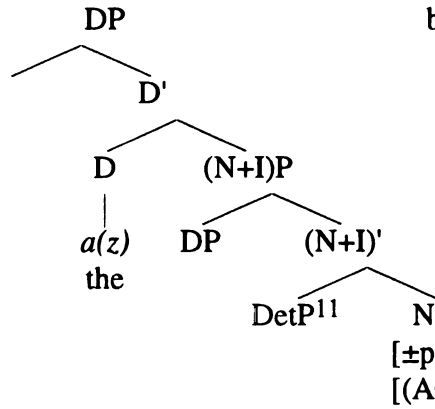
[9] The order of the head is irrelevant. For the head initial language, each head is on the left.

predicate (Szabolcsi 1994:214).[10] The notion of subordinator is more easily understood with a complementizer, as shown in (16) with a Spanish example.

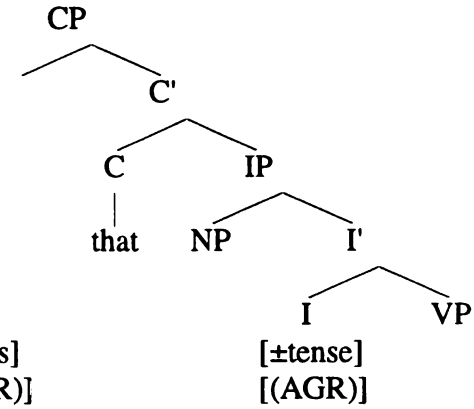
(16) Yo sé *(que) Juan es inteligente.
I know.1sg (that) John is intelligent
'I know that John is intelligent.'

In (16), for the clause *Juan es inteligente* to be an argument of *sé*, the complementizer *que* 'that' is required. In the same way, Szabolcsi argues that a D is required to introduce a noun phrase as an argument of a predicate. She proposes the structures in (17) for DP and CP (Szabolcsi's (22a) in Hungarian and (22b) in English).

(17) a.



b.



In many languages, D is associated with picking out a unique referent of what the noun phrase describes. This may be so because some Ds function like a demonstrative.[12] In some languages, a D may have only one of the above functions and the two functions are realized by distinct Ds separately. In other languages two functions may be conflated in one lexical item. Szabolcsi argues that in the case of

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[10] This amounts to saying that only DPs can be an argument but I do not follow Szabolcsi strictly on this point.

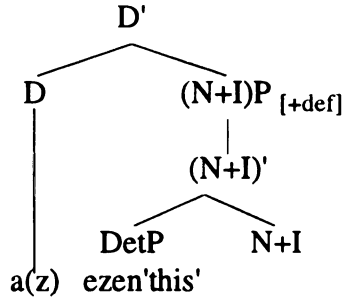
[11] Szabolcsi distinguishes a D(eterminer) and DetP. Only articles appear in D, and quantifiers like *every* and demonstratives like *this* are in DetP.

[12] The fact that D has two distinct functions, subordinator and demonstrative, also parallels C, whose functions are subordinator and clause type indicator (Szabolcsi 1994:217).

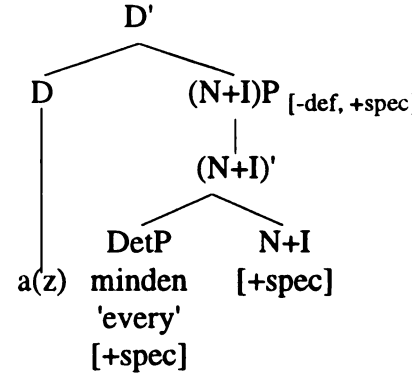
Hungarian D, it is a pure subordinator, but in English D, the two functions of Ds may be conflated in one lexical item; hence *the* and demonstratives do not cooccur, e.g. **the this book*). When a language has a conflated D, D has a referential function like a demonstrative, and D encodes definiteness of the DP.

Now, when a D is a pure subordinator, where does definiteness or indefiniteness of the DP come from? Szabolcsi's answer, based on Hungarian data, is that it is determined inside the complement of D (which is (N+I)P in Szabolcsi's analysis in (17a), NumP in the structure given in (15)). What shows up in D is a morpheme that agrees with the content of its complement. In Hungarian, if the content is [+definite] or [-definite, +specific], D is realized as *a(z)*, and if it is [-specific], D is phonetically null. The [±definite] and [±specific] features are properties of DetP in (17a), and DetP may or may not be overt. Szabolcsi's analysis is illustrated in (18).

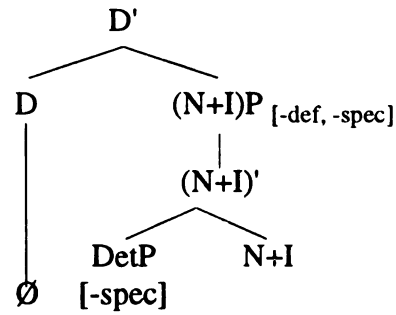
(18) a.



b.



c.



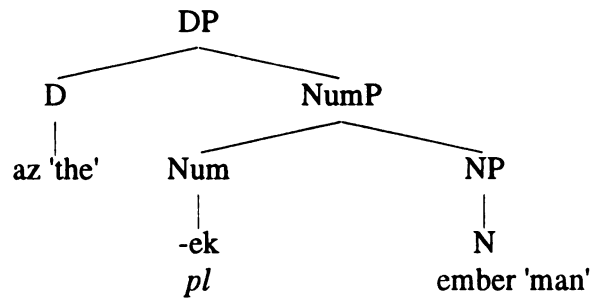
In (18ab), when (N+I)P is [+def] or [-def, +spec], the D is phonetically realized as *a(z)*, but in (18c), when (N+I)P is [-def, -spec], D is phonetically null.

In my analysis, I will assume, following Szabolcsi, that some Ds are pure subordinators, and definiteness or indefiniteness comes from the combination of a D and its complement. This assumption will become important in Chapter 2, which discusses semantic differences among numerically quantified noun phrases depending on the placement of Case particles.

1.4.1.2 Number Phrase (NumP)

Ritter (1992) argues for the existence of Number Phrase (NumP) based on cross-linguistic data from Modern Hebrew, Haitian, and Hungarian. She proposes that the head of NumP is the locus of number specification of the noun phrase such as the singular/plural distinctions. [13] In Hungarian, *az ember-ek* 'the men' has the structure given in (19) (Ritter's (31)).

(19)



The right surface order is derived by moving N to Num and left-adjoining it.

Noun phrases whose maximal projection is NumP have been argued to have an indefinite interpretation, for example, in Chinese (Cheng and Sybesma 1999), and

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[13] This does not mean that numerals must appear in the head of NumP, although that is a possibility. Ritter proposes that Num is the node where NPs get their singular/plural inflections.

in Thai (Visonyanggoon 2000). In section 2.3.1, I will propose that Japanese noun phrases that receive obligatory indefinite interpretation form a NumP.[14]

1.4.1.3 Classifier Phrase (ClP)

Another functional node I will assume in noun phrases is the Classifier Phrase (ClP). Not all languages employ a classifier system in their noun phrases. It has been noted that languages which use classifiers for nominal enumeration tend not to have singular/plural morphological marking on nouns (Sanches and Slobin 1973:47), or if they have both plural morphemes and classifiers, their use is often in complementary distribution (T'sou 1976:1216).

What the Cl does, intuitively, is to make a noun countable, since a Cl is required in order to enumerate nouns.[15] It is unclear whether languages without overt classifiers also have some covert functional head in place of the Cl, or NPs in those languages are countable (at least for count nouns) without such a functional element. Muromatsu (1998:122) suggests that number and gender features in non-classifier languages are what correspond to the Cl in classifier languages. However, although a Cl is needed to enumerate nouns, classifiers themselves do not express singular/plural distinction. Therefore, I assume that a NumP is also needed in classifier languages, even though no overt singular/plural morpheme cooccurs with classifiers.

Another assumption I will make is that Cl can take either NP or DP as its complement, and phi features of Cl have to agree with those of NP or DP. In

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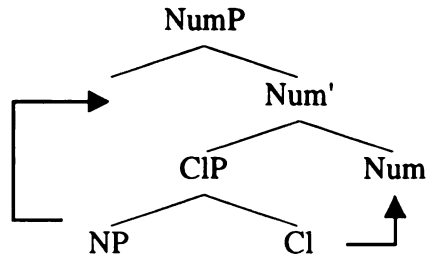
[14] When noun phrases do not involve NCPs, their interpretations are dependent on the context, and therefore, I will not make the claim that all noun phrases with an indefinite interpretation are NumPs.

[15] In some classifier languages, however, Cl is also required with demonstratives, without numeral (Cheng and Sybesma 1999, Visonyanggoon 2000).

Minimalist Program (Chomsky 1995), agreement is checked in Spec-Head configuration, and therefore, the Cl and the complement of the Cl must move to enter Spec-Head relation, as illustrated in (20).

(20)



In (20), the Cl moves to the Num and adjoins to it, and when NP moves to the Spec of NumP, it can check the phi feature of [Cl, Num] in a Spec-Head relation.

1.4.1.4 Noun Phrase (NP) and arguments

Finally, what is the function of NP, without all the functional heads, when it is "bare"? Common assumption seems to be that an NP denotes a predicate of type <e, t>, and as such, it cannot be an argument without having some functional heads, whereas DPs denote an entity or generalized quantifiers, and hence DPs can be an argument. In fact, some researchers take the position that only DPs can be an argument (Stowell 1989, Szabolcsi 1994, Longobardi 1994, 1998). However, Chierchia (1998) argues that in some languages, bare NPs can denote names of kinds, which is an entity, not a predicate, and if so, bare NPs in those languages can be arguments. Although what bare NPs denote and whether they can be an argument is still a matter of debate, various researchers have shown that indefinite noun phrases form NumPs and they can be arguments (Cheng and Sybesma 1999, Visonyanggoon

2000, Déchaine and Wiltschko 2002).[16] I do not intend to settle the debate in my thesis, but I assume that NumPs as well as DPs can be arguments.

1.4.2 Extended Projection

In order to understand DP as a noun phrase, even though its head is a determiner, I assume the notion of 'extended projection' as proposed in Grimshaw (1991). She proposes categorial specifications of various nodes as in (21):[17]

(21)

V	[+V, -N]	(F0) (L0)
V'	[+V, -N]	(F0) (L1)
VP	[+V, -N]	(F0) (L2)
I	[+V, -N]	(F1) (L0)
I'	[+V, -N]	(F1) (L1)
IP	[+V, -N]	(F1) (L2)
N	[-V, +N]	(F0) (L0)
N'	[-V, +N]	(F0) (L1)
NP	[-V, +N]	(F0) (L2)
D	[-V, +N]	(F1) (L0)
D'	[-V, +N]	(F1) (L1)
DP	[-V, +N]	(F1) (L2)

Extended projection is defined as follows.

(22) Extended Projection:
x is the extended head of y, and y is an extended projection of x iff:
(a) y dominates x;
(b) y and x share all categorial features;
(c) all nodes intervening between x and y share all categorial features;
(d) if x and y are not in the same perfect projection, the F value of y is higher than the F value of x.[18]

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[16] See also Schmitt and Munn (1999, 2000) for an analysis of bare nominals and their arguments against Chierchia (1998).

[17] L indicates projection level (i.e., L0 is a minimal projection). F is a binary feature that distinguishes lexical node from functional one.

[18] Perfect projection is defined as follows:
(i) x is the perfect head of y, and y is a perfect projection of x iff:
(a) y dominates x;
(b) y and x share all categorial features;
(c) all nodes intervening between x and y share all categorial features;
(d) the F value of y is the same as the F value of x.

Following this definition, assuming that Cl and Num are also [+N, -V], it is clear that the DP in (15) is an extended projection of N. DP dominates N, and the DP and the N share all categorial features, [+N, -V], and all nodes intervening between the N and the DP share all categorial features, and the F value of the DP is higher than the F value of N. I assume that different F level is possible for different functional heads between N and D, i.e., N (F0), Cl (F1), Num (F2), D (F3).[19] Therefore, assuming that ClP is specified [+N, -V] (F1) (L2), if Cl takes NP as its complement, ClP is an extended projection of N. On the other hand, if the Cl takes a DP as its complement, ClP will not be an extended projection of the D since the F value of ClP is lower than that of D. Also, when V takes a DP as its complement, the resulting VP is not an extended projection of N or D, since V does not share the same categorial features with N/D. Hence, nominal projection and verbal projection are distinguished.

1.5 Characteristics of Determiners

1.5.1 Determiners and Case particles

Possible oppositions towards treating Case particles as syntactic determiners include the fact that in many languages, what is considered a determiner is a definite or indefinite article. However, the Japanese language does not have an article system. So why should a Case particle be treated as a determiner?

It is true that in English, the most uncontroversial lexical item that is treated as a determiner is the definite article, and it has nothing to do with the structural Case of the noun phrase. In some other languages, however, Case can be expressed by an

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[19] Riemsdijk (1998) also notes that F could be n-ary feature to express different levels of functionality.

article, which is widely accepted to be a D. German is one such language, as the following examples show:

(23) a. **Der** Student gab **dem** Lehrer **den** Bleistift.
the(Nom) student gave the(Dat) teacher the(Acc) pencil
'The student gave the teacher the pencil.'

b. **Ein** Student gab **einem** Lehrer **einen** Bleistift.
a(Nom) student gave a(Dat) teachera a(Acc) pencil
'A student gave a teacher a pencil.'

In (23a), the definite article *der* (Nom) changes its form to *dem* for a dative and *den* for an accusative Case. Similarly, in (23b), the indefinite article *ein* (Nom) inflects as *einem* (Dat) and *einen* (Acc) depending on its Case. Thus, when we take the Case particles in Japanese as Ds, the fact that Case appears in D is not anything unusual from a crosslinguistic perspective.

1.5.2 (In)definiteness and Determiners

When we claim that the Japanese Case particles are determiners, another question that may come to one's mind is why Japanese does not express definiteness or indefiniteness by the determiners contrary to many languages in which the determiners are associated with (in)definiteness. The question can be answered in two ways. One is that, as argued in Guisti 1997, the articles (Ds) by themselves do not carry definite nor indefinite meaning. Then, the fact that 'bare' NP+Case (DP) in Japanese can have either a definite or an indefinite interpretation depending on some linguistic and extralinguistic contexts is not a problem for claiming Case particles to be syntactic determiners. But another way to answer the question is that Case particles in Japanese do, in fact, play a role in expressing (in)definiteness, which will be discussed in depth in Chapter 2. The point here is that the overt D *by itself* does

not express (in)definiteness, but it does so in combination with other functional phrases. As discussed in section 1.4.1.1, the same is true in Hungarian, as shown below.

(24) Hungarian (Szabolcsi, 1994)

a. **a** két találkozás
two meeting
'the two meetings' definite

b. két találkozás
two meeting
'two meetings' indefinite, specific or non-specific

c. **a** veled való két találkozás
with you two meeting
'(the/a) two meetings with you' definite or specific

d. **az** én két kalap-om
my two hat
'my two hats' definite or specific

In (24), definiteness or specificity of the whole noun phrase is determined not by the article alone, but it depends on what the article combines with.[20] For example, in (24a), when the determiner *a* is combined with 'two meetings', it gives a definite interpretation, but when it occurs with 'two meetings with you' in (24c), the whole noun phrase may have a definite or an indefinite-specific reading. As discussed in section 1.4.1.1, under Szabolcsi'a analysis, Hungarian D is a pure subordinator, and [±definite] is a feature of the complement of D, rather than D itself. Therefore, the fact that Case particles in Japanese does not "determine" the (in)definiteness of the noun phrase is not a problem for treating them as Ds.

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[20] The morpheme *a* (or *az* before a vowel) is usually taken as a definite article, derived from demonstrative *az* 'that' (Szalbocsi 1994: 184).

1.6 Syntactic Category of Case Particles: Literature review

Having laid out the possible syntactic projections for nominal categories, let us examine what has been proposed for syntactic status of Case particles in Japanese.

1.6.1 No syntactic position for Case Particles

Miyagawa (1988, 1989) proposes that only particles that assign theta roles (i.e., postpositions) project their own maximal projections and that other particles attach directly to noun phrases without projecting their own projections. Others, although not explicitly stated, also seem to assume that Case particles do not have any syntactic position (Kuroda 1965, Saito 1985, Fukui 1986, Murasugi 1991, Sadakane and Koizumi 1995 among others).

Saito (1985) proposes an analysis of Case assignment in Japanese: the nominative Case in Japanese is inherent and the nominative particle *ga* is inserted contextually rather than assigned structurally, as opposed to the accusative Case which is assigned by V. His arguments are supported by phenomena such as the following: i), multiple nominative marking is possible and ii) *ga* is obligatory in a sentence but *o* is not. The first point is exemplified in (25) (Kuno 1973:71).

(25) **Bunmeikoku-ga** **dansei-ga** **heikinzyumyou-ga** mizikai.
civilized country-Nom man-Nom average-life-Nom short
'It is in civilized countries that men are such that their average life-span is short.'

According to Saito, since *ga* is inserted in order to satisfy Case Filter (Chomsky 1981:49) by a contextually defined rule as in (26), it may be multiple as long as it is in the right context.

(26) *NP-ga unless the NP is [NP, S] (Saito 1985:207)

According to this rule, whenever NP is adjoined to S, the NP can be marked by *ga*.

The second point, the fact that Nom is obligatory and Acc is not, can be seen in (27).

(27) a. John-*(ga) hon-o yonda.
J-Nom book-Acc read
'John read a book.'
b. John-ga hon-(o) yonda.
J-Nom book-Acc read
'John read a book.'

(27a) is unacceptable without *ga*, but in (27b), *o* can be dropped. Saito argues that when an NP receives an abstract Case, morphological Case marking is optional, but contextually inserted morphological Case is obligatory since the absence of it will violate the Case Filter. While Saito does not explicitly state that Case particles do not have a syntactic position, it is not made clear where it is located either.

Following Saito (1985), Murasugi (1991) also proposes that the morpheme *no* which appears with a modifier NP or PP, as in *John-no hon* 'John's book', is contextually inserted, since its presence is obligatory and its distribution is similar to the dummy *of* in English.[21]

Miyagawa (1988, 1989) explicitly argues that Case particles do not have a projection of their own. For him, the assumption that Case particles do not project its own phrase but postpositions do is necessary in order to account for floating quantifier (FQ) phenomena in Japanese. His arguments are summarized below.

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[21] Murasugi's (1991) analysis of *no* is discussed in detail in Chapter 4.

A modifier of a noun *futa-ri* 'two-Cl' can precede the noun phrase in Japanese as in (28a), but it may also appear following the noun phrase and the Case particle in (28b). The numeral classifier phrase in (28b) is generally referred to as a FQ.

(28) a. **Futa-ri-no**tomodati-ga Sinzyuku-de Tanaka-sensei-ni atta.
2-Cl-Gen friend-Nom Shinjuku-in Tanaka-prof-Dat met
b. Tomodati-ga **futa-ri** Sinzyuku-de Tanaka-sensei-ni atta.
friend-Nom 2-Cl Shinjuku-in Tanaka-prof-Dat met
'Two friends met Prof. Tanaka in Shinjuku.'

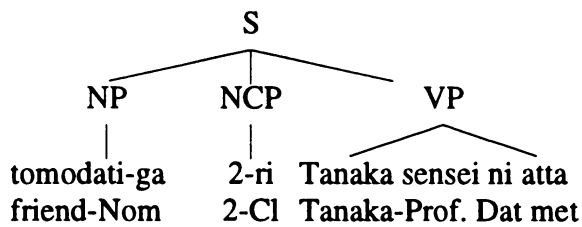
Taking the FQ to be a secondary predicate, Miyagawa argues that the FQ construction is possible only if the NCP and the NP (or the trace of it) that it quantifies are in a mutual c-commanding relation. The Mutual C-Command requirement is stated as follows:

(29) Mutual C-Command Requirement (MCC)
For a predicate to predicate of an NP, the NP or its trace and the predicate or its trace must c-command each other (Miyagawa 1989:30).[22]

When a NCP successfully modifies an NP, they have to c-command each other. The following data, with the tree structures, illustrate this point (Miyagawa 1989: 28).

(30) a. Tomodati-ga futa-ri Sinzyuku-de Tanaka-sensei-ni atta.
friend-Nom 2-Cl Shinjuku-in Tanaka-prof-Dat met
'Two friends met Prof. Tanaka in Shinjuku.'

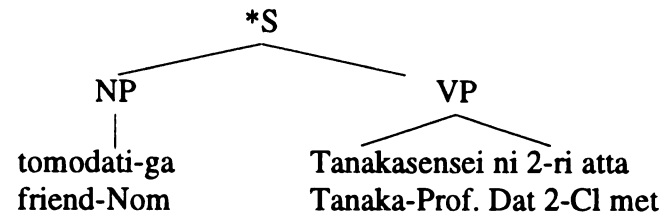
b.



[22] The notion of c-command adopted in his study is stated below.
(i) A c-commands B if neither of A, B dominates the other and the first branching node dominating A also dominates B. (Reinhart 1979)

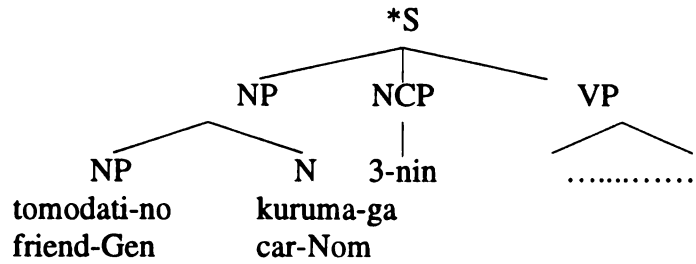
c. * **Tomodati ga** Sinzyuku de Tanaka-sensei ni **futa-ri** atta.
friend-Nom Shinjuku in Tanaka-Prof. Dat 2-Cl met
'Two friends met prof. Tanaka in Shinjuku.'

d.



e. * **Tomodati** no kuruma ga **san-nin** koshoosita.
friend Gen car Nom 3-Cl broke down
'Three friends' car broke down.'

f.

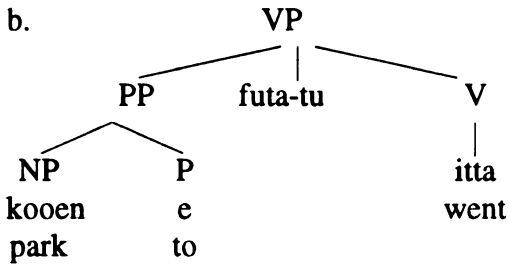


In (30a) the NP *tomodati* 'friend' and the classifier phrase *futa-ri* '2-Cl' can c-command each other as shown in (30b). However, in the ungrammatical (30c), because of the intervening Dative phrase *Tanaka-sensei ni* 'Prof. Tanaka-Dat', which is under VP as shown in (30d), the NCP cannot c-command the NP *tomodati* 'friend'. The sentence in (30e) is ungrammatical, even though the NCP *san-nin* '3-Cl' c-commands the NP *tomodati-no* 'friend', because the NP does not c-command the NCP as in (30f).

Since a Case particle does not have its own projection, *ga* in (30a) does not intervene the MCC between the NP and the NCP, but the postposition *e* in (31a) does because it projects its own projection, as shown in (31b). Therefore, (31a) is unacceptable.

(31) a. * Hanako wa **kooen** e **futa-tsu** itta
H-Top park-to 2-Cl went
'Hanako went to two parks.'

b.



However, as I discuss in Chapter 2, the distribution of FQs can be accounted for without positing a difference between Case and non-Case particles in terms of their abilities to project their own phrases.

In the next subsection, I review some of the analyses that account for obligatoriness of *ga* based on the structural position of the nominative subject and treat *ga* as a functional head of a noun phrase.

1.6.2 Case particle as a functional head

Some researchers have proposed that a Case particle is a functional head of the noun phrase.[23] Following the DP hypothesis of Abney (1987), Tateishi (1989) and Tonoike (1991) argue that if Japanese noun phrases form a DP, the best candidate for the head of DP is a Case particle since Japanese is a strictly head final language and a Case particle is usually the final element that appears with a noun phrase.[24] On the

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[23] Okutsu (1974:97) gives a projection C (I assume it stands for Case) for both Case and non-Case particles in his analysis of Japanese clause structures, although no implications of such treatment of particles are discussed.

[24] Tateishi (1989) also takes the NCP in the Case-medial form to be a D since, if we take the Case-medial form to be a nominal constituent, it is the final element in the noun phrase.

other hand, Fukuda (1993) proposes that a Case particle heads a Kase Phrase (KP).[25] Both Fukuda's and Tateishi's analyses draw on the Case drop phenomenon illustrated below:[26]

(32) a. John-ga sono hon-o yonda.
John-Nom that book-Acc read
'John read that book.'
b. * John-# sono hon-o yonda.
John-Nom that book-Acc read
c. John-ga sono hon-# yonda.
John-Nom that book-Acc read

As we have already observed in the examples given in (27), the contrast between (32b) and (32c) shows that, in a transitive sentence, the nominative Case marker cannot be dropped while the accusative marker can.

However, Fukuda notes that the contrast between (32b) and (32c) disappears and both become acceptable when a sentence-final particle is added, as in (33):

(33) a. John # sono hon-o yonda-**yo**.
John that book-Acc read-Prtcl
'John read that book.'
b. John-ga sono hon # yonda-**yo**.
John-Nom hat book read-Prtcl
'John read that book.'

Based on these facts and taking Case particle as a functional head K, Fukuda argues that the Case marker-drop in Japanese is licensed by the Empty Category Principle (ECP), and that the subject/object asymmetry is a specific example of the ECP effects.[27]

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[25] KP is originally proposed by Ken Hale in lectures at the 1980 LSA Linguistic Institute at Albuquerque, which is cited in Lamontagne and Travis (1986).

[26] The place where a Case marker is dropped is marked with #.

[27] The ECP is defined as in (i).

(i) A non-pronominal empty category must be properly head governed. (Rizzi (1990))

Fukuda analyzes the sentences in (32b) and (32c) as follows:

(34) a.* $[_{IP}[_{KP}[_{K'}$ John $[_K \emptyset\ ]]][_{I'}\ [_{VP}\ [_{KP}\ [_{K'}$ sono hon $[_K$ o $]]]\quad [_V$ yon$]]\ [_I$ da $]]]$
$[_{IP}[_{KP}[_{K'}$ John $[_K \emptyset\ ]]][_{I'}\ [_{VP}\ [_{KP}\ [_{K'}$ that book $[_K$ Acc $]]]\ [_V$ read$]]\ [_I$ Past$]]]$

b. $[_{IP}[_{KP}[_{K'}$ John $[_K$ ga $]]]\quad [_{I'}[_{VP}[_{KP}[_{K'}$ sono hon $\quad [_K \emptyset\ ]]]\ [_V$ yon$]]\ [_I$ da $]]]$
$[_{IP}[_{KP}[_{K'}$ John $[_K$ Nom $]]]\ [_{I'}[_{VP}[_{KP}[_{K'}$ that book $\quad [_K \emptyset\ ]]]\ [_V$ read$]]\ [_I$ Past$]]]$

In (34a) (=(32b)), the empty head K, being in Spec IP, is not within the intermediate projection of I, a head of IP. Thus, the empty category is not properly head governed and it violates the ECP. Therefore, (32b) is deviant. On the other hand, in (34b) (=(32c)) the verb, a head of VP, properly head governs the empty head K, so there is no ECP violation. When the sentence-final particle, which is taken to be a C element, is present, the empty K in the subject of (34a) would be properly head governed by C, and hence, the Case drop is possible in (33a).

According to Saito's (1985) analysis, the nominative *ga* cannot be dropped because the subject in Japanese does not receive an abstract Case. If the subject is not morphologically Case marked, it violates the Case Filter, while Acc object does not have to be morphologically marked since it receives an abstract Case (Saito 1985:209). However, Saito's account does not carry over to an example like (33). If *John* does not receive an abstract Case, *ga* should be required whether the sentence final particle is present or not, and hence, (33a) should be ungrammatical, according to Saito's analysis, which is a wrong prediction.

Furthermore, Tateishi (1989) shows that the Case-drop possibility of the subject depends on the kind of predicates the sentence has. In a nut shell, he argues that the possibility of the Case drop depends on how Case is assigned. His examples are given in (35)-(39).

(35) Transitive predicate

a. Ken-ga/*Ø Naomi-o/Ø seme-ta.
K-Nom/ N-Acc/ blamed
'Ken blamed Naomi.'

b. Ken-ga/*Ø Naomi-o/*Ø hageshiku seme-ta.
K-Nom/ N-Acc/ harshly blamed
'Ken blamed Naomi harshly.'

In (35a), the Acc marker can be dropped while the Nom cannot. In (35b), when an adverb intervenes between the object and the verb, the Acc cannot be dropped. The data set in (35) suggests that *o*-drop requires adjacency to the verb. On the other hand, the subject of unaccusative and stage-level predicates can freely drop *ga*.[28]

(36) Unaccusative predicate construction

Onna-ga/Ø kita.
woman-Nom came
'A woman came.'

(37) Stage-level predicate construction

Onna-ga/Ø mieru.
woman-Nom can be seen
'A woman can be seen.'

Tateishi also notes that both unergative predicates and individual-level predicates disallow Case-drop, but it is much worse with individual-level predicates.

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[28] According to Kuno (1973:223) and Saito (1985:207), Case-drop in (36) and (37) should be considered a Topic-*wa* drop rather than a *ga*-drop, which allows them to maintain the claim that *ga* cannot be dropped. However, I do not feel that *onna kita* (woman came) has the same meaning as *onna-wa kita* (woman-Top came), since the latter seems to have a contrastive focus on *onna* while the former does not have such meaning. Therefore, the claim that what is dropped in examples like (36) and (37) is a Topic marker does not seem very strong. It is often the case that the sentence with over Case particles does not have exactly the same meaning as the Case dropped version of the sentence. Another independent problem is that the acceptability of the sentences like (36) and (37) seems to vary among the native speakers of Japanese.

(38) Unergative predicate construction

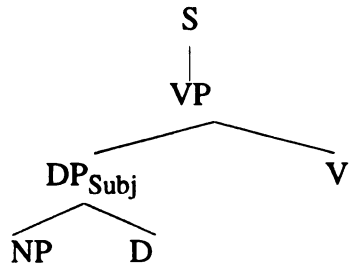
Onna-ga/*Ø	**hashitta.**
woman-Nom	ran
'A woman ran.'	

(39) Individual-level predicate construction

Onna-ga/***Ø	**utsukushii.**
woman-Nom	beautiful
'A woman is beautiful[29].'	

Assuming that subjects of different predicates are generated in different syntactic positions as shown below, Tateishi argues that the Case-drop paradigm is due to different ways Case is assigned in Japanese.[30] He proposes that Case particles are Ds and the Case-drop is a realization of null determiners and that data in (36)-(39) can be accounted for by the different ways the overt and the null Ds receive Case.

(40) Subject of unaccusative and stage-level predicates

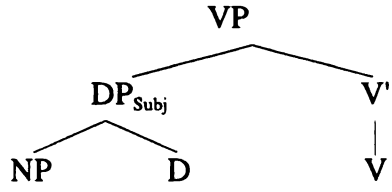


V assigns abstract Case to DP_{Subj}

[29] The translation here is not quite accurate. As noted in Kuroda 1988, when the subject of an individual level predicate takes *ga*, it is construed as an exhaustive listing reading, and hence 'it is woman (not anything else) that is beautiful' is a better translation.

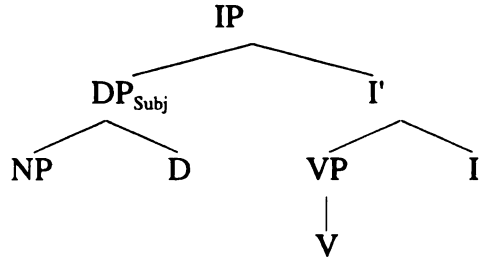
[30] The acceptability of the examples in (36)-(39) varies among native speakers of Japanese. This is problematic for Tateishi's argument.

(41) Subject of unergative predicates



V does not assign abstract Case to DP_{Sub} but lexically governs D.

(42) Subject of individual-level predicates



V does not assign abstract Case to DP_{Sub} and does not lexically govern D.

Following Saito (1983) and Kuroda (1992), Tateishi assumes that an empty D receives an abstract Case from V under government and when it is not governed, *ga* must be realized morphologically. According to Tateishi's analysis, (36) and (37) allow *ga* drop because the subject is generated as a complement of V as in (40), so the null D gets an abstract Case from V. On the other hand, the null D in (38) cannot get an abstract Case because the subject is in the Spec of VP as shown in (41). In such a position, the Case on the NP must be realized morphologically as *ga*, as argued in Saito 1983, and hence, the Case drop is not allowed in (38). Lastly, the Case-drop with individual-level predicates is worse, as shown above in (39), because it violates ECP as well as the Case Filter. As illustrated in (42), the subject of individual-level predicates is generated in Spec IP, and as a result, the null D cannot get an abstract

Case from V. In addition, since I is not a lexical head, the null D is not lexically-governed in that position, and it therefore violates the ECP.

The arguments for Case particles as functional heads based on the Case drop phenomena, however, face a few problem. If we do not assume different positions for the subject of various predicates, under Fukuda's analysis, the Case-drop of subjects in (36)-(39) should be equally ungrammatical, since they would all violate ECP. In his analysis, we cannot account for the grammaticality of (36) and (37). Therefore, it is clear that ECP alone cannot explain some of the possible instances of Case drop. However, under Tateishi's approach, the grammaticality of (20a) with a sentence final particle may not follow straightforwardly, since a null D cannot get Case in Spec IP, assuming that the subject of a transitive verb is in Spec IP. Therefore, both the ECP and the Case assignment accounts of the Case drop phenomenon need to be examined more closely. Moreover, within the Minimalist Program (Chomsky 1995), the ECP account of the Case-drop phenomenon needs to be reanalyzed completely since such a principle is not a part of the grammar. However, what both Fukuda and Tateishi's analyses suggest is that the obligatory nature of *ga* does not have to be related to its status as a contextually inserted morpheme. Furthermore, they show that *ga* is not always required, and hence, it weakens Saito's claim that *ga* is obligatory.

Another issue regarding Tateishi and Fukuda's analyses is whether the Case particles should be treated as Ds or Ks. If we consider Ds to be a bundle of features including Case (Giusti 1997), the category K, which is a pure Case feature, seems

redundant.[31] Therefore, I argue for the category D rather than K as the appropriate syntactic category for Case particles in Japanese.[32] While treating Case particles as Ds is not novel, my analysis is different from the previous attempts in that it does not depend on the Case-drop phenomena, unlike Tateishi and Fukuda.

1.7 Organization

The dissertation is organized as follows.

Chapter 2 discusses noun phrases with a Numeral Classifier Phrase and presents the first argument in support of the treatment of case markers in Japanese as a syntactic determiner (D). My analysis will connect the way noun phrases are interpreted to their syntactic structures. It will account for various puzzles regarding the syntactic distribution of NCPs and how they affect the interpretation of the whole noun phrase by treating case markers as Ds.

Chapter 3 deals with a negative polarity item (NPI) *dare-mo* 'anyone' and non-NPI *dare-mo* 'everyone' and presents the second argument for the syntactic status of Case particles as Ds. I will examine the relationship between the structure of the NPI *dare-mo* 'anyone' and its interpretation in comparison to non-NPI *dare-mo* 'everyone' and how their meanings may be derived compositionally. I will show that a satisfactory account of those phrases requires treating Case particles as Ds.

Chapter 4 explores what the consequences of the present analysis may be for the analysis of the particle *no* in Japanese. I will discuss *no* in various constructions

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[31] In languages that have both determiners and Case particles appearing independently with a noun phrase may have K projection separate from D. See Bittner (1994).

[32] Also, as discussed in section 1.5.1, in some languages, Case can be expressed by an article, which is assumed to be a D.

and argue in favor of a uniform analysis of *no* as a complementizer (C) rather than a D.

Chapter 5 is a summary and conclusion.

CHAPTER 2

NOUN PHRASES WITH NUMERAL CLASSIFIERS

2.1 Introduction

In this chapter I present the first argument in support of the treatment of case markers in Japanese as a syntactic determiner (D). My argument comes from the analysis of Numeral Classifier Phrases (NCPs) in relation to noun phrases. My analysis makes a connection between how the noun phrases are interpreted and their syntactic structures. There are various puzzles regarding the syntactic distribution of NCPs and/or how they affect the interpretation of the whole noun phrase. I show that by treating case markers as Ds we can account for many of the puzzles.

This chapter is organized as follows: In the next subsection, I introduce basic properties of Japanese NCPs followed by the primary data and an overview of my analysis. In section 2, I will discuss some recent major works on NCP and point out problems with these analyses. Then the details of the present analysis are discussed in section 3. In section 4 I present several supporting evidence for the proposed structures of noun phrases. Section 5 is a summary and conclusion.

2.1.1 A brief introduction to Japanese Numeral Classifier Phrases

In Japanese, classifiers are syntactically obligatory for explicit enumeration of noun phrases. In English, something similar to classifiers is used when counting entities expressed with mass nouns as shown in (1).

(1) a. three pieces of cheese b. *three cheese

Nothing other than a numeral phrase and a plural marker are required when the quantity of count nouns is expressed as shown in (2).

(2) three books/pencils/computers

However, in the case of Japanese, both count and mass nouns require classifiers, as demonstrated in (3).[1]

(3) a. tiizu san-kake
cheese three-piece
b. * tiizu san
c. hon san-satu
book three-Classifier for bounded objects
d. * hon san

The choice of classifier depends on the object that is enumerated by the numeral. The following are a few examples of classifiers:

(4) a. mai: for thin, flat objects (e.g., papers, pizza, CDs)
b. hon: for long, cylindrical objects (e.g., pens, umbrellas, bananas)
c. dai: for machines (e.g., computers, cars, bending machines)
d. too: for large animals (e.g., cows, elephant, dinosaurs)

The sentence becomes ungrammatical if the noun phrase and its classifier do not match as shown below:

(5) * John-ga hon-o san-too katta.
J.-Nom book-Acc three-Cl for animals bought
'John bought three books.'

In (5), the classifier for large animals is used for *hon* 'book', and the sentence is unacceptable.

The position of numeral classifiers relative to the noun phrases they are associated with vary, as demonstrated in (6).[2]

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[1] Unlike some other classifier languages like Chinese or Thai, a classifier never appears without a numeral phrase in Japanese. I have no explanation for why that is the case.

[2] Here I only use examples with nominative noun phrases. Noun phrases with an accusative marker or a topic marker show similar distributions.

(6) a. San-nin-no gakusei-ga kita.
3-Cl-Gen student-Nom came
'Three students came.'

b. Gakusei-ga san-nin kita.
student-Nom three-Cl came
'Three students came.'

c. San-nin gakusei-ga kita.
3-Cl student-Nom came
'THREE students came.'

d. Gakusei san-nin-ga kita.
student three-Cl-Nom came
'The three students came.'

A genitive marked numeral classifier phrase must precede the noun phrase as in (6a), while a non case-marked NCP may follow a case marked noun phrase as in (6b) or precede it as in (6c).[3] When the numeral classifier phrase directly follows a non case-marked noun phrase, the classifier is followed by a case marker as in (6d).

Furthermore, other elements may intervene between the noun phrase and its numeral classifier phrase in some cases, as shown in (7).

(7) a. **San-satu** John ga **hon o** yonda.
3-Cl John-Nom **book-Acc** read
'John read three books.'

b. John ga **hon o** kinoo **san-satu** yonda.
John-Nom **book-Acc** yesterday **3-Cl** read
'Yesterday John read three books.'

In (7a), the subject *John* appears between the NCP and *hon* 'book', and in (7b), an adverb intervenes between *hon-o* and the NCP.

Now that we know basic facts about Japanese NCP, let me illustrate some puzzles associated with the distribution and the interpretation of NCP that will be analyzed in this chapter.

2.1.2 The puzzles

2.1.2.1 Definite/indefinite

It is commonly assumed that noun phrases in a language without (in)definite articles like Japanese are ambiguous between definite/indefinite readings. However, certain combinations of a noun phrase and a NCP are associated with only indefinite readings or only definite readings, as shown below.

(8) a. John-ga **hon-o san-satu** katta.
J-Nom **book-Acc 3-Cl** bought
'John bought **three books**.'
b. John-ga **hon san-satu-o** katta.
J-Nom **book 3-Cl-Acc** bought
'John bought **the three books**.'

(9) a. Herikoputaa-ni **puropera-ga ip-pon** aru.
helicopter-Dat **propeller-Nom 1-Cl** exist
'A helicopter has one propeller.'
b. ?* Herikoputaa-ni **puropera ip-pon-ga** aru.
helicopter-Dat **propeller 1-Cl-Nom** exist
'*A helicopter has the one propeller.'

In (8a) *hon-o san-satu* 'book-Acc 3-Cl' gives rise to only an indefinite reading, while *hon san satu-o* 'book 3-Cl-Acc' in (8b) gives a definite reading (Takano 1984; Downing 1993, 1996; Ishii 1997; Sasaki Alam 1997). It is generally true that the expression of the form [N+Case marker+NCP] (the Case-medial form) gives an indefinite reading and the order [N+NCP+Case] (the Case-final form) is associated with a definite reading. In fact, as shown in (9), the Case-final form is unacceptable in the existential construction with an integral part reading, showing a definiteness effect. That is, while (9a) is well-formed

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[3] Downing (1996:221) notes that prenominal NCPs like (6a) is used when the speaker has particular individuals in mind, whereas the form in (6b) is used when it can be any individuals. The semantics and structure of prenominal NCPs will be discussed in Chapter 4.

with the reading 'A helicopter has one propeller', (9b) with the Case-final form is deviant for the integral part reading.[4]

2.1.2.2 Modification phenomena

A second puzzle has to do with different ways the Case-medial form and the Case-final form are modified.

2.1.2.2.1 Relative clauses

In Japanese, the head of a relative clause (RC) follows the RC. It has been noted that when the Case-medial form is in the head position of a RC, the RC seems to modify only a noun phrase, rather than the noun phrase plus the classifier phrase (Ishii 1997). This is illustrated in (10).

(10) a. John-ga **hon-o** **san-satu** katta.
J.-Nom **book-Acc** **3-Cl** bought
'John bought three books.'

b. Mary-ga [John-ga katta $_{RC}$] **hon-o** **san-satu** nakusita.
M.-Nom [J-Nom bought] **book-Acc** **3-Cl** lost
'Mary lost three of the books John bought.'

In (10a) the sentence means 'John bought three books'. The phrase in bold is more or less equivalent to 'three books'. Therefore, if we make this phrase the head of an RC as in (10b), we expect to get the reading '(the) three books John bought'. However, this prediction is not borne out: (10b) means 'three of the books John bought'.

On the other hand, when the case final form is in the head position of a relative clause, the relative clause modifies 'three books' as shown in (11b).

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[4] (9b) may have an existential reading. For some unknown reason, Japanese does not show a definiteness effect in an existential construction with the existential reading.

(11) a. John-ga **hon** **san-satu-o** katta.
J.-Nom **book** **3-Cl-Acc** bought
'John bought the three books'
b. Mary-ga [John-ga katta $_{RC}$] **hon** **san-satu-o** nakusita.
M.-Nom [J.-Nom bought $_{RC}$] **book** **3-Cl-Acc** lost
"Mary lost the three books John bought.'

In (11b), the RC *John-ga katta* 'John bought' modifies *hon san-satu* 'three books', so the sentence means 'Mary lost *the three books John bought.*'

2.1.2.2.2 Demonstratives

A phenomenon similar to the relative clause modification can be observed with demonstrative modification, as shown in (12).

(12) a. John-ga kono **hon-o** **san-satu** katta.
John-Nom this/these **book-Acc** **3-Cl** bought
'John bought three copies of this book'
b. John-ga kono **hon** **san-satu-o** katta.
J.-Nom this **book** **3-Cl-Acc** bought
'John bought these three books.'

Demonstratives always precede the noun phrases that they modify in Japanese. In (12a), the demonstrative *kono* 'this/these' precedes the Case-medial form *hon-o san-satu* 'three books' but the resulting string of words does not mean 'these three books', but instead, it means 'three copies of this book'. On the other hand, as shown in (12b), when *kono* precedes the Case-final form *hon san-satu o*, then the resulting phrase means 'these three books'.

2.1.2.3 Adverb intervention

The Case-medial form and the Case-final form also behave differently with respect to adverb intervention, which is illustrated in (13) and (14) below.

(13) a. Hon-o **kinoo** san-satu yonda.
book-Acc **yesterday** 3-Cl read
'(I) read three books yesterday.'
b. Hon-o **yukkuri** san-satu yonda.
book-Acc **slowly** 3-Cl read
'(I) read three books slowly.'

(14) a. * Hon **kinoo** san-satu-o yonda.
book **yesterday** 3-Cl-Acc read
b. * Hon **yukkuri** san-satu-o yonda.
book **slowly** 3-Cl-Acc read
c. (Kinoo/yukkuri) hon san-satu-o (kinoo/yukkuri) yonda.
(yesterday/slowly) book 3-Cl-Acc (yesterday/slowly) read
'I read three books yesterday/slowly.'

With the Case-medial form, adverbs can intervene between the noun phrase and its NCP, as shown in (13), while the intervention is not allowed with the Case-final form, as shown in (14a,b). In this case the adverb must either precede or follow the Case-final form, as shown in (14c). This constitutes the third puzzle.

2.1.2.4 Subject/Object asymmetry

The fourth puzzle concerns intervention effects with the Case-medial form. It has been noted that with the Case-medial form the subject can intervene between the object and its classifier, as in (15b), but the object cannot intervene between the subject and its classifier, as in (16b) (Kuroda 1980, Haig 1980, Miyagawa 1988, 1989).

(15) a. Gakusei-ga **hon-o** **ni-satu** katta.
student-Nom book-Acc 2-Cl bought
'A student bought two books.'
b. **Hon-o** gakusei-ga **ni-satu** katta.
book-Acc student-Nom 2-Cl bought
'A student bought two books.'

(16) a. **Gakusei-ga** **san-nin** hon-o katta.
student-Nom 3-Cl book-Acc bought
'Three students bought (a) book(s).'
b. * **Gakusei-ga** hon-o **san-nin** katta.
student-Nom book-Acc 3-Cl bought
'Three students bought (a) book(s).'

On the other hand, as discussed in Miyagawa 1989, there seems to be a counter-example to the generalization about object intervention as in (17).

(17) **Tekihei-ga** ano hasi-o **ni-san-nin** watatta.
enemy soldier-Nom that bridge-Acc 2-3-Cl crossed
'Two or three enemy soldiers crossed that bridge.'

In (17), the object *ano hasi-o* intervenes between the subject NP and its associate NCP, and yet the sentence is grammatical, unlike (16b).

2.1.2.5 Specific/Nonspecific asymmetry

Within the Case-medial form, the distribution of NCP is argued to differ depending on the interpretation associated with the quantified phrase (Kitahara 1993, Sasaki Alam 1997). This is illustrated in (18) and (19).

(18) a. John-ga rekisi-no **hon-o san-satu** yonda. (Indef-Nonspecific)
J.-Nom history-Gen book-Acc **3-Cl** read
'John read three history books.'

b. **San-satu**$_i$ John-ga rekisi-no **hon-o** t_i yonda.
3-Cl J.-Nom history-Gen book-Acc read
'John read three history books.'
(Nonspecific reading for 'three history books')

(19) a. John-ga **Harvard-no gakusei-o san-nin** matta. (Indef-Specific)
J.-Nom H.-Gen student-Acc **3-Cl** waited
'John waited for three of the Harvard students.'

b. ?* **San-nin**$_i$ John-ga **Harvard-no gakusei-o** t_i matta.
3-Cl J.-Nom H.-Gen student-Acc waited
'John waited for three Harvard students.'

The descriptive fact is as follows: the numeral classifier *san-satu* '3-Cl' in (18a) can scramble when the noun phrase has an indefinite non-specific reading as in (18b). However the numeral classifier cannot scramble when it has a specific reading. In (19a), *gakusei-o san-nin* 'three students' may get an indefinite-specific reading, but when the

numeral classifier *san-nin* '3-Cl' is scrambled as in (19b), the sentence cannot have the indefinite-specific reading.[5] This is the fifth puzzle.

2.1.2.6 Case/Non case asymmetry

The last puzzle concerns the particles that can appear between an NP and its classifier phrase and ones that cannot. The only particle that can appear in that position is a Case particle. Therefore, when the classifier follows non-Case particles, it cannot be associated with the NP, as shown in (20b) (Miyagawa 1988, Kawashima 1994).

(20) a. Mary-wa kooen-**o** futa-tu mituketa
M.-Top park-**Acc** 2-Cl found
'Mary found two parks.'

b. * Mary-wa kooen-**e** futa-tu itta
M.-Top park-**to** 2-Cl went
Intended: 'Mary went to two parks.'

In (20a), the NCP follows the Case particle, and it can modify *kooen* 'park', but in (20b), when it follows non-Case particle (postposition), it cannot be associated with *kooen*.

2.1.3 An overview of my analysis

Before getting into more detailed analyses of the above data, let me present the schematic illustrations of the structures to be proposed in this chapter. The structures I propose for the Case-medial form and the Case-final form are given in (21a) and (21b), respectively.

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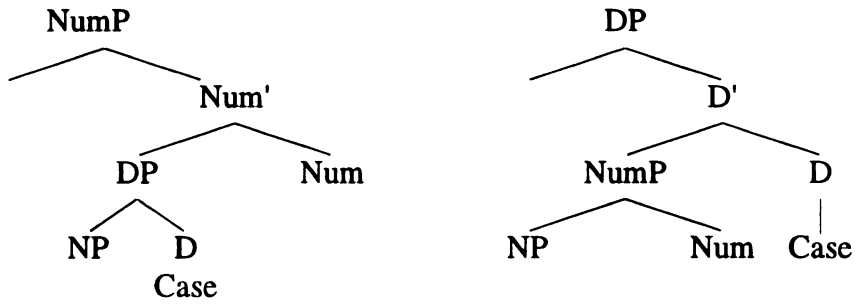
[5] An indefinite-nonspecific reading is possible, but the pragmatic plausibility favors a specific reading.

(21) a. Case-medial form (indefinite) b. Case-final form (definite)



In brief, I will argue that the Case-medial form is a NumP as shown in (21a).[6]

It has been proposed for other languages that indefinite noun phrases constitute NumP or some projection smaller than DP (Cheng and Sybesma 1999, Campbell 1996, Visonyanggoon 2000, Déchaine and Wiltschko 2002). Therefore, the fact that the Case-medial form, which has an indefinite reading, projects NumP is compatible with the crosslinguistic analyses. As for the Case-final form, it is a DP with an overt NumP layer projected. In (21b), D takes NumP as its complement and it induces the definite reading of the whole DP.

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[6] There is a theoretical issue of whether NumP can be an argument. If we are to comply with the theory that says only DPs can be arguments (Stowell 1989, Longobardi 1994, Szabolcsi 1994), we may suggest that NumP in (21a) has an empty D head and forms a DP. Under such analysis, indefinites without an overt D are restricted to a lexically governed position i.e., complement of V, since the empty head needs to be lexically governed, and hence they do not appear in the subject position. However, in the case of the Case-medial form, since there is no empirical evidence to show that there is a DP layer above this NumP, i.e., the Case-medial form can appear in the subject position, NumP seems to be the most unsuperfluous representation for the noun phrase in question. Other researchers (Cheng and Sybesma 1999, Visonyanggoon 2000) have also proposed NumP as the projection of indefinite noun phrases.

2.2 Previous analyses and their problems

2.2.1 Classifier as secondary predicate: Miyagawa (1988, 1989)

Miyagawa (1988, 1989) argues that the NCP in the Case-medial form is a secondary predicate (SP) of its associated NP. He proposes the Mutual C-Command requirement as the determining factor that derives the distribution of NCP relative to its associated NP.

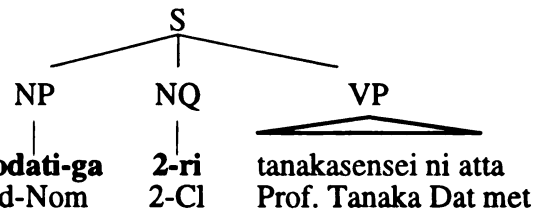
(22) Mutual C-Command Requirement (MCC): (Miyagawa 1989:30)

> For a predicate to predicate of an NP, the NP or its trace and the predicate or its trace must c-command each other.[7]

This means that when an NCP successfully modifies an NP, they have to c-command each other. The following data, with the schematic tree structures, illustrate this point (data adopted from Miyagawa 1989: 28).

(23) a. Tomodati ga huta-ri sinzyuku de Tanaka-sensei ni atta.
friend-Nom 2-Cl Shinjuku in Tanaka-Prof. Dat met
'Two friends met prof. Tanaka in Shinjuku.'
(Miyagawa's (32))

a'.



b. * Tomodati ga sinzyuku de Tanaka-sensei ni huta-ri atta.(Miyagawa's (33))
friend-Nom Shinjuku in Tanaka-prof Dat 2-Cl met
Intended: 'Two friends met prof. Tanaka in Shinjuku.'

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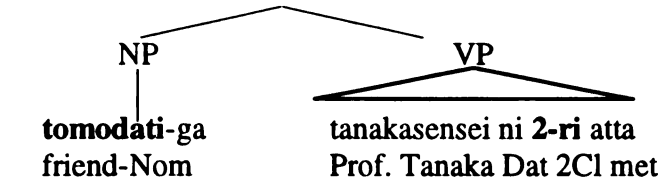
[7] The notion of c-command adopted in his study is stated below.

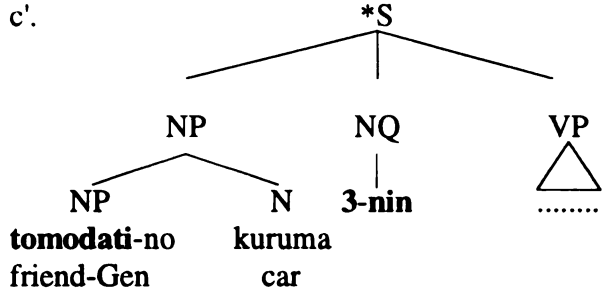
> A c-commands B if neither of A, B dominates the other and the first branching node dominating A also dominates B. (Reinhart 1979)

b'. *S (Miyagawa's (35)



c. * Tomodati no kuruma ga san-nin kosyoosita. (Miyagawa's (37))
friend Gen car Nom 3-Cl broke down
'Three friends' car broke down.'

c'. *S (Miyagawa's (38))



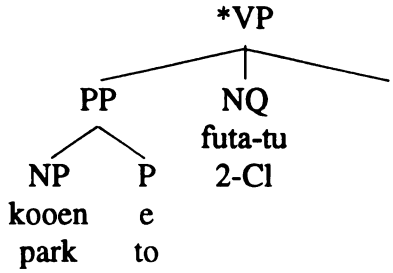
In (23a) the NP *tomodati* and the classifier phrase *futari* can c-command each other. However, in the ungrammatical (23b), because of the intervening Dative phrase *Tanaka-sensei ni*, which is under VP, the ClP cannot c-command the NP *tomodati*, as shown in (23b'). On the other hand, (23c) is ungrammatical, even though *san-nin* c-commands *tomodati*, because the NP does not c-command the ClP. In both (23b') and (23c'), the MCC is not satisfied and hence the sentences are ill-formed.

Miyagawa argues that since postpositions assign their own theta roles, Ps require NP objects and have projections of their own. On the other hand, because Case particles like *ga/o* do not assign theta roles, they do not have a projection of their own. Miyagawa states that the sole function of case markers like *ga/o* is to provide Case to the NP and it does not occupy any syntactic position. According to this distinction between postpositions and Case particles, *ga* in (23a) does not block the MCC but the postposition

e in (24a) does. As a result, the NCP in (24a) cannot be associated with the NP *kooen* 'park', as shown in (24b).

(24) a. * Hanako wa kooen e futa-tu itta. (Miyagawa's (47))
H-Top park to 2-Cl went
'Hanako went to two parks.'

b.



There are a few problems with Miyagawa's analysis. First, he assumes a multiple branching structure for Japanese, which allows mutual c-command to be established between the floating quantifier and its associated NP. However, in a more restrictive theory where all languages should have at most binary structures, it does not seem possible to keep the MCC requirement.

Second, the account based on the distinction between Case particles and postpositions in terms of their ability to project does not always follow, as shown below.

(25) a. Sengetu wa paatyi e mit-tu gurai itta.
last month Top party to 3-Cl about went
'Last month I went to about three parties.'
b. Nomiya e ni san-gen itta.
bar to 2 3 Cl went
'I went to a couple of bars.'

It seems that when the NCP expresses approximate quantity, its floating from PP becomes better. The contrast between (24a) and (25a) cannot be explained in terms of the MCC. Although NCPs cannot usually be associated with an NP embedded in a PP, the phenomenon is not absolute.

Another problem, pointed out by Park and Sohn (1993), is that the floating NCP has a property that is different from regular secondary predicates. The following example, taken from Park and Sohn (1993:189, the original is in Korean, I have translated it into Japanese) presents a problem for the analysis of NCP in the Case-medial form as a secondary predicate.

(26) [$_{CP}$[$_{NP}$[$_{CP}$Gakusei-ga nan-nin sankasita] taikai]-de kare-ga syoo-o totta-**no**]
student-Nom what-Cl participated contest-Loc he-Nom prize-Acc won-Q
'He won the prize in [the contest in which how many students have participated]?'

They argue that, assuming that *nan-nin* 'how many people' moves to the matrix Spec of a +WH Comp at LF, the WH-phrase crosses an island. This fact poses a problem for Miyagawa's analysis of NCP as a secondary predicate since it is not possible to extract typical secondary predicates out of an island, as shown in (27) and (28) (Park and Sohn's (6) and (7)).

(27) a. John-i cichyese tolawassta.
J-Nom tired returned
'John returned tired.'

b. John-i elmana cichyese tolawass-ni.
J-Nom how tired returned-Q
'How tired did John return?'

c. * Ne-nun [elmana cichyese tolaon salam]-lul mannass-ni.
you-Top how tired returned person-Acc met-Q
'Q you met [a person that returned how tired]'

(28) a. John-i koki-lul cal ikhiese mekessta.
J-Nom meat-Acc well done ate
'John ate the meat well done.'

b. John-i koki-lul elmana ikhiese mekess-ni.
J-Nom meat-Acc how well-done ate-Q
'How well done did John eat the meat?'

c. * Mary-nun [koki-lul elmana ikhiese mekun salam]-ul silheha-ni.
M-Top meat-Acc how well-done eat person-Acc hate-Q
'Q Mary hates [a person that ate the meat how well done]'

In (27a), *cichyese* 'tired' is a secondary predicate associated with the subject, and when it is in the matrix clause, it can be interrogated, as shown in (27b). However, when the secondary predicate occurs inside a relative clause, it cannot be interrogated, as shown in (27c). (28) shows the same point with an object related secondary predicate. Park and Sohn argue that the ungrammaticality of (27c) and (28c) is due to the fact that the +WH feature of the secondary predicate cannot be checked in the matrix Spec of CP because the movement crosses a complex NP island. They conclude that if *nan-nin* 'how many people' in (26) is a secondary predicate, the sentence would be ill-formed like (27c) and (28c). Therefore, the fact that (26) is well-formed is problematic for Miyagawa's analysis of the floating quantifier as a secondary predicate.

My analysis of NP-Case-ClP is similar to Miyagawa in spirit in that the NCP is not a part of the extended projection of the head noun. However, my analysis treats the NCP as a constituent of the noun phrase, rather than as a secondary predicate, and also pursues a strict binary branching analysis, and does away with the MCC.[8]

2.2.2 Numeral classifier as a head: Kitahara (1993) and Kawashima (1994, 1998)

2.2.2.1 Kitahara (1993)

In Kitahara (1993), the structures of noun phrases in the Case-medial form and the Case-final form in (29) are analyzed as shown in (30).

(29) a. hon-o san-satu (Case-medial form)
book-Acc three-Cl
b. hon san-satu-o (Case-final form)
book three-Cl-Acc

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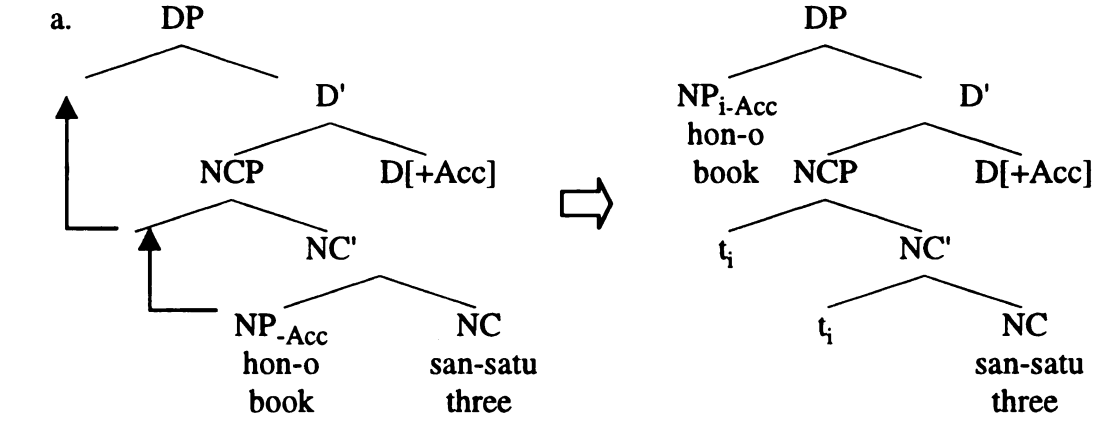
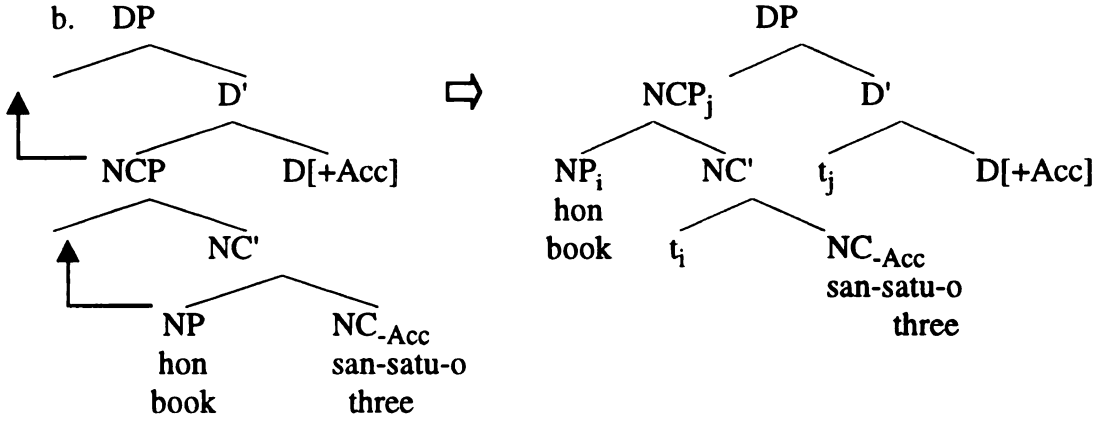
[8] The mutual c-command requirement is problematic since, as far as I know, we do not find such a requirement anywhere else in the grammar. Therefore, it is more desirable to account for the distributions of FQs without it.

(30) a.



b.



According to Kitahara's analysis, both the Case-medial form and the Case-final form are derived transformationally from identical underlying structures. The only difference is that the lexical item inserted in NP in (30a) bears the Acc marker *o*, but not in (30b). In (30b) the Acc marker is borne by the lexical item in NC. However, these differences are not structurally represented. Kitahara proposes that in (30a), the head of NCP takes an NP *hon-o* as its complement and the NP moves to Spec NCP in order to check some feature of NC head in Spec-Head configuration. In the next step, a covert (null) D takes the NCP as its complement. This D bears an Acc case feature that needs to be checked off. He argues that NP moves to Spec DP to check off the Acc case feature of D since the head of the NP has an Acc feature. On the other hand, in (30b), Acc feature is borne by NC head, and therefore, in order to check Acc feature of D, NCP moves to Spec DP.

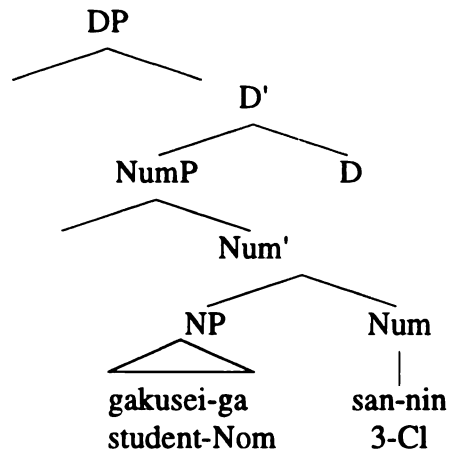
The first problem with Kitahara's analysis is that he does not recognize any interpretational difference between (29a) and (29b), and therefore, his analysis does not capture the semantic differences that these constructions bear. As discussed in section 2.1, while the NP-Case-NCP order has an indefinite reading, the NP-NCP-Case order is used when the noun phrase is definite. Although some researchers have treated phrases like (29a) and (29b) semantically equivalent, quantitative studies conducted by Pamela Downing (1993, 1996) find the functional difference between the NP-Case-ClP order and the NP-ClP-Case order, which provides evidence for their semantic differences. Downing (1993) investigates a corpus of 96 uses of the NP-Case-ClP order collected from both oral and written sources. She points out that NP-Case-ClP order is typically used when the number introduced by the NCP is new (87.5%). When it is not introductory, it only appears in distributive or emphatically exhaustive contexts. These facts are consistent with the analysis of NP-Case-ClP order as expressing indefiniteness. In addition, Downing (1996) finds that NP-ClP-Case order is typically used to pick out the referents already in the discourse rather than to convey any new information about the number of those referents. This again is consistent with our claim that NP-ClP-Case order gives rise to the definite reading.

The second problem is that, if (29a) and (29b) have an identical syntactic structure given in (30), it is not clear why the accusative case is marked on NP in (30a) but on NC in (30b). Except for the morphological marking of accusative Case on different nodes, (30a) and (30b) are identical at the syntactic level. Yet they have quite different syntactic distributions and meanings. He offers no explanation about how the position of the Case particle makes such differences for the DP.

2.2.2.2 Kawashima (1994, 1998)

Kawashima (1994, 1998) only analyzes the Case-medial form and also has no structural position for Case particles. Her analysis, which is similar to Kitahara's (1993), is as follows:

(31)



Structurally, what Kawashima calls NumP corresponds to Kitahara's NCP. What differs from Kitahara's analysis is that Kawashima proposes that the case marked NP *gakusei-ga* 'student-Nom' in (31) moves out of DP stranding its classifier phrase behind. Therefore, a so-called floating quantifier construction like (32) is a result of stranding the numeral classifier phrase.

(32) Gakusei-ga$_i$ kinoo [t_i san-nin] kita.
student-Nom$_i$ yesterday [t_i 3-Cl] came
'Three students came yesterday.'

Although Kawashima's basic analysis of the Case-medial form seems to be on the right track, she does not have any analysis of the Case-final form. I will also propose an analysis of FQs as a NCP stranding, but my analysis differs from Kawashima's in that the Case-medial form constitutes a NumP rather than a DP, as shown in (21a).

2.2.2.3 Classifier as Adverb: Sasaki Alam (1997)

Sasaki Alam (1997) also analyzes only the Case-medial form and does not discuss the structural position of the Case particle. She tries to account for the subject/object asymmetry and the specific/non-specific asymmetry introduced in 2.1.2.4 and 2.1.2.5, respectively, by taking the NCP in the Case-medial form as an adverb of quantification. Her claim is that only when the NCP is quantifying over an event, can it be separated from the associate NP more freely. I will summarize her arguments below.

Sasaki Alam proposes that in the Case-medial form, the NCP associated with the subject is more restricted in distribution than the object-related NCP (e.g., (15b) and (16b), discussed above) because of the functional differences between the subject and the object in event semantics. While object NPs may measure out the events, subject NPs that are purely external arguments such as the subject of transitive and unaccusative sentences cannot. The idea that the object can measure out an event comes from the fact that the count/mass distinctions for the internal argument affect the interpretation of an event, as shown in (33), whereas the count/mass distinctions of the subject do not affect the interpretation of the event, as shown in (34) (Sasaki Alam's (27) and (28)).

(33) a. Charles drank a mug of beer. (?? for an hour/in an hour) (**delimited** event)
b. Charles drank beer. (for an hour/#in an hour) (**nondelimited** event)

(34) a. The heater melted the candle. (**delimited** event)
b. Heat melted the candle. (**delimited** event)

Based on this observation, she argues that an NCP associated with the object in the Case-medial form can quantify an event, and hence, it is an adverb. As an adverb, it has a freer distribution and it can scramble over the subject, as shown in (15b) above. On the other hand, since an NCP of an external argument does not quantify over an event but only

over an entity, it is not an adverb, and hence its distribution is restricted. Therefore, (16b) is not acceptable.

Furthermore, if a floating NCP needs to quantify over an event, the event has to be of the type that can be quantified in order for the FQ to be licensed. If the event cannot be quantified, floating of the NCP is not allowed. She argues that this can account for the contrast between (35a) and (35b) (the specific/non-specific asymmetry) below (the judgment is Sasaki Alam's).[9]

(35) a. San-satu Taro-ga gengogaku-no hon-o yonda.
3-Cl Taro-Nom linguistics-Gen book-Acc read
'Taro read three linguistics books.'

b. ?* San-nin Taro-ga Harvard-no gakusei-o matta.
3-Cl Taro-Nom H.-Gen student-Acc waited
'Taro waited for three Harvard students.'

Her explanation is as follows: In (35a), 'reading three linguistics books' can be interpreted distributively, as 'there were three incidents of a book reading event', and therefore, the NCP is quantifying over an event. On the other hand, in (35b), 'waiting for three Harvard students' cannot mean that there were three incidents of a waiting event, since 'wait' is an inherently homogeneous event. This means that an event like 'wait' does not allow an NCP to quantify over it, and hence, the NCP in (35b) cannot be an adverb of quantification. As a result, its distribution is restricted and movement of the NCP in (35b) causes the sentence to be ungrammatical.

Sasaki Alam claims that *hon-o san-satu yonda* 'read three books' allows a distributive reading (i.e. there were three incidents of a book reading event), whereas

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[9] To me, the deviance of (35b) is pragmatic rather than syntactic. The scrambled sentence, which forces a non-specific reading of *three Harvard students*, is fine if we construct a context where one has to wait for three random Harvard students.

matta 'waited' is an inherently homogeneous event and does not allow a distributive reading, is supported by the contrast in (36a,b).

(36) a. # Taro-ga gengogaku-no hon-o san-satu san-jikan yonda.
-Nom linguistics-Gen book-Acc 3-Cl 3-hours read
'Taro read three linguistics books for three hours.'

b. Taro-ga Harvard-no gakusei-o san-nin san-jikan matta.
Toro-Nom Harvard-Gen student-Acc 3-Cl 3-hours waited
'Taro waited for three Harvard students for three hours.'

Sasaki Alam states that in (36a), since *hon-o san-satu yonda* 'read three books' denotes a telic event (i.e. the event has a terminal point) consisting of three completed events, it is incompatible with the durative adverb *san-jikan* 'three hours'. On the other hand, since *matta* 'waited' denotes an atelic event, it is compatible with the durational adverb.

To summarize Sasaki Alam's argument, only when the Case-medial form allows the event-related reading is the NCP an adverb of quantification, and only then, may the NCP have a freer distribution. Therefore various asymmetries follow from whether the NCP is quantifying over an event or not.

Sasaki Alam's account of the FQ-related asymmetries is interesting, but there are several problems with her analysis. First, she does not offer any syntactic evidence to show the status of the NCP as an adverb. Their basic distribution certainly seems similar, as the data in (37)-(39) show.

(37) a John ga hon o **san-satu** yonda.
John-Nom book-Acc 3-Cl read
'John read three books.'

b John ga hon o **yukkuri** yonda.
John-Nom book-Acc slowly read
John read (a) book(s) slowly.'

(38) a John ga **san-satu** hon o yonda.
John-Nom 3-Cl book-Acc read
'John read three books.'

b. John ga **yukkuri** hon o yonda.
John-Nom slowly book-Acc read
John read (a) book(s) slowly.'

(39) a. **San-satu** John ga hon o yonda.
3-Cl John-Nom book-Acc read
'John read three books.'
b **Yukkuri** John ga hon o yonda.
slowly John-Nom book-Acc read
'John read (a) book(s) slowly.'

In (38a), the NCP precedes the case marked NP *hon-o* 'book-Acc'. Similarly, the manner adverb *yukkuri* 'slowly' may precede the direct object *hon-o* 'book-Acc' in (38b). Both the NCP and the adverb may also appear in the sentence initial position in (39)

Although their linear orders seem to suggest that the NCP and the adverb are in the same syntactic position, they do not behave completely alike. For example, the adverbs cannot be coordinated with *to* 'and' while the NCP can.

(40) a. * Mary ga hon-o kinoo to sinbun-o kyoo yonda.
Mary-Nom book-Acc yesterday and newspaper-Acc today read
'Mary read (a) book(s) yesterday and (a)newspaper(s) today.'
b John-ga hon-o san-satu to zassi-o ni-satu yonda.
J.-Nom book-Acc 3-Cl and magazine-Acc 2-Cl read
'John read three books and two magazines.'

(40a) shows that *hon-o kinoo* (book-Acc yesterday) cannot be coordinated by *to* 'and', while in (40b), *hon-o san-satu* (book-Acc 3-Cl) can be coordinated by *to*.[10] If both *kinoo* 'yesterday' and *san-satu* 'three' are adverbs and occupy the same syntactic position, it is not clear why only the adverb of quantification can be coordinated with the preceding noun phrase and the temporal adverb cannot. Assuming that those items that can be

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[10] Note that *kinoo* 'yesterday' can be coordinated by *to* 'and' independently as shown in (i).

(i) kinoo-to kyoo gakkoo-e itta.
yesterday and today school-to went
'I went to school yesterday and today.'

coordinated form a constituent, *san-satu* 'three' forms a constituent with *hon-o* 'book-Acc' in (40b), but *kinoo* 'yesterday' does not.

The second problem is that it is not clear how having an event quantification reading entitles the NCP in the Case-medial form to be an adverb, considering that regular quantified NPs can also induce an event-related reading. Observe Krifka's (1992) example cited by Sasaki Alam in (41) (Sasaki Alam's (19)).

(41) Four thousand ships passed through the lock last year.
A:There are four thousand ships which passed through the lock last year. (Object-related reading)
B: There were four thousand events of passing through the lock by a ship last year. (Event-related reading)

(41) has an event-related reading as stated in (B). Yet there is no reason to treat *four thousand* here as a syntactic adverb. If so, the fact that the NCP in the Case-medial form may be associated with an event-related reading does not require the NCP to be an adverb of quantification. Whether the Case-medial form receives an event-related reading or not seems to depend on the nature of the predicate it is an argument of, rather than the syntactic status of the NCP as an adverb of quantification.

Another problem is that, even if we accept the status of some NCPs as adverbs of quantification, Sasaki Alam's claim that subject-related NCPs' quantification over an entity leads to a more restricted distribution is quite vague. She does not explain how it is restricted. It is certainly not true that subject-related NCPs must stay adjacent to their associate NPs. While object intervention is not allowed, as shown in (16b) above, other phrases can intervene between the subject and its NCP, as shown in (42).

(42) Gakusei-ga kinoo huta-ri hon-o katta.
student-Nom yesterday 2-Cl book-Acc bought
'Two students bought books yesterday.'

Under Sasaki Alam's analysis, since the subject of a transitive sentence is a purely external argument, its NCP does not quantify over an event; and therefore, its distribution should be limited. But her analysis cannot explain why the object intervention is not allowed while adverb intervention is, as shown in (42).

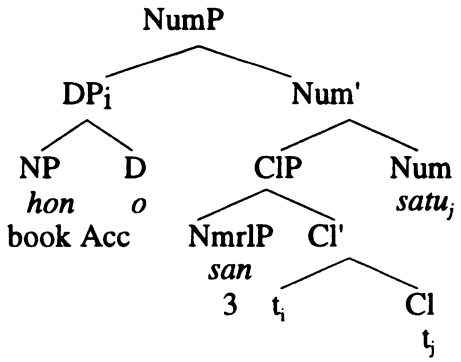
Therefore, while Sasaki Alam's analysis of various asymmetries is insightful, I reject the analysis of floating quantifiers as adverbs of quantification and treat the NCP as a part of the noun phrase.[11]

2.3 The structures of Noun Phrases with NCPs

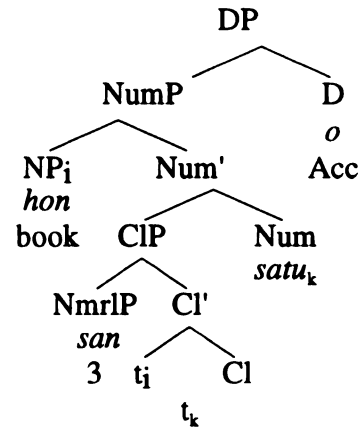
Having critically reviewed previous analyses of the Case-medial (NP-Case-NCP) and the Case-final (NP-NCP-Case) forms and pointed out problems/shortcomings of each analysis, I provide my analysis of the two forms in this section. In this analysis, I take the NCP as a constituent of the noun phrases, rather than as a secondary predicate or an adverb. Therefore, my analysis is closer to Kitahara's (1993) and Kawashima's (1994) analyses. It differs from their analyses, however, in at least two respects: In my analysis, Case-particles have a structural position as a functional head, which I propose to be a D. Secondly, the Case-medial form and the Case-final form project different phrases, although both are nominal projections, unlike Kitahara's analysis which treats them both as DPs. The present analysis aims to explain, based on their internal structures, how the Case-final form is associated with a definite interpretation while the Case-medial form is interpreted as an indefinite, as discussed in section 2.1.2.1.

I propose the structures in (43a) and (43b) for the Case-medial form and the Case-final form, respectively.

(43) a. Case-medial form (indefinite) [NP-Case-NCP]



b. Case-final form (definite) [NP-NCP-Case]



In the present analysis, the Case-medial form, as well as the Case-final form, are treated as some form of noun phrases, following Kamio (1977, 1983), Kawashima (1994, 1998) Kitahara (1993) and others. The standard test used to argue for nominal constituency of the Case-medial form is the coordination by *to* as shown in (44) below (Kamio 1977:84 (9)).

(44) Watasi-wa ookina gomuin to [nengahagaki-o ni hyaku mai] chuumonsita.
I-Top big rubber stamp and [new year card-Acc 200-Cl] ordered
'I ordered a big rubber stamp and 200 new year cards.'

In (44), a simple noun phrase and the Case-medial form are coordinated, and if coordination is only possible for the constituents of the same type, (44) argues for the

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[11] See also Fujita (1994) for an analysis of FQ as an adverb. Although his arguments are based more on syntactic distributions than semantics, a similar criticism applies. In Chapter 3, I discuss some parts of his analysis.

treatment of the Case-medial form as a noun phrase.[12] Therefore I will take this position. Now let me discuss each structure proposed in (43) in the next subsections.

2.3.1 Case-medial form (indefinite)

In (43a), the head of the classifier phrase selects a DP as its complement, and the Numeral phrase (NmrlP) is a Specifier of the Classifier Phrase (ClP). The head of the Number Phrase (NumP) takes the Classifier phrase as its complement. The head of the ClP moves to the head of the NumP as the Num head needs to be lexically filled. Consequently, the DP raises to the Spec of NumP so that the phi features of the [Num+Cl] head can be checked with the DP in Spec-head agreement.[13]

Assuming the structure in (43a) for the Case-medial form, the VP *hon-o san-satu katta* (book-Acc 3-Cl bought) may have either of the following representations in (45).[14]

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[12] As discussed in Kakegawa (1999) and also discussed in Koizumi (1995, 2000), there are cases in which what are coordinated by *to* cannot be analyzed as noun phrases as shown in (i) and (ii). This kind of examples is also used in Inoue (1976) to argue against a single constituency analysis of the Case-medial form.

(i) [John-ga hon-o san-satu] to [Mary-ga zassi-o ni-satu] katta.
[J-Nom book-Acc 3-Cl] and [M-Nom magazine-Acc 2-Cl] bought
'J bought 3 books and M bought 2 magazines
(Kakegawa 1999:28 (52))

(ii) [Gakusei-ga kinoo huta-ri] to [sensei-ga kyoo san-nin] kita.
[student-Nom yesterday 2-Cl] and [teacher-Nom today 3-Cl] came
'Yesterday two students and today three teachers came.'
(Koizumi 2000:263 (93a))

As pointed out by Kawazoe (2002), however, the bracketed 'phrases' in those cases cannot be coordinated with a single noun phrase as in (iii).

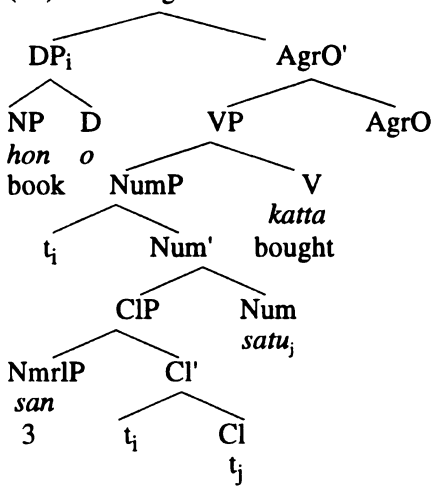
(iii) *[Gakusei-ga kinoo huta-ri] to [sensei-ga] kita.
[student-Nom yesterday 2-Cl] and [teacher-Nom] came
Intended: 'Yesterday two students and (a) teacher(s) came.'
(Kawazoe 2002:169 (17))

Based on (iii), the bracketed phrases in (i) and (ii) are not of the nominal category. Therefore, it seems that there are *to* coordinated phrases that are larger than noun phrases.

[13] I assume that all the feature checking takes place in Spec-Head configuration. Therefore, DP must move to Spec NumP to check the phi features of Cl head.

[14] Kakegawa (1999) shows that both representations in (45) are necessary based on the coordination of the Case-medial forms.

(45) a. AgrOP



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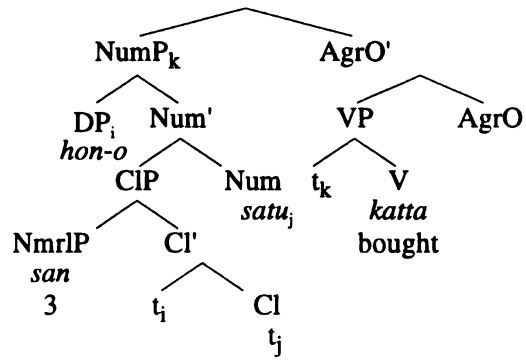

The important point here is that the complement of the verb is a NumP, and the verb assigns a theta role to the NumP. Since this noun phrase does not project up to a DP, it receives an indefinite reading.[15] There are two possible representation for the Case-medial form like *hon-o san satu* 'three books'. In (45a), the DP *hon-o* 'book-Acc' alone rises to [Spec AgrO], and in (45b), the whole NumP rises to [Spec AgrO] so that the D feature of Agr is checked.[16][17][18] The structural difference between (45a) and (45b) is important both syntactically and semantically. Recall that adverbs can intervene between the NP and its NCP. This is allowed in (45a). For syntax-semantics mapping, Diesing (1992) argues that the argument that remains VP internal gets a non-specific reading and

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[15] See also Campbell (1996:176) for a structure of indefinite noun phrases in English.

[16] I am assuming Agr phrases for convenience here. The present analysis should be compatible with the vP based analysis.

[17] In order to check the Case feature of AgrO, either the DP in Spec NumP in (45a) or the NumP itself in (45b) can satisfy Attract Closest (Chomsky 1995) since they are equidistant from Agr. Closeness is defined as follows: β is closer to the target K than α if β c-commands α.
Since the NumP does not c-command the DP *hon-o*, under the definition, the NumP is not closer to AgrO than the DP.

[18] I will ignore the issue of whether the verb in Japanese overtly raises to T or not for simplicity. The issue does not affect the present discussion.

the argument that is outside the VP gets a specific reading (see also Mahajan 1992). If that is true, we expect that (45a) should get an indefinite-non-specific reading because the argument NumP remains inside the VP. On the other hand, we expect (45b) to have an indefinite specific reading because the argument NumP is outside the VP. The consequence of this structural and semantic difference related to the distribution of the numeral classifier phrase will be discussed in section 2.4.

2.3.2 Case-final form (definite)

Recall that the Case-final form has a definite reading as opposed to the Case-medial form, which is indefinite. This semantic contrast is captured syntactically in the configurations given in (43). In (43b), the Cl head selects an NP as its complement instead of a DP.[19] An important difference from the structure proposed for the indefinite one in (43a) is that, in (43b), the NP and its associate numeral classifier phrase are a part of the same extended projection, NumP. Since the D head takes this NumP as its complement, the DP is an extended projection of the NP *hon* 'book'. Therefore, in (43b) the argument of the verb is a DP, as shown in (46) below, but in (43a), the argument is a NumP, as illustrated in (45).

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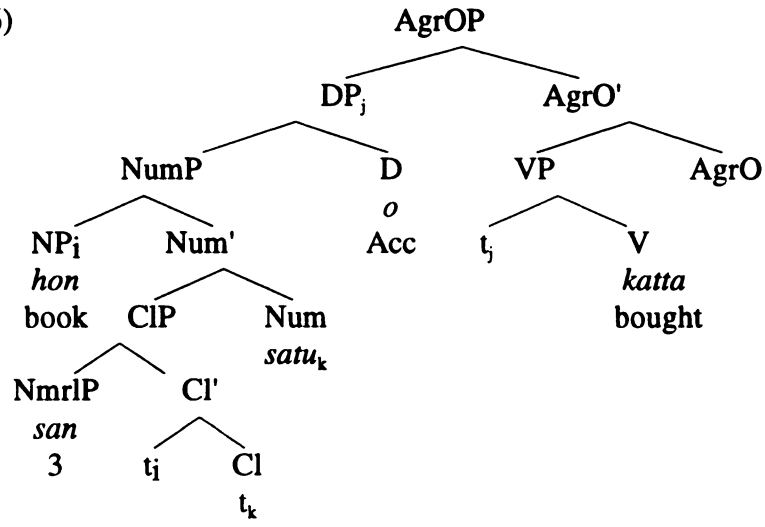
[19] In English, a quantifier like *all* seems to take a complement that is smaller than DP (e.g., *all students*) or DP (e.g., all the students). Therefore, considering that NCPs are quantificational elements, the fact that Cl may select NP or DP may not be unusual.

(46)



Hence, assuming that the case markers are Ds, the indefinite reading associated with the Case-medial form and the definite reading of the Case-final form is captured by the structures given in (43). Namely, when the argument is a NumP as in the Case-medial form, it gets an indefinite reading, and when the argument is a DP with overt DP and NumP layers, it gets a definite interpretation. Note that for the definite interpretation to become prominent, the DP has to be an extended project of a NumP and the NumP has to contain overt number information. Therefore, the DP *hon-o* 'book-Acc' in (43a) does not get a definite reading because the NP *hon* 'book' does not project a NumP, or it may have a NumP projection but it does not contain overt number information.

However, it is not the case that DPs like *hon-o* 'book-Acc' never get a definite interpretation. Bare NPs with a Case (DPs without Number projection) may receive a definite interpretation in some cases, but when they do, what makes them get a definite reading largely depends on the context in which the noun phrase is used.[20] In general the

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[20]. The strongest version of the analysis, suggested by Alan Munn (p.c.), would be to say that all DPs in Japanese are definite; NP+Case is a definite 'kind' (Chierchia 1998) and NumP+Case is a definite specific.

definite interpretation of a bare NP+Case seems to be a product of interactions between the noun phrase and things external to the noun phrase, such as the structural position (e.g. Topic/Focus), kinds of predicates (e.g. stage vs. individual level predicate), and contextual information (see Ogawa 1996 about Tense and definiteness).[21]

Therefore, an important difference between the DP without a number projection (i.e. bare common noun + Case) and the DP with a number projection (the Case-final form) is that the latter comes with definiteness encoded internally by way of overt

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We still need to explain why the Number makes DPs specific. See Dayal (2002) for the discussion of the relationship between the morphological number marking and kind/(in)definite readings.

[21] Takano (1992, 1994) argues that Case-marking particles are determiners which perform some universal type-shifting functions: *wa* is a generalized type-shifting functor, and *ga* is an iota operator which takes a singleton set to create an individual from the unique member of that given set. She argues that the instance where *ga* or *o* marked common nouns (CNs) get a definite reading is due to the inherent uniqueness implicit in the particular CN. For example:

(i) Hi-ga nobot-ta 'The sun has risen.'
Sun-Nom rise-Past

Here *hi* 'sun' is an inherently unique entity, therefore, even though it is marked by *ga*, it is definite. In the sense of the present analysis, this amounts to saying that *hi* 'sun' comes with number information 'one' even though it is not overtly lexicalized. However, her analysis cannot account for the fact that the case-final form, which is marked by *ga* or *o*, always gets a definite interpretation. In addition, her claim that object bare CNs are always interpreted as indefinite is not borne out, as shown in (ii).

(ii) Mary-wa itumo go-ji-ni **mise-o** sime-te uti-ni kaeru.
-Top always five-o'clock-Dat **shop-Acc** close-Conj house-Dat return
'Mary always closes up her/the shop at five and go home.'

In this sentence, the bare CN object *mise-o* receives a definite interpretation, contrary to Takano's prediction. It cannot be said that *shop* is inherently unique. In this case it is more reasonable to say that the pragmatics forces the definite interpretation of *shop*, since it is implausible for someone to habitually close an arbitrary shop before going home without special context. This shows that the bare object CN can also be either definite or indefinite depending on the context. In the same sentence, however, if we replace *mise-o* with the Case-medial form, which receives only an indefinite reading, we predict the sentence to be infelicitous with a nonspecific reading. On the other hand, it should be well formed with the Case-final form. These predictions are borne out, as shown below.

(iii) # Mary-wa itumo go-ji-ni **mise-o** **ni-ken** sime-te uti-ni kaeru.
M-Top always five-o'clock-Dat **shop-Acc** **2-Cl** close-and house-Dat return
'Mary always closes up two shops at five and go home.'
(# with "any two shops" (non-specific) reading. OK with "two of the shops" (specific) reading.)

(iv) Mary-wa itumo go-ji-ni **mise ni-ken-o** sime-te uti-ni kaeru.
M-Top always five-o'clock-at **shop 2-Cl-Acc** close-and house-to go
'Mary always closes up the two shops at five and go home.'

It is clear from these examples that the CN without number can be either definite or indefinite but the Case-medial form and the Case-final form can only be indefinite and definite, respectively.

number information.[22] Hence, it gets a definite interpretation independent of context and it cannot be used in a context where indefinites are required. This point can be made clear from the examples given in (47).

(47) a. # Biiru san-bon-o kudasai.
beer 3-Cl-Acc give-me
'Give me the three bottles of beer.'
b. Biiru-o san-bon kudasai.
beer-Acc 3-Cl give-me
'Give me three bottles of beer.'

(47a) is unacceptable as a discourse initial utterance when ordering some beer at a shop, which is quite understandable if *biiru san-bon-o* (beer 3-Cl-Acc) expresses some definite bottles of beer. In such a situation, the Case-medial form must be used as in (47b).

The analysis proposed for the Case-final form here is quite reminiscent of the analysis of Hungarian DPs proposed in Szabolcsi (1994), which I introduced in Chapter 1. In both Japanese and Hungarian, the definiteness of the DP depends of the content of DP, rather than the D itself.

2.3.3 Summary

In this section, I have argued for the structures of the Case-medial form and the Case-final form and showed that by taking case particles as Ds, we can account for the semantic differences between those two forms of noun phrase in a way that is compatible

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[22] We can see a similar effect of numeral in English noun phrases. Campbell (1996) and Storto (2000) point out that possessive pronoun plus bare singular noun may have indefinite interpretation in a predicative position as in (i).
(i) John is my friend, and Bill is also my friend.
However, as Zamparelli (1995) points out, when genitive contains an overt numeral, it can no longer be indefinite as in (ii).
(ii) #John and Bill are my two friends, and Dave and Ed are also my two friends.
These data suggest that overt numeral information in determiner phrases has something to do with expressing definiteness.

with crosslinguistic analyses of noun phrases discussed in chapter 1: Namely, an indefinite noun phrase form a NumP (Cheng and Sybesma 1999, Visonyanggoon 2000, Déchaine and Wiltschko 2002), while a definiteness is expressed by a DP depending on the complement of D (Szabolcsi 1994).

2.4 Supporting evidence

So far I have motivated the analysis of the two noun phrases based on their semantic distinctions. In this section, I will show that not only does the present analysis capture the semantic differences between the Case-medial form and the Case-final form structurally, but it can also account for their distributional differences and other phenomena introduced in section 2.1.

2.4.1 Adverb intervention

Let us first discuss adverb intervention facts. Given the structure (45a) and (46), we predict that an adverb can appear between the noun phrase 'book' and its numeral classifier phrase in (45a), but not in (46). This prediction is borne out as shown in (48) and (49).

(48) a. Hon-o **kinoo** san-satu yonda.
book-Acc **yesterday** 3-Cl read
'(I) read three books yesterday.'

b. Hon-o **yukkuri** san-satu yonda.
book-Acc **slowly** 3-Cl read
'(I) read three books slowly.'

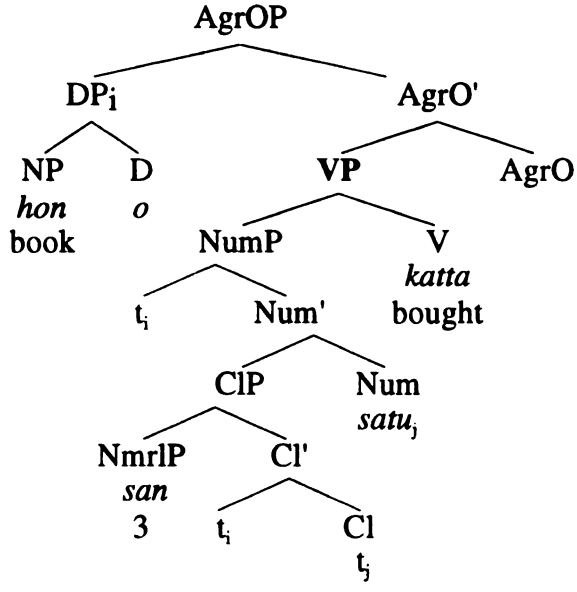
(49) a. * Hon **kinoo** san-satu-o yonda.
book **yesterday** 3-Cl-Acc read

b. * Hon **yukkuri** san-satu-o yonda.
book **slowly** 3-Cl-Acc read

In (48a), the temporal adverb *kinoo* 'yesterday' can intervene between the noun phrase and its NCP, and in (48b) the manner adverb *yukkuri* 'slowly' can intervene the noun

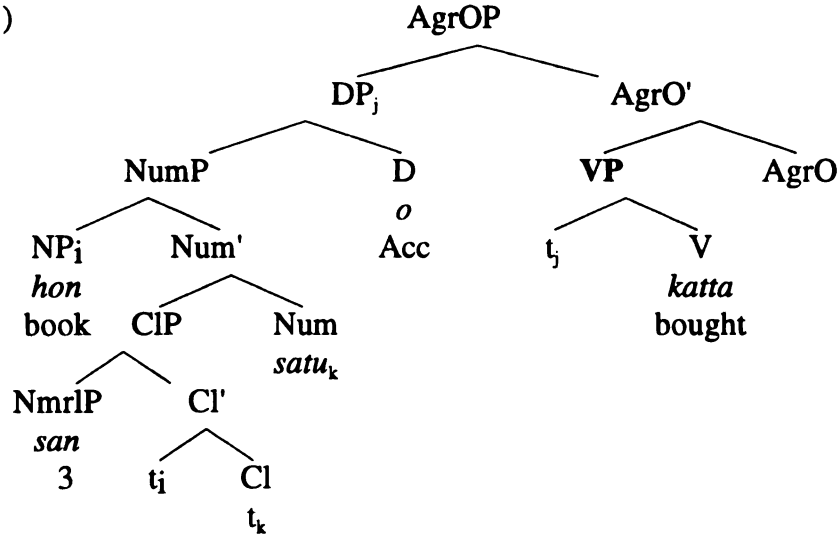
phrase and its numeral classifier. This is possible because the adverbs can adjoin to VP in (45a), repeated here in (50).

(50) (=45a)



However, as you can see in (49), the adverb intervention is not possible for the Case-final form because there is no node between the noun and its classifier to which the adverb can adjoin in the structure in (46), repeated here as (51).

(51) (=46)



Considering that adverbs must adjoin to some verbal projection, i.e. VP, AgrP or TP, in (51), adverbs must either precede or follow the Case-final form as in (52).

(52) a. **Kinoo** hon san-satu-o yonda.
yesterday book 3-Cl-Acc read
'Yesterday I read the three books.'
b. Hon san-satu-o **kinoo** yonda.
book 3-Cl-Acc yesterday read
'Yesterday I read the three books.'

In (52a), the adverb *kinoo* 'yesterday' precedes the direct object as it may adjoin to the AgrOP, and in (52b) it follows the direct object as it can adjoin to the VP in (51).

2.4.2 Scrambling

The present analysis also makes the right prediction for scrambling as well. In (50), the numeral and the classifier are a constituent under a maximal projection, NumP. Therefore *san-satu* '3-Cl' should be able to move in the Case-medial form.[23] However, in (51), the numeral and the classifier do not constitute a maximal projection. Hence, *san-satu* '3-Cl' should not be able to scramble. These predictions are also borne out, as shown below.

(53) San-satu$_i$ John-ga hon-o t_i yonda.
3-Cl J.-Nom book-Acc read
'John read three books'

(54) * San-satu$_i$ John-ga hon t_i-o yonda.
3-Cl J.-Nom book -Acc read
Intended reading: 'John read the three books.'

(53) shows that the numeral classifier phrase can scramble from the Case-medial form. On the other hand, scrambling *san-satu* '3-Cl' in (54) does not maintain the intended reading (definite). If the scrambling is legitimate, we expect that the sentence maintain the original meaning, but this is not the case in (54). Therefore, both the adverbial

intervention and scrambling facts are accountable with the structures given in (45a) and (46).

2.4.3 Modification

In this subsection, I will show that the present analysis can also account for scope differences in demonstratives and relative clauses modifying the Case-medial form and the Case-final form.

2.4.3.1 Relative clauses

In Japanese, the head of a relative clause (RC) appears at the end of the RC. It has been noted that when the Case-medial form is in the head position of a RC, the RC seems to modify only a noun phrase, rather than the noun phrase plus the classifier phrase (Ishii 1997). This is not expected under an analysis that treats the Case-medial form as a DP (Kitahara 1993, Kawashima 1994). Consider the following data.

(55) a. John-ga **hon-o** **san-satu** katta.
J.-Nom book-Acc 3-Cl bought
'John bought three books.'

b. Mary-ga [John-ga katta $_{RC}$] hon-o san-satu nakusita.
M.-Nom [J-Nom bought] book-Acc 3-Cl lost
'Mary lost three of the books [John bought].'

In (55a) the sentence means 'John bought three books'. The bolded phrase in (55a) is more or less equivalent to 'three books'. Therefore, if we make this phrase to be the head of a RC as in (55b), we expect to get the reading '(the) three books John bought'.

However, this prediction is not borne out as shown in (55b). (55b) does not mean that John bought three books and Mary lost them, but rather, it means that John bought

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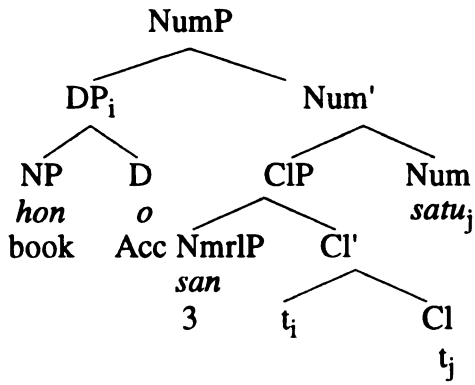
[23] This is a legitimate remnant movement according to Müller (1996) since the antecedent of t_i is in A-

some books, and Mary lost three of them. Therefore, it seems that in (55b) the clause *John-ga katta* 'John bought' does not modify 'three books' but instead it modifies only 'books'. This fact can be given a reasonable analysis based on the structure of the Case-medial form proposed in (43a), repeated here in (56) for convenience, and on the standard adjunction structure of relatives clauses.[24]

(56) Case-medial form (indefinite)



In the above structure, the NCP is not a part of the extended projection of NP *hon* 'book'. Now, assuming that the noun phrases that are modified by the relative clause must be DPs (Kayne 1994), the structure of (55b) is analyzed as shown in (57).[25]

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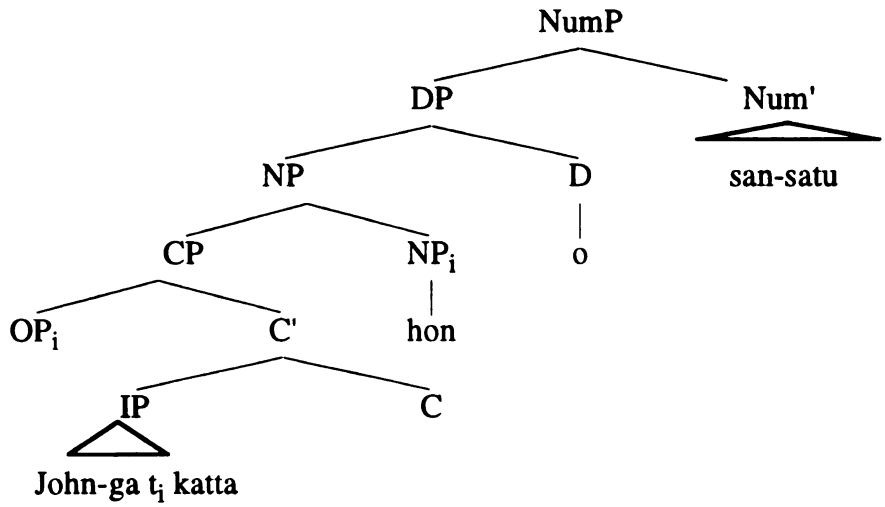
position and the scrambling of NumP is plausibly an A'-movement.

[24] I assume that restrictive relative clauses are adjoined to NP or NumP, and non-restrictive relative clauses are adjoined to DP.

[25] I assume the analysis of the relative clause as a DP, but I do not follow Kayne's (1994) analysis strictly. In his analysis, D takes a CP as its complement.

(57)



From the above structure, it is clear that the RC in (55b) modifies *hon* 'book' alone and not *hon-o san-satu* 'three books'. Therefore, the interpretation of (55b) is explained structurally under the present analysis.

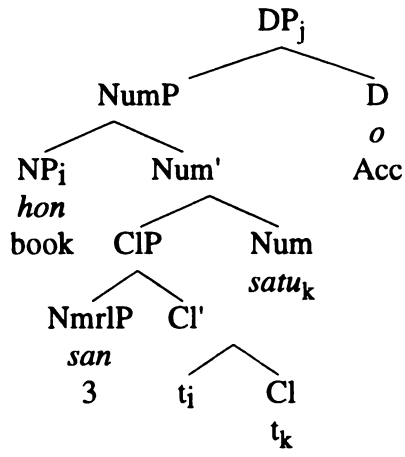
On the other hand, when the case final form is in the head position of a relative clause, the relative clause modifies 'three books' as shown in (58b).

(58) a. John-ga [hon san-satu-o] katta.
J.-Nom book 3-Cl-Acc bought
'John bought the three books.'

b. Mary-ga [John-ga katta $_{CP}$] hon san-satu-o nakusita.
M.-Nom J.-Nom bought book 3-Cl-Acc lost
"Mary lost the three books John bought.'

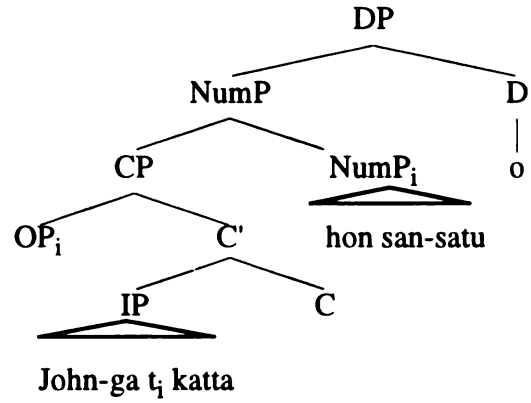
(58b) means that John bought three books and Mary lost them. Therefore, in (58b), the RC *John-ga katta* 'John bought' modifies *hon san-satu* 'three books'. In the present analysis of the Case-final form, repeated in (59), (58b) can be given the schematic structure in (60).

(59) Case-final form (definite)



If the RC is adjoined to NumP in the structure given above, (58b) has the structure in (60).

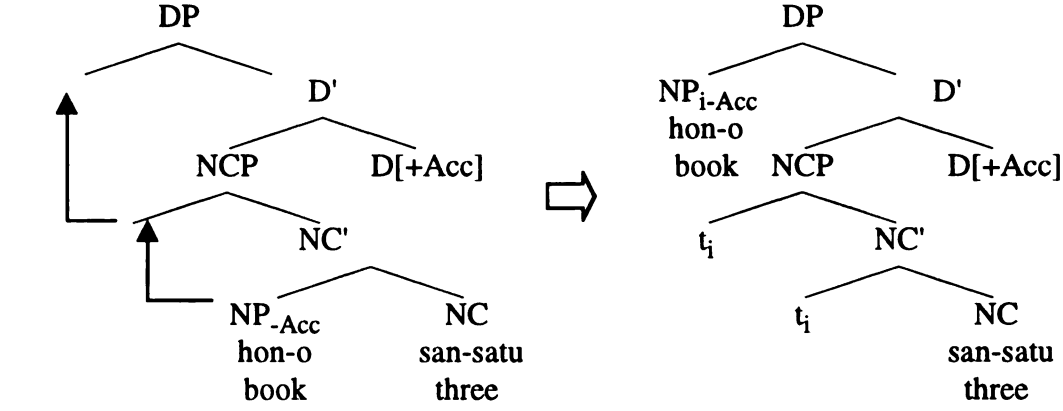
(60)



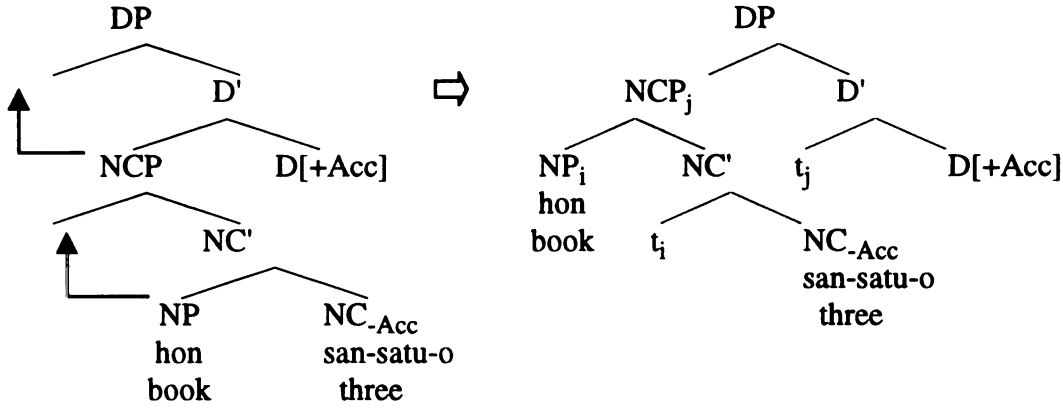
In (60), the relative clause modifies the NumP consisting of *hon* 'book' and a numeral classifier *san-satu* '3-Cl'. Therefore, the reading we get is 'the three books John bought'. In my analysis, the semantic difference between (55b) and (58b) follows from the structures proposed in (43).

Such a difference between the Case-medial form and the Case-final form with regard to modification is not expected from the structures that Kitahara (1993) proposes, repeated in (61):

(61) a. Case-medial form



b. Case-final form



With these structures, whether we take the traditional analysis of RCs as NP adjunction or Kayne's (1994) analysis (i.e., the modifying clause is a complement of D), it does not seem possible to derive the contrast in modification. To derive the semantic difference between the Case-medial form and the Case-final form in relative clause modification in Kitahara's analysis, we have to posit some constraint that says that RCs must adjoin to NPs in the Case-medial form in (61a), but must adjoin to NCPs in the Case-final form in (61b). However, such a constraint seems ad-hoc and it is not clear why the RC cannot adjoin to the NP in (61b), which might give us a 'three of the books John bought' interpretation for (58b). It should also be noted that in both (61a) and (61b), since the

SpecDP must be filled by the moved elements, Kitahara's analysis is incompatible with Kayne's (1994) analysis of the RC. [26]

2.4.3.2 Demonstratives

Another often noted phenomenon in terms of modification is that the Case-medial form cannot become definite even when it takes demonstrative (Ishii 1997). Sentences in (62) exemplify this point.

(62) a. John-ga **kono** hon-o san-satu katta
John-Nom this/these book-Acc 3-Cl bought
Actual reading: 'John bought 3 copies of this book'
Intended reading: 'John bought these three books.'

b. **#Kono** gakusei-ga san-nin kita
this/these student-Nom 3-Cl read
Actual reading: 'Three instances of this student came.'
Intended reading: "These three students came.'

c. Kono kodomo-tati-wa genki-da.
this/these child-Pl-Top healthy-Cop
'These children are healthy.'

The sentences in (62a,b) have a demonstrative *kono* 'this/these' preceding the Case-medial form. Note, however, that (62a) cannot mean that 'John bought these three books' but instead it only means 'John bought three copies of this book'. It seems that the demonstrative is specifying only *hon* 'book', not *hon-o san-satu* 'three books'. The same is true for a nominative marked Case-medial form in (62b). (62b) is pragmatically odd because it means something like 'three instances of this student came' rather than 'these three students came'. The three students in (62b) must all be the same individual. Importantly, the oddity is not because the demonstrative *kono* 'this/these' is incompatible

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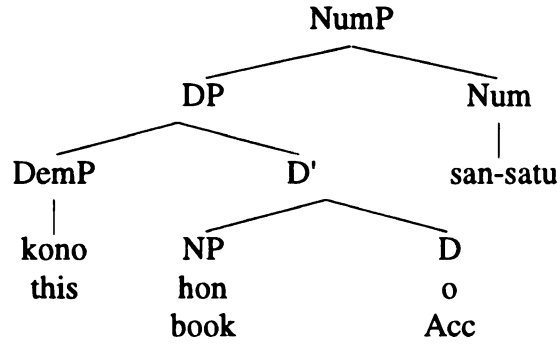
[26] According to Kayne, D takes CP as its complement, and what is modified by the relative clause (i.e. the relative head) moves to Spec CP from inside IP. For languages in which the relative clause follows the head of the relative clause, the derivation stops here. For languages like Japanese, IP consequently moves to Spec DP.

with plural 'three books'. As (62c) shows, *kono* is compatible with plural noun phrase *kodomo-tati* 'children'.

The above fact can be given a structural account under the present analysis. Assuming that demonstratives are specifiers of DPs (Vergnaud 1985; Szabolcsi 1994, Campbell 1996, Murasugi 1991), the only DP that can host the demonstrative in the Case-medial form (see (45a)) is the DP *hon-o* 'book-Acc'. Therefore, in (62a) the demonstrative is in [Spec DP] as shown in (63).[27]

(63)

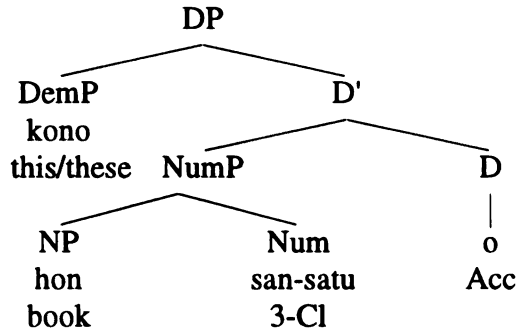


The demonstrative *kono* 'this' specifies *hon* 'book', not *hon-o san-satu* 'three books'. The fact that the demonstrative cannot specify *hon-o san-satu* 'three books' follows from the present analysis because the numeral classifier is not a constituent of the extended projection of NP *hon* 'book' in the Case-medial form.

On the other hand, the Case-final form is a DP as a whole, that is, the numeral classifier and the NP are a part of the same extended projection as shown in (43b). Therefore, when a demonstrative is used with the Case-final form, we expect the demonstrative to specify *hon san-satu* 'three books' and get the meaning 'these three books'. This prediction is borne out as seen in (64).

(64) John-ga [**kono** hon san-satu-o] katta.
J.-Nom this book 3-Cl-Acc bought
'John bought these three books.'

(65)



As shown in (65) above, the demonstrative *kono* 'this' is in [Spec DP], specifying *hon san-satu* 'three books'. Hence, (65) means 'these three books'.

2.4.4 Some Asymmetries

I have shown that the semantic and distributional contrasts between the Case-medial form and the Case-final form support the structures proposed in (43). In the literature, much more attention has been paid to the Case-medial form, often as part of analyses of 'floating quantifiers'. In this section, I will show that the present analysis of the Case-medial form is compatible with the various asymmetries associated with floating quantifier phenomena discussed in previous works. Before proceeding to an account of these phenomena, however, I need to lay out the theory of scrambling to be adopted in the following analyses, since these asymmetry facts involve scrambling of various phrases.

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[27] ClP projection is omitted for simplicity.

2.4.4.1 The nature of scrambling

A number of researchers have analyzed scrambling as an optional movement operation which is responsible for flexible word order in Japanese. However, under the Minimalist Program, purely optional syntactic movement is problematic. Therefore, following Miyagawa (1997), I assume that scrambling is driven either by a Case-agreement feature or by a Focus feature. Support for his analysis comes from the fact that some instances of scrambling have A-movement properties. In this section I summarize the arguments for his analysis.

Saito (1992) shows that VP adjunction scrambling has A-movement properties; that is, VP-scrambled phrases do not reconstruct and they can be an antecedent for the reciprocal *otagai* 'each other' (Miyagawa's (10)).[28]

(66) a. John-ga [$_{VP}$ Hanako-to Mary-ni [otagai-no tomodati]-o syookaisita]
J-Nom Hanako-and Mary-Dat [each other-Gen friend]-Acc introduced
'John introduced each other's friends to Hanako and Mary'

b.??? John-ga [$_{VP}$ [otagai-no tomodati]$_i$-o [$_{VP}$ Hanako-to Mary-ni t_i
J-Nom [each other-Gen friend]-Acc [Hanako-and Mary-Dat t_i
syookaisita]]
introduced
'John introduced each other's friends to Hanako and Mary.'

Miyagawa argues that since (66a) is good, (66b) should also be good if the VP-scrambled phrase can be reconstructed. The fact that (66b) is not well-formed suggests that VP-scrambled phrases do not reconstruct, and hence, VP-adjoined scrambling can be treated as A-movement.[29]

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[28] The grammaticality judgment given to examples in this section is Miyagawa's, but I share his intuition for the most part.

[29] Miyagawa's analysis assumes that A-movement does not allow reconstruction.

Another property of A-movement, which is that A-moved phrases can bind reciprocals, is observed with IP-adjoined scrambling example in (67b) (Miyagawa's (12)):

(67) a. * Otagai-no sensei-ga John to Mary-o mita.
each other-Gen teacher-Nom J-and M-Acc saw
'Each other's teacher saw John and Mary'

b. $[_{IP}$ [John to Mary-]$_i$ o $[_{IP}$ otagai-no sensei-ga t_i mita.]]
J-and M-Acc each other-Gen teacher-Nom saw
'Each other's teacher saw John and Mary'

(67a) is ill-formed because *otagai* 'each other' does not have a c-commanding antecedent. But when *John to Mary* scrambles in (67b), the sentence becomes acceptable because the moved phrase can be the antecedent for *otagai.* Therefore, it suggests that IP-scrambled phrases can A-binds *otagai.*

Another test for A-movement Miyagawa uses is whether a portion of an idiom chunk can be moved. This test also supports his argument that IP-scrambling is A-movement, as shown in (68) (Miyagawa's (37) and (38)):

(68) a. te-o nobasu
hand-Acc extend
'become involved'

b. Te$_i$-o John-ga hoteru-gyoo-ni t_i nobasita.
hand-Acc J-Nom hotel-business-to extended
'John became involved in the hotel business.'

Te-o nobasu in (68a) is an idiom chunk. (68b) shows that the idiom chunk maintains its idiomatic meaning even though the direct object *te-o* 'hand-Acc' is moved and it is separated from the verb. Therefore, Miyagawa argues that, according to this test, movement of *te-o* 'hand-Acc' in (68b) is A-movement.

Having established that IP-adjunction is A-movement, Miyagawa further argues that this movement is Case-driven. This means that, in an example like (69) below, the

object moves to check the case feature in Spec IP. Miyagawa argues that in those cases the head of IP checks both Nom and Acc features.[30]

(69) [$_{IP}$ Pizza-o$_i$ [$_{I'}$ John-ga t_i tabeta.]
pizza-Acc J-Nom ate
'John ate pizza.'

Under an Agr based analysis of Case checking, I(nfl) that can check both Nom and Acc is a fused Agrs-Agro head. Miyagawa assumes the nature of Agrs and Agro as follows (Miyagawa 1997:15):

> In Japanese, Agro is inherently weak (see Tada 1992, Ura 1994) but Agrs is strong. If Agro fuses with Agrs, the fused head takes on the strong feature of Agrs, which is the "head" of this newly created category. Hence, accusative Case may be checked in the IP-adjoined position at overt syntax. However, if Agro does not fuse with Agrs, then, given the inherently weak nature of Agro (Miyagawa 1994), the accusative Case on the object is not checked until LF (in the specifier position of the Agr to the right of the subject).

Miyagawa's analysis predicts that Case-driven scrambling of an accusative object is possible only if Agrs is present. If Agrs is not present, Agro stays "weak" and hence no overt movement is possible. He argues that the nominative/genitive conversion phenomenon, which occurs inside relative clauses, supports his analysis (Miyagawa's (52) and (53)).

(70) [$_{DP}$ [$_{IP}$ Tanaka-**ga/no** hoteru-gyoo-ni te-o nobasita] uwasa]
[$_{DP}$ [$_{IP}$ Tanaka-Nom/Gen hotel-business-to hand-Acc extended] rumor]
'the rumor that Tanaka became involved in the hotel business'

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[30] He claims that such operation is possible because Japanese allows multiple spec positions for a single head as evidenced by multiple subjects construction in (i).

(i) Taroo-**ga** musume-**ga** Isya-ni natta.
T-Nom daughter-Nom doctor-Dat became
Lit. 'Taro, his daughter became a doctor.'

(71) a. [$_{DP}$ [$_{IP}$ te$_i$-o [$_{IP}$ Tanaka-**ga** hoteru-gyoo-ni t_i nobasita] uwasa]
[$_{DP}$ [$_{IP}$ hand-Acc [$_{IP}$ Tanaka-Nom hotel-business-to t_i extended] rumor]
'the rumor that Tanaka became involved in the hotel business'
b. *[$_{DP}$ [$_{IP}$ te$_i$-o [$_{IP}$ Tanaka-**no** hoteru-gyoo-ni t_i nobasita] uwasa]
[$_{DP}$ [$_{IP}$ hand-Acc [$_{IP}$ Tanaka-Gen hotel-business-to t_i extended] rumor]

The subject inside a relative clause may take either nominative case or genitive case as shown in (70). The assumption here is that in (70), when the subject inside the relative clause has nominative case, Agrs is present in the structure, and when genitive case appears on the subject, Agrs is absent. A-movement of an idiom chunk constituent is only allowed if the subject of the relative clause is marked with nominative case as in (71a) but not if it has genitive case as in (71b). This is expected under Miyagawa's proposal because the movement of *te-o* to Spec IP requires a strong Agrs (fused with Agro), which is present in (71a) but absent in (71b).

Miyagawa also argues that another kind of scrambling may be driven by a focus feature. He proposes that there is a focus position between the subject position and the VP based on the following data (Miyagawa 1997: 22):

(72) John-ga isoide [$_{VP}$ hon-o katta].
J-Nom hurry book-Acc bought
'John bought a book in a hurry.'

(73) a. ?? John-ga isoide [$_{VP}$ hon-wa katta].
J-Nom hurry book-Contrast bought
'John bought a book in a hurry.'
b. John-ga hon-wa$_i$ isoide [$_{VP}$ t_i katta].
J-Nom book-Contrast hurry bought
'John bought a book in a hurry.'

The morpheme *wa* on 'book' in (73a) and (73b) forces a contrastive focus interpretation of the object 'book'. Assuming that the manner adverb *isoide* 'quickly' is adjoined to VP, the sentence is marginal when the focus maker appears within the VP as in (73a).

However, if the object moves to the position between subject and VP, the sentence becomes fine, as in (73b). Therefore, Focus Phrase (FocP) seems to be higher than VP. FocP can also appear above IP, as shown in (74) (Miyagawa's (67)).

(74) Hon-wa$_i$ [$_{IP}$John-ga isoide [$_{VP}$ t_i katta]]
book-Cntr J-Nom hurry [t bought]
'John bought a book in a hurry.'

Therefore, Miyagawa concludes that a FocP can be located between either IP and VP, or above IP and argues that A'-scrambling is Focus driven. [31]

Miyagawa's analysis appears to be reasonable, even though it is not clear to me how the details of Case checking mechanism may work. Therefore, in the following analyses, I adopt Miyagawa's intuition that scrambling is either a Case driven movement or a movement for focus, but not the details of his proposal regarding Case assignments.

2.4.4.2 Specific/non-specific asymmetry

The sentences in (75)–(76) illustrate specific/non-specific asymmetry. (Data adapted from Kitahara 1993. Judgments are Kitahara's.)

(75) a. John-ga rekisi-no hon-o **san-satu** yonda.
J.-Nom history-Gen book-Acc **3-Cl** read
'John read **three history books**.' (Indef-Nonspecific)

b. **San-satu$_i$** John-ga rekisi-no hon-o t_i yonda.
3-Cl$_i$ J.-Nom history-Gen book-Acc t_i read
'John read three history books.'

(76) a. John-ga Harvard-no gakusei-o **san-nin** matta.
J.-Nom H.-Gen student-Acc **3-Cl** waited
'John waited for **three Harvard students**.' (Indef-Specific)

b. ?* **San-nin$_i$** John-ga Harvard-no gakusei-o t_i matta.
3-Cl J.-Nom H.-Gen student-Acc t_i waited
'John waited for three Harvard students.'

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[31] See Boskovic and Takahashi (1998) for an analysis of scrambling as base-generation and LF lowering. I will not adopt their analysis since it is not clear how LF lowering works. Saito and Fukui (1998) argue for optionality of scrambling movement. I do not adopt their analysis mainly because I do not share their intuitions about many of their data.

The descriptive fact is as follows: the numeral classifier *san-satu* '3-Cl' in (75a) can scramble when the noun phrase has an indefinite non-specific reading as in (75b). However the numeral classifier cannot scramble when it has a specific reading. In (76a), *gakusei-o san-nin* 'three students' gets an indefinite-specific reading,[32] and when the numeral classifier *san-nin* '3-Cl' is scrambled as in (76b), the sentence is unacceptable with the indefinite-specific reading.

Miyagawa (1989) argues that the contrast is due to the difference between theme and non-theme arguments. He stipulates that the NCP associated with a non-theme argument does not leave trace and hence violates the mutual c-command requirement when it scrambles (c.f. section 2.1. in the present chapter). According to his analysis, (76b) is ruled out because *san-nin* is associated with a non-theme argument, and hence it does not leave a trace. However, his account faces a problem with examples like (77), as correctly pointed out by Kitahara (1993) (Kitahara's (22)).

(77) a. [Gengogaku-no hon-o]$_i$ Taro-ga t_i san-satu yonda.
linguistics-Gen book-Acc T-Nom 3-Cl read
'Taro read three linguistics books.'

b. ?* [Harvard-no gakusei-o]$_i$ Taro-ga t_i san-nin matta.
H-Gen student-Acc T-Nom 3-Cl waited
'Taro waited for three Harvard students.'

Given the standard assumption that arguments leave a trace when they move regardless of whether they are theme or non-theme arguements, the mutual c-command account does not work for (77b). If there is a trace, it does not violate the MCC requirement and

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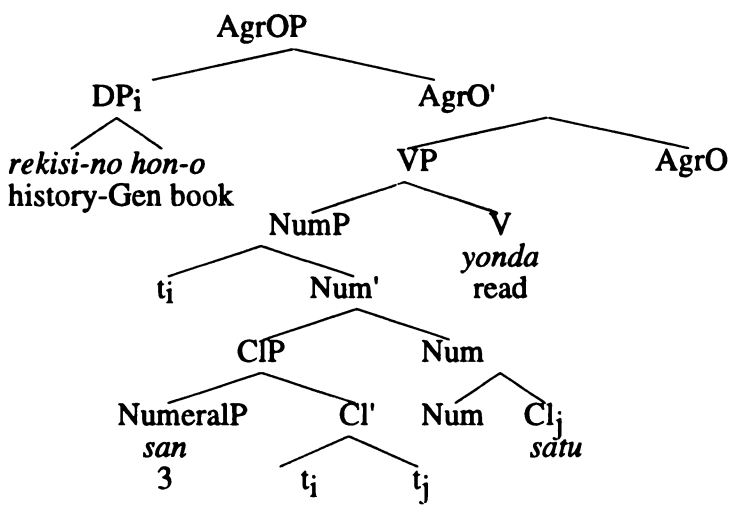
[32] An indefinite-nonspecific reading is possible, but the pragmatic plausibility favors a specific reading.

the sentence should be well-formed. Yet (77b) is not acceptable with an indefinite specific reading.

Based on the above facts, Kitahara (1993) proposes a constraint which states that '[e]xtraction out of a specific DP is prohibited (while extraction out of a non-specific DP is allowed)' (p.184). He suggests that this constraint is related to the Specificity Effect, i.e., variables must not appear inside a specific nominal phrase. Since *Harvard-no gakusei-o san-nin* 'three Harvard students' in (76) forms a DP in his analysis and is construed as specific, extraction of NCP *san-nin* out of this DP violates the proposed constraint. Therefore, it causes the sentence in (76b) to be ungrammatical.[33]

Under the present analysis, the asymmetry between specific and nonspecific indefinites regarding the possibility of scrambling the NCP follows naturally from the structures proposed for the Case-medial form in (43a). In my analysis, (75a) can be analyzed as (78).

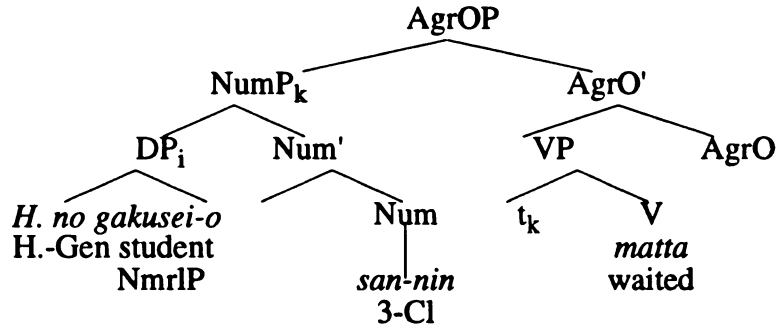
(78) (Indef-Nonspecific)



[33] Campbell (1996) proposes that there is a specificity operator in SpecDP of a specific noun phrase. Therefore, extraction out of a specific DP is not possible since SpecDP, a possible escape hatch analogous

In this structure, the argument NumP remains inside the VP. Therefore, following Diesing (1992), we can say that (78) is a configuration for the indefinite-nonspecific.[34] In (78), since the numeral and the classifier phrase form a constituent under a maximal projection NumP, it can scramble.[35] On the other hand, (76a) with an indefinite specific reading has a structure given in (79).[36]

(79)



In (79), the argument NumP is outside of the VP, and hence this phrase gets a specific reading. Since the DP remains inside the NumP, the numeral and the classifier phrase cannot constitute a maximal projection. Consequently, the numeral classifier phrase in (76a) cannot move. Under this analysis, the fact that (80) is grammatical with a non-specific reading can also be accounted for.

(80)

San-nin$_i$	John-ga	Harvard-no	gakusei-o	**t$_i$**	matta. (=76b)
3-Cl	J.-Nom	H.-Gen	student-Acc		waited

'John waited for three Harvard students.'

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to SpecCP, is occupied. Kitahara's analysis is not compatible with Campbell's account since SpecDP is filled by a moved element for a case reason in both specific and nonspecific DPs.

[34] According to Diesing's (1992:10) Mapping Hypothesis, there is a relationship between how a noun phrase is interpreted and its syntactic position. In her model, NPs that are interpreted inside VP receive an indefinite nonspecific (non-presuppositional) reading, while materials that are interpreted outside VP receive a specific (presuppositional) reading.

[35] Here we need to assume that scrambled NumP reconstruct at LF, and are interpreted in the VP internal position so that it will keep the nonspecific reading even when they scramble to a position outside VP. See Hasegawa (1993) for the argument of LF reconstruction of the NCP based on scope facts.

[36] ClP projection is omitted for simplicity.

The sentence above has a reading that John waited for three random Harvard students to appear. It is pragmatically odd to be waiting for non-specific Harvard students without some context, but the sentence is syntactically well-formed. Scrambling of *san-nin* is allowed in (80) because it can have the structure shown in (78).

If this account is correct, we predict that whenever a classifier phrase is scrambled, only a nonspecific reading is available. The examples in (81) seem to support this prediction.

(81) a. San-nin Sano-sensei-ga Harvard-no gakusei-o sikatta. Iida-sensei-mo
3-Cl Sano-prof.-Nom H-Gen student-Acc scolded. Iida-prof.-also
[pro] sikatta sooda.
[pro] scolded heard.
'Prof. Sano scolded three Harvard students. I heard that Prof. Iida also scolded [pro].'

b. Sano-sensei-ga Harvard-no gakusei san-nin-o sikatta. Iida-sensei-mo
Sano-Prof.-Nom H-Gen student 3-Cl-Acc scolded. Iida-Prof.-also
[pro] sikatta sooda.
[pro] scolded heard.
'Prof. Sano scolded the three Harvard students. I heard that Prof. Iida also scolded [pro].'

In (81a), the three students scolded by Prof. Sano may or may not be the same students that are scolded by Prof. Iida. But in (81b), pro must be interpreted as the same three students that are scolded by Prof. Sano. Under the assumption that an empty pronoun coindexed with a specific NP denotes the same members of what is referred to by the specific NP, what is coindexed with pro in (81a) is not a specific NP since the *pro* in (81a) can be interpreted as any three Harvard students.

Under the present analysis, the distribution of the numeral classifier phrase in specific and non-specific indefinites follows from the structures proposed in (45).

2.4.4.3 Subject/object asymmetry

It has been noted that the subject can intervene between the object and its classifier as in (82b), but the object cannot intervene between the subject and its classifier as in (83b) (Miyagawa 1988, 1989).

(82) a. Gakusei-ga **hon-o** **ni-satu** katta.
student-Nom book-Acc 2-Cl bought
'A student bought two books.'

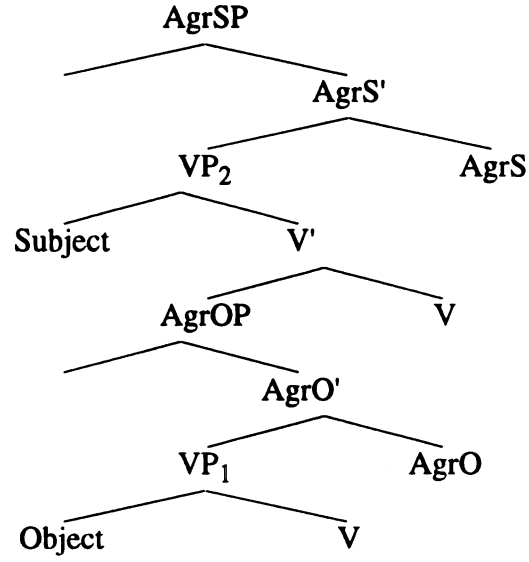
b. **Hon-o** gakusei-ga **ni-satu** katta.
book-Acc student-Nom 2-Cl bought
'A student bought two books.'

(83) a. **Gakusei-ga** **san-nin** hon-o katta.
student-Nom 3-Cl book-Acc bought
'Three students bought (a) book(s).'

b. * **Gakusei-ga** hon-o **san-nin** katta.
student-Nom book-Acc 3-Cl bought
'Three students bought (a) book(s).'

The present analysis is compatible with Koizumi's (1993) analysis of this asymmetry fact based on his Split-VP hypothesis. Koizumi proposes the Split VP structure shown in (84). His analysis is motivated by the fact that, contrary to the VP Internal Subject Hypothesis (Kuroda 1988, Koopman and Sportiche 1991, among others), subjects of the transitive and unergative sentences seem to originate somewhere higher than VP and AgroP but lower than TP. He argues that subjects are base-generated in the specifier position of the higher VP and objects in the Spec of the lower VP.

(84)



One piece of the supporting evidence for his analysis is the floating quantifier phenomenon found in various languages including Japanese. Following Sportiche (1988), Koizumi assumes that FQs form a constituent with the argument noun phrase at the base-generated position and are stranded there (or in some other intermediate position) when the noun phrase moves to check Case features. Koizumi's account of the subject/object asymmetry in Japanese is as follows (Koizumi's (122), (124a) and (126)):

(85) a. **Gakusei-ga** kinoo **san-nin** piza-o tabeta.
student-Nom yesterday 3-Cl pizza-Acc ate
'Three students ate pizza yesterday.'

b. $[_{AGRsP}$ **gakusei-ga**$_i$ $[_{AGRs'}$ kinoo $[_{VP2}$ $[t_i$ **san-nin**] ...]]]
student-Nom yesterday 3-Cl

(86) a. * **Gakusei-ga** piza-o **san-nin** tabeta.
student-Nom pizza-Acc 3-Cl ate
Intended: 'Three students ate pizza.'

b. * $[_{AGRsP}$ **gakusei-ga**$_i$ $[_{VP2}$ t_i $[_{AGRoP}$ piza-o$_j$ **san-nin** $[_{VP1}$ t_j ...]]]
student-Nom pizza-Acc 3-Cl

(85a) can be analyzed as in (85b) under the split VP hypothesis: the subject *gakusei-ga* 'student-Nom' originates in the Spec of VP_2, where it forms a constituent with the NCP *3-*

nin. The adverb *kinoo* 'yesterday' is adjoined to VP_2, and hence, when the subject moves to Spec AGRsP to check Case, it can appear between the subject and its FQ. The Split VP hypothesis predicts the sentence in (86a) to be ill-formed: Koizumi argues that if the subject *gakusei* 'student' is base-generated in Spec VP_2, its trace and the numeral classifier cannot form a constituent even if the object scrambles.[37] On the other hand, the VP internal subject analysis makes a wrong prediction about (86a), since it can be analyzed as in (87), the sentence should be well-formed.

(87) $[_{AGRsP}$ gakusei-ga$_i$ $[_{AGRoP}$ piza-o$_j$ $[_{VP}$ t_i 3-nin t_j ...]]]
student-Nom pizza-Acc 3-Cl

In (87), if the subject and the object are both base-generated in the same VP, the trace of the subject and the NCP can form a constituent, and hence the sentence should be well-formed, but it is not.

Although Koizumi assumes that the FQ and the argument noun phrase form a nominal constituent, he does not offer any analysis of the phrase. He simply refers to Kitahara (1992) for the internal structure of the Case-medial form in his footnote 25. In what follows I show that the present analysis of the Case-medial form is also compatible with Koizumi's account of (86). Let us first illustrate why the subject can intervene between the object and its NCP, using the example in (82b).[38]

Under the present analysis, *hon-o 2-satu* 'two books' forms a NumP (see (43a)), and following the Split VP hypothesis, it originates in Spec VP_1 in the structure given in

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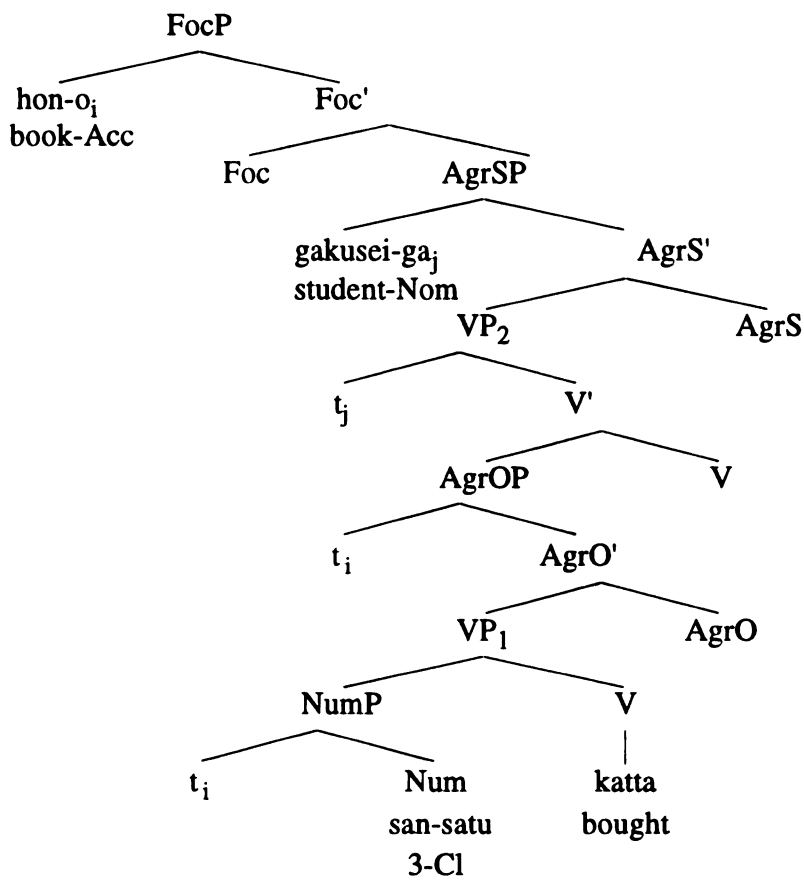
[37] Koizumi (1993) does not explain why the numeral classifier associated with the subject is not base-generated in Spec VP_2 together with the subject. If it is, the ungrammaticality of (86a) has to do with the direct object's inabilityto scramble to the position between Spec AGRsP and VP_2.

[38] Koizumi (1993) does not analyze an example like (82b).

(88) below. The subject is base generated in Spec VP_2, then moves to Spec AgrsP. The sentence in (82b) can be correctly derived when the DP *hon-o* 'book-Acc' moves to Spec AgroP to check Case feature stranding the NCP, and further moves to the position higher than the subject, which is argued to be a focus position (Miyagawa 1997).

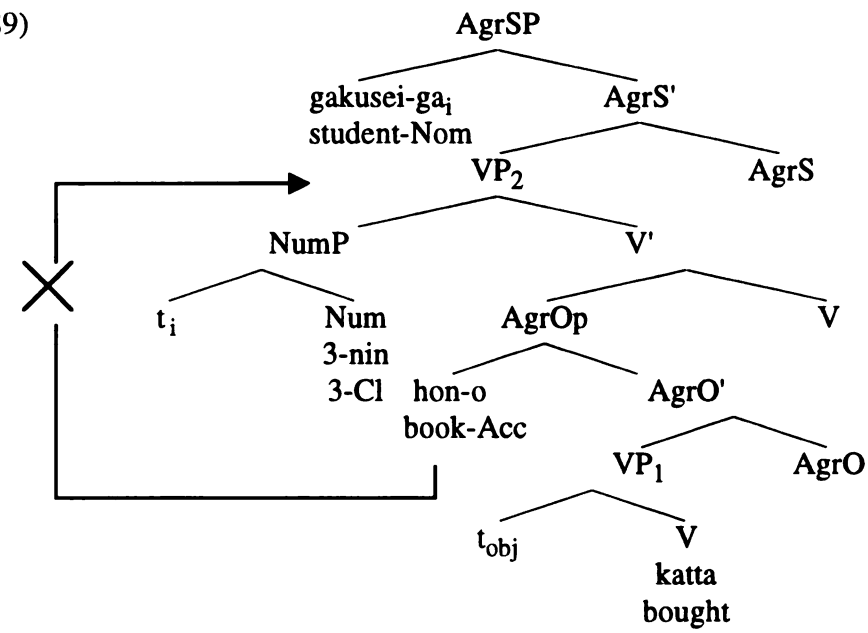
(88)



On the other hand, (83b) cannot be derived legitimately. Under the present analysis, the subject *gakusei-ga san-nin* 'three students' forms a NumP presented in (43a). Following the Split VP hypothesis, this subject originates in Spec VP_2 in (89). Then, the DP *gakusei-ga* 'student-Nom' moves to Spec AgrsP to check the Case feature, stranding the NCP in Spec VP_2. On the other hand, the object *hon-o* 'book-Acc' is base-generated in Spec VP_1, then moves to Spec AgroP to check the Case feature. Since AgroP is lower

than VP_2, the object's movement to Spec AgroP will not derive (83b). Furthermore, since adjunction to VP is not a legitimate landing site for scrambling according to Miyagawa (1997) as discussed in section 2.4.4.1, *hon-o* 'book-Acc' cannot move there. Therefore, the sentence in (83b) is correctly ruled out, as shown in (89).

(89)



Hence, the structure proposed for the Case-medial form is compatible with Koizumi's (1993) analysis of the Subject/Object asymmetry. It correctly rules in a sentence like (82b) and rules out ones like (83b).

2.4.4.4 Theme/Non-theme asymmetry

The analysis of the Case-medial form proposed in this chapter is compatible with Miyagawa's (1989) analysis of the theme/non-theme asymmetry. The data adopted from Miyagawa (1989) are given below.

(90) a. * **Tomodati-ga** ie-o$_i$ **san-nin** t$_i$ katta.
friend-Nom house-Acc 3-Cl bought
'Three friends bought a house.'

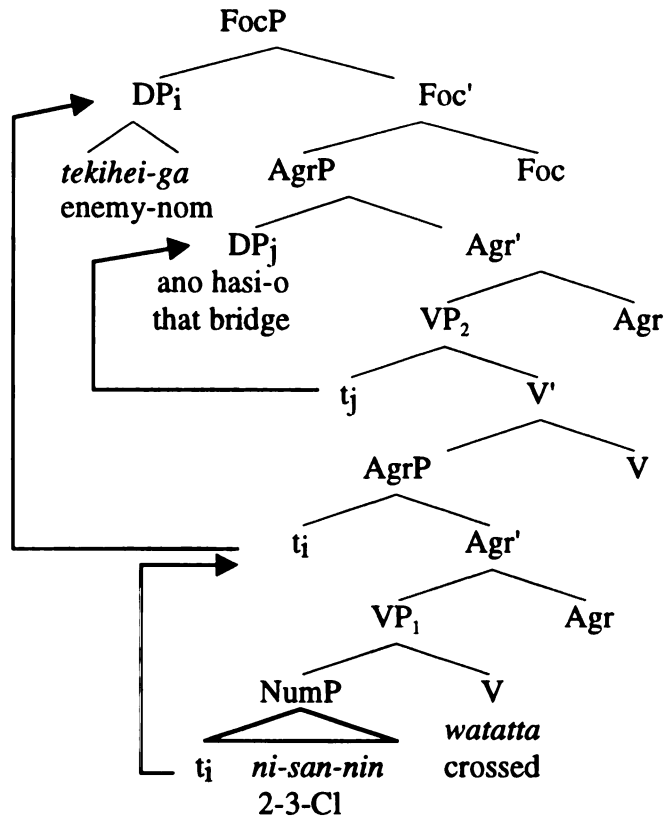
b. **Tekihei-ga$_i$** ano hasi-o [t$_i$ **ni-san-nin** watatta $_{VP}$]
enemy soldier-Nom that bridge-Acc 2-3-Cl crossed
'Two or three enemy soldiers crossed that bridge.'

In both (90a) and (90b), the object intervenes between the subject and its classifier. This should not be allowed as discussed in section 2.4.4.2. The sentence in (90a) is deviant in exactly the same way as (83b). Namely, the scrambling of *ie-o* 'house-Acc' to VP adjunction site is illegitimate (Koizumi 1995, Miyagawa 1997). However, (90b) is well-formed even though the object *ano hasi-o* 'that bridge-Acc' appears between the subject and its classifier.

The account given in Miyagawa 1989 is that the subject of (90b) is an Affected Theme, and hence it originates in the lowest VP, as a complement of the Verb. Therefore, in (90b), the trace of the subject and its classifier c-commands each other in Miyagawa's analysis, while in (90a) the object intervenes between the subject and its classifier.[39]

We can adopt Miyagawa's account in the present analysis as shown in (91), using Koizumi's (1995) Split VP analysis:

(91)



Assuming that the theta position of Affected Theme is lower than the direct object (Miyagawa 1989), it is the subject that moves over the object rather than the object moving to the position between the subject and its classifier phrase. The subject DP moves to Spec AgrP in order to check the Case feature, stranding the numeral classifier phrase, and then to Spec FocP. This is a legitimate movement unlike the scrambling of the object in (90a), which is a VP adjunction. Hence (90b) is well formed.

As discussed in section 2.2.2.3, Sasaki Alam (1997) has proposed an alternative account for the subject/object asymmetry and the theme/non theme asymmetry based on the event semantics approach. In her analysis, an NCP has a freer distribution when it

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[39] Recall that under Miyagawa's (1989) analysis the NP (or its trace) and the floating qantifier (which is

quantifies over an event rather than an object. A floating NCP associated with an object of transitive verb and a subject of unaccusative verb can measure an event, and hence they are considered an adverb of quantification. Since they are not quantifying over an entity, they do not need to stay with the NP, and as a result, they can scramble relatively freely. Under Miyagawa's (1989) analysis, since both the object of transitive verb and subject of unaccusative verb can be taken as a theme argument, by positing a lower than object base position for unaccusative subject, the object intervention like (90b) can be accounted for as discussed above. However, an example like (92) could be a problem for Miyagawa's analysis as well as the present analysis (Sasaki Alam's (25b)).

(92) **Gakusei-ga** hon-o ima-madeni **san-nin** katta.
student-Nom book-Acc now-until 3-Cl bought
'Three students bought a book up to now.'

According to Sasaki Alam, the direct object *hon-o* 'book-Acc' can intervene between the subject and its NCP because the adverb *ima-madeni* 'until now' induces a distributive reading, and therefore, *san-nin* '3-Cl' can quantify an event and it functions as an adverb of quantification.

In order to account for the example in (92) under the present analysis, we may say that there is a Focus position to which the direct object can move above the adverb. However, it is not clear why we cannot have a focus position above VP in (89). One way to solve the problem may be that the focus position is not recognized unless something

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analyzed as a secondary predicate) must c-command each other in order to license the floating quantifier.

separates the focus position and the VP.[40] I will leave the exact nature of focus movement for future research.

2.4.4.5 Case/non-case asymmetry

It is generally true that the classifier cannot be associated with an NP embedded inside a PP as in (93b) (Miyagawa 1988, Kawashima 1994).

(93) a. Mary-wa [kooen-**o** $_{DP}$] huta-tu mituketa.
M.-Top park-**Acc** 2-Cl found
'Mary found two parks.'

b. * Mary-wa [kooen-**e** $_{PP}$] huta-tu itta.
M.-Top park-**to** 2-Cl went
Intended: 'Mary went to two parks.'

As discussed in section 2.1, Miyagawa (1989) rules out (93b) by the mutual c-command requirement. Under his analysis, the accusative marker *o* in (93a) does not project its own phrase, so it does not block the MCC between *kooen* 'park' and *futa-tu* '2-CL'. On the other hand, *e* 'to' in (93b) projects P, and hence it blocks the MCC between *kooen* 'park' and *futa-tu* '2-CL' (cf. (24b)). Therefore, (93b) is ill-formed.

Under the present analysis, this asymmetry is simply due to the selectional restriction of the Cl head. If we assume that case particles head DPs and postposition head PPs, it is plausible to think that the Cl selects a nominal phrase, an NP or a DP, but not a PP. Considering a function of classifiers as an individualizer (hence it makes a

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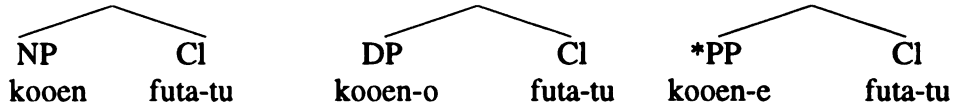
[40] In fact, a sentence like (83b) becomes more acceptable if we put a big pause or some kind of fillers between *hon-o* and *san-nin* as in (i) or mark the object with a contrastive focus particle *wa*, as shown in (ii).

(i) **Gakusei-ga** hon-o // anoo **san-nin** katta.
student-Nom book-Acc uh 3-Cl bought
'Three students bought a book.'

(ii) Gakusei-ga hon-wa san-nin katta.
student-Nom book-Cntr 3-Cl bought
'Three students bought books (but not other things).'

noun phrase countable), it is natural that Cl selects nominal category as its complement. Due to this selectional restriction, (93b) is ruled out as shown in (94c).

(94) a. b. c.



Unlike Miyagawa's analysis, we do not have to stipulate the mutual c-command requirement to explain the contrast between (93a) and (93b).[41]

2.5. Conclusion

In this chapter I have argued that the Case-final form, which has a definite reading, is a DP, but the Case-medial form, which has an indefinite reading, is not a DP, but it is a NumP. Their semantic distinctions are captured structurally if we analyze case particles as determiners. My claim is that when the verb takes NumP as its argument, only an indefinite reading is possible, but if the argument is a DP that is an extended projection of an overt NumP projection, it has a definite reading. An important point to note here is that the D alone does not derive the definite reading in Japanese.[42] Therefore my claim is not that all DPs in Japanese would have a definite reading, but that the combination of the D and the number projection produces the definite reading.

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[41] Approximate numerals can 'float' from PP with postposition *e* 'to' as shown in (i).

(i) Nomiya-e ni-san-gen yotta.
Bar-to two-three-Cl stopped by
'I stopped by two to three bars.'

Under the present analysis, since Cl does not select PP as its complement, in order to generate sentences like (i), we have to treat approximate numerals to be in a different syntactic position from the regular NCPs. I leave the analysis of exact syntactic position of approximate numerals for future research. See Kawashima (1998) for an analysis of approximate numerals as a syntactic category quantifier (Q).

[42] According to Szabolcsi (1994), a similar fact also holds in Hungarian noun phrases as discussed in Chapter 1.

However, as noted before, DPs without an overt number projection may get a definite reading depending on the structural position of the noun phrase, contextual information, and types of predicates, and so forth. As a result, noun phrases in Japanese seem ambiguous in terms of (in)definiteness. Yet, this is not the case with numerically quantified noun phrases discussed in this chapter. What is interesting about the Case-final form, which is a DP containing NumP projection, is that this DP seems to allow only a definite interpretation. On the other hand, the Case-medial form, which is analyzed as a NumP, allows only an indefinite reading. The present analysis captures this semantic contrast structurally in addition to accounting for their syntactic distribution by taking case particles as determiners. Therefore, if it is correct, the present analysis argues for the analysis of case particles as Ds in Japanese noun phrases.

Although the question as to why the number projection is crucial for definiteness in the Case-final form has not been answered, the connection between definiteness and number is not specific to Japanese noun phrases as seen in the contrast between *my friend* (can be indefinite) and *my two friends* (can only be definite). I will leave the formal analysis of the connection between number and definiteness for future research.

CHAPTER 3

THE INTERNAL STRUCTURES OF JAPANESE *DARE-MO*

3.1 Introduction

In this chapter, I present a second argument for the syntactic status of Case particles as determiners (Ds). The argument comes from an analysis of the internal structure and distribution of a Japanese negative polarity item (hereafter NPI) *dare-mo* 'anyone' and what I call the generic *dare-mo*, which are never Case-marked, in comparison to the universal *dare-mo* 'everyone', which is always Case-marked. I argue that their semantic and distributional differences arise from their internal structures, rather than from having two different morphemes, i.e., *mo* that is a NPI and *mo* that is a universal quantifier.[1] I show that a satisfactory structural account of those phrases requires treating Case particles as Ds. Many researchers have focused on licensing conditions of the NPI *dare-mo* (McGloin 1972, Kawashima 1994, Kawashima and Kitahara 1992, Kato 1992, 1994, Sohn 1996, Yoshimoto 1998, among others), but its internal structure has not been thoroughly analyzed. I will argue, following Déprez's (2000) analysis of Haitian Creole, that the NPI *dare-mo* 'anyone' is a DP with a null D head that functions as a variable. I propose that, in the NPI *dare-mo*, this variable in the

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[1] Takahashi (2002) proposes that *mo* in the NPI *dare-mo* is lexically specified for [+Neg, -Case], and *mo* in the universal *dare-mo* is specified for [+Case]. Japanese words have pitch accent and different pitch accent patterns can distinguish homonyms. Therefore, he argues that different pitch accent patterns associated with the NPI and the universal *dare-mo* support that they have different lexical specifications. The pitch accent patterns for the NPI *dare-mo* 'anyone' is daRE-MO and the universal *daremo* 'everyone' is DAre-mo (lower case letters indicate low pitch and upper case letters indicate high pitch). However, I will take the position that both *mo* are the same morpheme and the difference in pitch accent patterns comes from the fact that *mo* in the NPI is focused, which receives a high pitch. DAre is the regular pitch accent pattern for the indeterminate pronoun *dare* 'who'. Standard Japanese does not allow HLH pattern within a word, and hence DAreMO, if taken as one word, is not well formed. So in order to have a focused MO, which has a

null D head is bound by the negative operator (Neg OP).[2] In the case of the generic *dare-mo*, it also has an empty D head, but it is bound by the generic operator (GEN). On the other hand, in the universal *dare-mo* 'everyone', the D is filled by the Case-particle, and therefore the D is no longer a variable. Since an overt D blocks the binding of *dare-mo* by Neg OP, it is natural that *dare-mo-ga/o* 'everyone-Nom/Acc' does not receive an NPI reading.

The chapter is organized as follows: The next subsection introduces the core data demonstrating the syntactic properties of the NPI and the universal *dare-mo*, followed by the generic *dare-mo*. In section 3.2, the relationship between the DP structure and negative pronouns are discussed and the structures of the NPI and the universal *dare-mo* are presented. Based on the structures proposed, section 3.3 shows how we may account for the distribution of *dare-mo*. Section 3.4 deals with the compositional meaning of the NPI *dare-mo* in comparison to a Hindi NPI. In section 3.5, I will discuss some of the remaining issues and section 3.6 concludes this chapter. There is an additional section in 3.7, which discusses an analysis of the NPI *dare-mo* as an adverb.

3.1.1 The distribution of the NPI vs. the universal *dare-mo*

Noun phrases in Japanese are generally marked with a Case particle when they are in a Case position.[3] However, the NPI *dare-mo* 'anyone' cannot co-occur with any Case particle while the universal *dare-mo* 'everyone' must have a Case particle as shown

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high pitch, following *dare*, only possible pattern is daRE MO due to the requirement that the first and the second morae must have a different pitch.

[2] This does not mean that all NPs with a null D head will require Neg operator Generic operator, since not all of them are variables. I assume that there are different kinds of null Ds and the one in the NPI *dare-mo* is the kind that needs to be bound by Neg OP.

[3] In spoken Japanese, "Case-dropp" is quite common. It is not clear whether in those instances, Case particles are syntactically absent or just phonetically inaudible. The important point here is that the NPI

in (1)-(4) [4].

(1) daRE-MO ko-nai.[5]
who-MO come-Neg
'Nobody will come.'

(2) * daRE-MO-ga ko-nai.
who-MO come-Neg
'Nobody will come.'

(3) DAre-mo-ga ki-ta.
who-MO-Nom come-Past
'Everyone came.'

(4) * DAre-mo ki-ta.
who-MO come-Past
Intended: 'Everyone came.'

The sentence in (1) is grammatical without a Case marker on *dare-mo*, while adding the Case marker *ga* makes the sentence unacceptable as in (2). [6] On the other hand, in (3) the sentence requires the nominative marker *-ga* on *dare-mo* 'everyone' in order to have the intended reading 'everyone came'. If the Case marker is dropped, the sentence becomes unacceptable as seen in (4).[7] If the Case-particles in Japanese are truly optional and do

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dare-mo never appears with a Case particle following *mo*.

[4] As noted in footnote 1, Japanese words have pitch accent patterns. Lower case letters indicate low pitch and upper case letters indicate high pitch. Note that the pitch accent patterns for the NPI *daremo* 'anyone' and the universal *daremo* 'everyone' are different. For the sake of simplicity, I will not transcribe them distinctively in the rest of the chapter unless special attention to pitch accent is necessary.

[5] I gloss *dare* as 'who' throughout the chapter for convenience. *Dare* does not, however, mean 'who' unless it is used in an interrogative sentence. Its actual meaning is closer to indefinite someone, or a human. Kuroda (1965) calls it "indeterminate pronoun". Following Hagstrom (1998), I assume that *dare* is the extensional property of being human. Semantics of *dare* will be discussed in section 3.4.

[6] The NPI *dare-mo* does not take a Case particle. This fact should not be confused with a general morphological constraint on **mo-ga* sequence shown in (i).

(i) a. * John-**mo-ga** kita. Intended reading: 'John also came.'
John-also-Nom came
b. John-mo kita. 'John also came.'
J-also came

A general morphological ban on *mo-ga* sequence does not account for the fact that the universal *dare-mo* does allow *mo-ga* sequence, as shown in (3).

[7] Other interrogative pronouns show similar properties, though to a varying degree. *Nani* 'what' works just

not have any function other than marking the morphological Case, this contrast is puzzling.

Another distributional fact that needs to be noted is that, unlike its English counterparts, the NPI *dare-mo* can only be licensed by negation and cannot appear in other downward entailing (DE) contexts as shown in (5)-(7). [8]

(5) * Dare-mo ku-reba John-ga yorokobu. (*dare-mo* in prostasis of conditional)
who-MO come-If J-Nom be-glad
'If anyone comes, John will be glad.'

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like *dare*: *nani-mo* '(NPI) anything', nani-mo-ga 'everything', as shown in (i).

(i) a. John-wa dezaato-o naNI-MO tabe-na-katta.
J-Top dessert-Acc what-MO eat-Neg-Past
'John didn't eat any desseart.'
b. Yuki-ni oowarete, NAni-mo-ga kireini mie-ta.
snow-by covered what-MO-Nom beautiful look-Past
'Covered by the snow, everything looked pretty.'

Dore 'which' seems a little ambiguous: *dore-mo* 'any of them' behaves like the NPI *dare-mo*, but the universal one with a Case particle sounds a little marginal, as shown in (iib).

(ii) a. Keeki-ga doRE-MO hosiku-nai.
cake-Nom which-MO want-Neg
'I don't want any of the cakes.'
b. ?Kinoo mita eiga DOre-mo-ga omosirokat-ta.
yesterday saw movie which-MO-Nom interesting-Past
'Every movie I saw yesterday was interesting.'

Doko 'where' may form an NPI when *mo* is added as in *doko-mo* '(NPI) anywhere', but the universal one does not take a Case particle, as shown in (iii).

(iii) a. John-wa doKO-MO ik-ana-katta.
J-Top where-MO go-Neg-Past
'John didn't go anywhere.'
b. ?*Amerika no tosi DOko-mo-ga onazi-yooni mieta.
America-Gen city where-MO-Nom alike looked
'Every American city looked alike.'

In this dissertation, I discuss mainly *dare-mo* since it seems that different wh-word contributes differently to the compositional meaning of the resulting phrase of WH-MO, which affects their distribution.

[8] In many languages, NPIs are licensed in the scope of any downward entailing (DE) function where a downward entailing function is defined as follows: A function f is downward entailing iff for every arbitrary element X, Y it holds that : $X \subseteq Y \rightarrow f(Y) \subseteq f(X)$
According to this definition, negation, as well as conditional and comparative among others, are DE functions. For example, negation is DE function because the following entailment relation holds(Giannakidou 1998:8):

(i) Lucy does not like ice-cream
(ii) [[Italian ice-cream]] $\subseteq$ [[ice-cream]]
From (i) and (ii), (iii) is entailed.
(iii) Lucy does not like Italian ice-cream.

(6) * John-ga dare-mo yori ookii. (*dare-mo* in comparative)
J-Nom who-MO than big
'John is bigger than anyone.'

(7) * Dare-mo ki-ta. (*dare-mo* in affirmative)
who-MO come-Past
'Anyone came.'

On the other hand, the universal *dare-mo* 'everyone' can, but does not usually occur with negation as shown in (8).

(8) # Dare-mo-ga ko-na-katta.[9] (*dare-mo-ga* in negative)
who-MO-Nom come-Neg-Past
'Everyone didn't come'

3.1.2 The generic *dare-mo*

There are some cases where *dare-mo* appears without a Case particle and still seem to receive universal reading, as shown in (9) below.

(9) a. Hito-wa DAre-mo kodoku dearu.[10]
person-Top who-MO lonely Cop
'All human beings are lonely'

b. Otoko-wa DAre-mo ookami dearu.
male-Top who-MO wolf Cop
'All men are beasts.'

c. Onna-wa DAre-mo kesyou-de bakeru.
woman-Top who-MO cosmetics-with transform
'All women change with cosmetics.'

d. Nihonjin-wa DAre-mo burandomono-ga suki dearu.
Japanese-Top who-MO brand product-Nom like
'All Japanese people like famous brand items.'

e. Tosiyori-wa DAremo kega-o siyasui.
old person-Top who-MO injury-Acc easy to get
'All elderly people are prone to injuries.

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[9] I think the sentence is syntactically well-formed, but is it not commonly used in Japanese. The reason for that could be that (8) only allows the reading in which universal quantification takes scope over NEG and it is truth conditionally indistinguishable from *dare-mo konakatta* 'Nobody came'. That is, (8) means 'for all x, x is a person, and x did not come'. This is truth conditionally equivalent to 'there is no x such that x came'. Both sentences are true in a context where you are expecting John, Bill, Mary to come but none of them shows up. But in Japanese, for some reason people prefer *dare-mo konakatta* 'nobody came' to *dare-mo-ga konakatta* 'everyone didn't come' in that context.

[10] Note that the pitch accent pattern of *dare-mo* here is the same as the universal *dare-mo*: DAre-mo, but it does not require Case like the NPI *dare-mo*.

However, this kind of *dare-mo* has a distribution that is different form the universal *dare-mo* that occurs with a Case particle. First, it seems that its associate NP must be the Topic of the sentence, as shown in (10).

(10) a. * Tyoonan-ga tosiyori-o DAre-mo yasinau mono da.
eldest son-Nom elderly person who-MO provide thing Cop
Intended: 'It should be that the eldest sons provide for the elderly.'

b. Tosiyori-wa DAre-mo tyoonan-ga yasinau mono da.
elderly person who-MO eldest son-Nom provide thing Cop
'As for the elderly, it should be that the eldest sons provide for them.'

In (10a), the Caseless *DAre-mo* cannot occur with a direct object, but when the direct object is topicalized, the sentence becomes well formed, as shown in (10b).

Second, the predicate of the sentence must be of a generic nature. This point can be made clear by the fact that when we change the predicates of (9) to the stage-level predicates, the acceptability of those sentences degrades, as shown in (11).

(11) a. ? Hito-wa DAre-mo yuki-de koronda.
person-Top who-MO snow-with slipped
'*All people fell on the ground because of the snow'

b. ? Otoko-wa DAre-mo okane-o haratta.
male-Top who-MO money-Acc paid
'*All men paid money.'

c. ? Onna-wa DAre-mo osoku kita.
woman-Top who-MO late came
'*All women came late.'

In sum the Caseless *DAre-mo* is limited to generic statements and it can only quantify over the topic of the sentence.[11] Therefore, I call this kind of *DAre-mo* the

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[11] There is an added restriction to the associate NP of the Caseless *DAre-mo*. It does not seem to allow the associate NP to be of an occupational kind, as shown in (i).

(i) a. ? Gakusei-wa DAre-mo ii seiseki-o hosigaru.
student-Top who-MO good grade-Acc want
'All students want good grades.'

b. ? Kyousi-wa DAre-mo sinken dearu.
teacher-Top who-MO serious Cop

generic *dare-mo* and treat it separately from the universal *dare-mo*, which requires a Case particle.[12]

3.1.3 Associate NPs

Both the NPI *dare-mo* 'anyone' and the universal *dare-mo* 'everyone' can co-occur with an associate NP. The distribution of the NPI *dare-mo* with respect to its associate NP is quite free as shown in the following examples.

(12) **Gakusei-ga dare-mo** ko-na-katta.
student-Nom who-MO come-Neg-Past
'No student came.'

'All teachers are serious.'

c. ? Zyunsa-wa DAremo juumin-o mamoru.
policeman-Top who-MO resident-Acc protect
'All policemen protect residents.'

It is not clear why these sentences should be bad as a generic statement. It has been suggested that the occupational terms are inherently stage-level expressions . This may explain the incompatibility of the occupational terms in individual-level predicate sentences in (i). However, the matter is more complicated; that is, without *DAre-mo*, it is possible to have an occupational term as the topic of a generic sentence as in (ii).

(ii) Gakusei-wa isogasii.
student-Top busy
'Students are busy.'

In this dissertation, I will leave the issue aside.

12 Another possible counterexample to the generalization that the universal *dare-mo* requires a Case particle was brought to my attention by Mutsuko Endo Hudson (p.c.), as shown in (i).

(i) DAre-mo takami-no kenbutu (Shinichi Hoshi, *Gota gota kiryuu*, p209)
who-MO high look-Gen observing
'Everyone, just observing'

Note that it is not a full sentence, and even though it appears within a paragraph, it has the taste of a newspaper or magazine article headline. In those headlines, Case particles are often omitted (even the nominative Case particle, which usually cannot be dropped (Saito 1985)), as shown in (ii).

(ii) a. Kiriyama-san-[ ] sensyoo (*Asahi shinbun*, May 17, 2003)
K-Mr. first win
'Mr. Kiriyama, having won the first match.'

b. zyoyuu-no Sakurai Junko-san-[ ], tere asa purodyuusaa to kekkon
acctress-Gen S.J.-Miss TV Asahi producer with marriage
'The actress Miss Junko Sakurai, having married a producer of Asahi TV.'

[ ] indicates the place where the nominative marker should be present in a full sentence. The example in (i) seems to involve a similar Case-drop process and is a special case of the universal *dare-mo* in which the Case particle is dropped for stylistic reason. Therefore, the universal *dare-mo* without a Case particle in (i) does not represent the general use of the phrase.

(13) **Dare-mo gakusei-ga** ko-na-katta.
who-MO student-Nom come-Neg-Past
'No student came.'

(14) **Sensei-ga dare-mo** John-o home-na-katta.
teacher-Nom who-MO J-Acc praise-Neg-Past
'No teacher praised John.'

(15) **Dare-mo sensei-ga** John-o home-na-katta.
who-MO teacher-Nom J-Acc praise-Neg-Past
'No teacher praised John.'

(16) John-ga **sensei-o dare-mo** syootaisi-na-katta.
J-Nom teacher-Acc who-MO invite-Neg-Past
'John didn't invite any teacher.'

(17) John-ga **dare-mo sensei-o** syootaisi-na-katta.
J-Nom who-MO teacher-Acc invite-Neg-Past
'John didn't invite any teacher.'

In both subject and object positions, *dare-mo* may immediately follow its associate NP as in (12), (14) and (16), or immediately precede its associate NP as in (13), (15) and (17). In addition, some phrases may intervene between *dare-mo* and its associate NP, as shown below.

(18) **Gakusei-ga** kinoo **dare-mo** ko-na-katta.
student-Nom yesterday who-MO come-Neg-Past
'No student came yesterday.'

(19) **Gakusei-ga** kinoo **dare-mo** hon-o kaw-ana-katta.
student-Nom yesterday who-MO book-Acc buy-Neg-Past
'No student bought a book yesterday.'

(20) John-ga **sensei-o** kinoo **dare-mo** syootaisi-na-katta.
J-Nom teacher-Acc yesterday who-MO invite-Neg-Past
'John didn't invite any teacher yesterday.'

In both subject and object positions, a temporal adverb 'yesterday' may occur between *dare-mo* and its associate NP as in (18)-(20). In addition, the subject NP can intervene between *dare-mo* and its associate object NP *sensei-o* 'teacher-Acc' as in (21) below.

(21) **Sensei-o** John-ga **dare-mo** syootaisi-na-katta.
teacher-Acc J-Nom who-MO invite-Neg-Past
'John didn't invite any teacher'

However, the sentence becomes ungrammatical when the object NP intervenes between *dare-mo* and its associate subject NP *sensei-ga* 'teacher-Nom' as in (19) (Kawashima 1994:117).

(22) * **Sensei-ga** John-o **dare-mo** yob-ana-katta.
teacher-Nom J-Acc who-MO invite-Neg-Past
'No teacher invited John.'

As noted in Kawashima (1994), this fact parallels the distribution of a numeral classifier phrase (NCP), namely, an object cannot intervene between an NCP and its subject NP, as shown below (Kawashima 1994:117).

(23) a. * **Gakusei-ga** hon-o **san-nin** kat-ta.
student-Nom book-Acc three-CL buy-Past
'Three students bought a book.'
b. **Hon-o** gakusei-ga **san-satsu** kat-ta.
book-Acc student-Nom three-CL buy-Past
'A student bought three books.'

In chapter 2 section 2.4.4.3, I discussed an account of the phenomenon described in (23). I will show in section 3.3.3.1 that the distribution of the NPI *dare-mo* illustrated in (21) and (22) can be accounted for in a similar way. More specifically, I will argue that the analysis of NPI-licensing as overt movement of NPI to Spec NegP (Sohn 1996, Yoshimoto 1998), which will be discussed in 3.3.2.2, together with the internal structures of *dare-mo* can account for the distribution of *dare-mo* and its associate NP illustrated in (12)-(22).[13]

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[13] See section 3.7 of this chapter for the analysis of the NPI *dare-mo* as an adverb.

While the distribution of the NPI *dare-mo* seems quite free, the distribution of the universal *dare-mo* 'everyone' with respect to its associate NP is very limited. They may co-occur only when *dare-mo* immediately follows the NP as shown below:

(24) Gakusei dare-mo-ga ki-ta.
student who-MO-Nom come-Past
'Every student came.'

(25) * Dare-mo gakusei-ga ki-ta.
who-MO student-Nom come-Past
Intended: 'Every student came.'

(26) * **Gakusei** kinoo **dare-mo-ga** ki-ta.
student yesterday who-MO-Nom come-Past
'Every student came yesterday'

When *dare-mo* follows *gakusei* 'student', the sentence is grammatical as in (24), but when *dare-mo* precedes it, the sentence becomes ungrammatical as in (25). Even if *dare-mo* follows its associate NP, the sentence is not acceptable when another phrase intervenes between the two as in (26). I will show that this restricted distribution follows from the internal structure of the universal *dare-mo* 'everyone'.

3.2 The Internal Structure of the NPI and the universal *dare-mo*

3.2.1 Indefinite pronouns and their structures

3.2.1.1 Types of negative pronouns

Based on the study of a wide range of indefinite pronouns, Haspelmath (1997:210) categorizes indefinites used in expressing the negation of indefinite ('negative indefinites') into three sub-types in (27), depending on their relation to verbal negation (Haspelmath 1997:201).

(27) **Types of Negative Indefinite (NI)**

(i) **Type NV-NI**: Negative indefinites that always co-occur with verbal negation, e.g. Polish *nikt* 'nobody'. (Haspelmath 1997:201)

a. Nikt nie przyszedt.
nobody Neg came
'Nobody came.'
b. Nie widziatam nikogo.
Neg saw nobody
'I saw nobody'

(ii) **Type V-NI:** Negative indefinites that never co-occur with verbal negation, e.g. the standard English *no*-series.

a. Nobody came.
b. I saw nobody.

(iii) **Type (N)V-NI:** Negative indefinites that sometimes co-occur with verbal negation and sometimes do not, e.g. Spanish *nadie* 'nobody'.

a. Nadie vino.
nobody came
'Nobody came'
b. No vi a nadie.
Neg I:saw Acc nobody
'I saw nobody'

Haspelmath's categorization seems to capture the properties of indefinite pronouns in negation most accurately.[14] His analysis has a descriptive value although it is not explanatory. In the following subsection, I introduce Déprez's (2000) account of how this cross-linguistic variation may be derived by syntactic structures of negative indefinites in different languages.

3.2.1.2 DP structure and cross-linguistic variation of negative indefinites

Déprez (2000) argues that the different distributions of negative indefinites in various languages, shown in (27), can be accounted for based on the (in)ability to license a null D head in each language.[15] She proposes that an empty D needs to be licensed under DP internal Spec-Head agreement or by head movement. If the empty D is not

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[14] "Negative indefinite" does not mean that some indefinite pronouns are semantically negative. See Haspelmath (1997:194) for argument against classifying some types of indefinite as "inherently negative".

[15] Deprez's term for negative indefinites is negative concord words (n-words). I use Haspelmath's terminology 'negative indefinites' in this dissertation.

licensed DP internally, it must be governed by V, and hence its distribution is limited to post-verbal (or preverbal, if the language is head final) position. In addition, she argues that an empty D is a variable and requires an operator to bind it to satisfy full interpretation. Based on these assumptions, she proposes that negative indefinites that require verbal negation contain an empty D head, which needs to be bound by a negative operator. Also, if the negative indefinite can appear both in pre- and post-verbal positions in negative sentences, it must have an empty D head that is licensed DP internally. On the other hand, if the D head is filled due to head movement, it is no longer a variable and hence cannot be bound by an operator. Therefore, the negative indefinite that cannot co-occur with negation is a DP with a filled head since a filled D cannot be bound by negation. A nice feature of her analysis is that it derives cross-linguistic variations in the distribution of negative indefinites from independent choices in DP syntax.

In Déprez's analysis the type NV-NI (27i) is exemplified by Haitian Creole, as shown in (28) (Déprez's (12)).

Haitian Creole

(28) a. M **pa** we pèsonn.[16]
I Neg saw anyone
'I did not see anyone'

b. Pèsonn **pa** rele'm.
anyone Neg called me
'Nobody called me'

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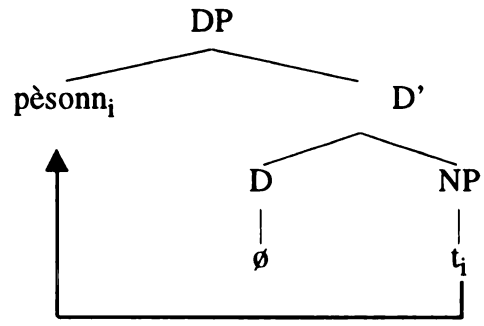
[16] All non-Japanese examples in this section are from Déprez (2000). She does not provide word-by-word glosses for her data, so I provided some, when I could deduce them from the sentence meaning.

Pèsonn 'anyone' can appear both in post-verbal (28a) and preverbal position (28b), and in both cases it co-occurs with verbal negation. Déprez proposes a structure for Haitian Creole *pèsonn* as in (29).

(29)



She proposes that by NP-to-Spec DP movement, Spec-head agreement licenses the null D head, and hence the distribution of the DP *pèsonn* is symmetrical; that is, it can appear in both pre-verbal and post-verbal positions. At the same time, the variable in the null D needs to be operator bound, and that is why it requires NEG operator. The assumption is that in contrast to head movement to D, the movement to Spec DP does not affect the semantic nature of the constituent since it does not suppress the null D. Therefore, the null D still functions as a variable, and the presence of negation is required to satisfy full interpretation.

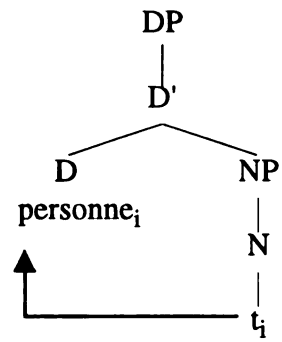
The type V-NI (27ii) is exemplified by standard French as in (30) (Déprez's (16)).

Standard French

(30) a. Personne n'est pas venu. =Double Negative reading
'Everyone came' *For no one it is the case that they did not come*
b. Je n'ai pas rien fait. =DN reading
'I did something' *I did not do nothing*

Personne 'nobody' cannot be used with verbal negation without invoking a double negative reading. Déprez proposes that the negative indefinite in French has the structure shown in (31).

(31) Standard French



In the DP *personne* there is head movement to D. In Déprez 1997, she proposes that the similarities and differences between negative constructions in Haitian Creole and in French come from the semantic nature of their negative indefinites (NIs). That is, they are both indefinite expressions but differ in their quantificational force. Namely, French NIs are like numeral indefinites and have intrinsic quantificational force but Haitian Creole NIs are like bare plurals and do not have intrinsic quantificational force. Déprez (2000) further connects this semantic difference to their distinct DP structures. She argues that the intrinsic quantificational force of French NIs is a consequence of the internal head movement from N to D. Under her analysis, DP internal head movement functions as a trigger for a semantic type shift from a nominal predicate to a weak quantifier (Déprez 2000: 273).[17] Also, since D is filled, it no longer acts as a variable. As a result, binding by an external operator is no longer needed or possible.[18]

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[17] Déprez's analysis suggests that head movement to D is not restricted to the attribution of referential properties to nouns contra Longobardi (1994)(Déprez 200: 282).

[18] Note however, that, it is not clear that DPs with filled D head cannot be bound by any operator, as pointed out by Cristina Schmitt (p.c.) since in an example like *whenever Mary eats the desert, she feels sick afterwards*, there could be as many deserts as the number of eatings, which shows that the DP *the desert* is bound by an external operator.

The type (N)V-NI (27iii), exemplified with Italian data here as in (32) is a hybrid of the other two types (Déprez's (63) and (64)).

Italian

(32) a. Non ho visto alcun ragazzo
Neg have I:see any boy
'I haven't seen any boy.
b. Non credo che [alcun ragazzo abbia parlato].
Neg I:believe that [any boy has speak]
'I do not believe that any boy has spoken.'

In (32a), the indefinite noun phrase *alcun ragazzo* 'any boy' is post-verbal and it requires negation in the same clause, while in (32b), *alcun ragazzo* 'any boy' is in preverbal position and does not require negation in the same clause.

Déprez posits different structures for NIs in a post-verbal position and a pre-verbal position. Since the post-verbal NIs need to be governed by V and require negation, the null D head is not licensed and the null D is a variable, but in the pre-verbal position, the D is licensed internally. These structures are motivated by different positions NIs occur with respect to adjectival modifiers. As shown in (33), *alcun* 'any' can occur in a pre-nominal or post-nominal position when DP is in a post-verbal position while in (34) *alcun* can only be pre-nominal when the DP containing *alcun* is in pre-verbal position (Déprez's (63) and (64)).

(33) Non ho visto **alcun ragazzo/ ragazzo alcuno.** (post-V)
Neg have I:see any boy/ boy any
'I haven't seen any boy.'

(34) Non credo che [**alcun ragazzo / *ragazzo alcuno** abbia parlato]. (pre-V)
Neg I:believe that [any boy/ *boy any has speak]
'I do not believe that any boy has spoken'

Note in addition that *alcun* agrees overtly with its modifying noun when it is post-nominal. Based on these observations, Déprez proposes (35) and (36) for the DP

structures with post-nominal and pre-nominal *alcun* respectively (Déprez's (65a') and (65b)).

(35) $[_{DP}\ [_{D}\ \varnothing]\ [_{FP}$ ragazzo $[_{NP}\ [_{Adj}$ alcuno] t]]] (post-nominal *alcun*)
boy any

(36) $[_{DP/Num}$ alcun $[_{D/Num}\ \varnothing\ ]\ [_{NP}$ t [ragazzo]]] (pre-nominal *alcun*)
any boy

In (35), *alcun* is in the Spec of NP and the head of this NP *ragazzo* 'boy' moves over it to a higher functional head. Since the head of the DP is null and is not licensed, (35) is limited to post-verbal position, and hence the pattern in (34) follows. The post-nominal *alcun* cannot appear in a pre-verbal position. On the other hand, in (36) *alcun* occupies the Spec of some functional projection, either NumP or DP. Since the Spec licenses a null head in its projection under Spec-Head agreement, (36) does not require an external governor for the null head. Therefore, (36) can be in pre-verbal subject positions as in (34) or in the post-verbal position as in (33), as long as there is a c-commanding Neg operator to bind the variable in the null head, as is the case in both (33) and (34). Déprez's analysis accounts for the asymmetric distribution of negative indefinites in Italian and other Romance languages nicely.

Déprez's (2000) analysis is worth pursuing because it can explain why there are variations among negative indefinites in different languages in the way described by Haspelmath (1997). I will adopt some of the basic tenets of her analysis of negative indefinites for my structural analysis of the NPI and the universal *dare-mo*, and hence place Japanese NPI *dare-mo* 'anyone' in the typology. Before going into the present analysis, however, let us review some of the previous analyses concerning the NPI and the universal *dare-mo* in the next subsection.

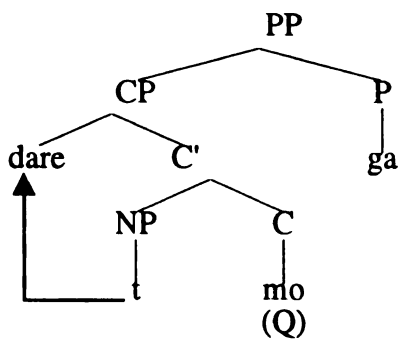
3.2.2 Previous analyses of the internal structure of *dare-mo*

In the literature, there has not been much attempt to analyze the internal structure of the NPI *dare-mo* 'anyone' or the universal *dare-mo* 'everyone'. Some researches have dealt with these phrases separately and did not pay much attention to why such semantic difference exists between the two. In a number of analyses, the morpheme *mo* in the universal *dare-mo* is taken as a universal quantifier (McGloin (1972), Nishigauchi (1990), Sato-zhu (1996), Shimoyama (1999) and others). However, none of those analyses investigate why it is that the presence of a Case-marker is required in most cases to have a universal quantification reading for the universal *dare-mo* while the lack of the Case marker is required in the NPI *dare-mo*. I will introduce below Kawashima's (1994) treatment of the NPI and the universal *dare-mo* and Nishigauchi's (1986, 1990) and Takahashi's (2002) analyses of the morpheme *mo*. Even though their analyses do not go in depth with the internal structure of the NPI *dare-mo* or the universal *dare-mo-ga/o*, they are among the few works that touch on the issue.

3.2.2.1 Mo as a complementizer

Nishigauchi (1986) suggests a structure for *dare-mo-ga* 'everyone-Nom' as a CP plus P as shown in (37).

(37)



He proposes that the indeterminate pronoun *dare* 'who' is a free variable that acquires its quantificational character from Q-elements such as *mo* and *ka*. He assumes that Q-

elements appear in C (parallel to the position of a question marker *ka* in a interrogative sentence, e.g. *dare-ga kimasi-ta ka* (who-Nom come-Past-Q) 'who came?' and they govern an indeterminate pronoun when it is moved to Spec CP[19]. Consequently the raised pronoun acquires its quantificational force from *mo*. Under his analysis, the morpheme *mo* is the center of universal quantificational force of the phrase *dare-mo-ga* 'everyone'.[20] It is reasonable to assume that the morpheme *mo* is a universal quantifier, but it is not clear why it requires the Case marker. In addition, his analysis of *mo* cannot explain why the NPI *dare-mo* 'anyone' does not have such universal quantificational force despite the presence of *mo* and why it requires negation. In other words, why does the universal *dare-mo* require the Case marker to have universally quantified interpretation while lack of the Case marker turns it into an NPI without universal quantificational force? His analysis cannot answer these questions. I follow the proposal that *mo* is a head that takes *dare* as its complement and binds it, but the structure he proposes is not motivated by any independent evidence.

3.2.2.2 NPI *mo* and universal *mo* as a determiner

Takahashi (2002) proposes that *mo* in the NPI *dare-mo* is an NPI determiner (D) and the one in the universal *dare-mo* is a universal determiner (D) and treat them as

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[19] Nishigauchi assumes that C is a "category-neutral " node. According to him, "the lexical features of CP may be determined, not by its own head C, but rather by whatever maximal projection is governed by C" (Nishigauchi 1991:218). Therefore when C takes NP as its complement the CP is nominal.

[20] Examples such as the following are taken to show that the scope of the universal quantifier depends on the position of *mo* (Sato-Zhu 1996:125 (12)).

i) Dono onnanoko-**mo** sono araiguma-o mita. 'All the girls saw the raccoon'
which girl-MO that raccoon-Acc saw

ii) Dono-onnanoko-ga mita araiguma-**mo** kawai katta.
which-girl-Nom saw raccoon-MO cute was 'For all x, girl(x), the raccoon x saw was cute'

In (i) universal quantifier takes scope over girls, but in (ii), it takes scope over girl-raccoon pairs. But the semi-formal translation provided by Sato-Zhu shows that it is still *girl* that the quantifier takes scope over, since it does not say 'for all x, y, girl (x), racoon (y), ...'.

distinct entities (p605, footnote 23). He puts aside the issue of Case marking difference between the DP headed by the NPI *mo* and the universal *mo*. Therefore, his analysis does not have much to say about why the NPI *dare-mo* cannot be Case-marked while the universal *dare-mo* can, which is the main concern for the present analysis.

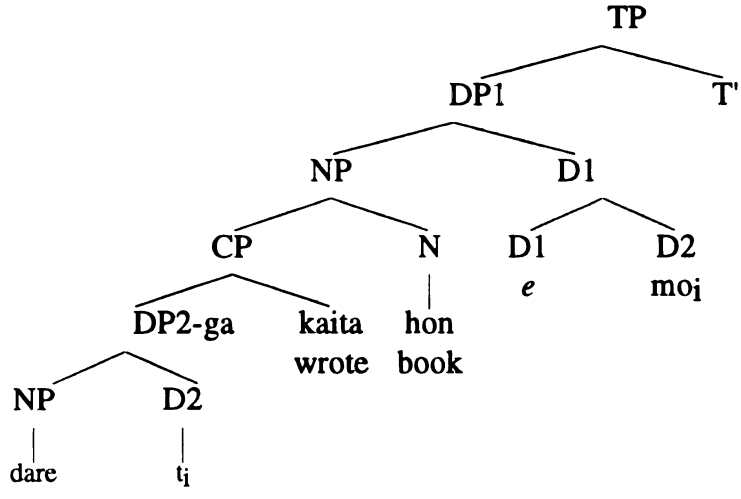
Although not directly relevant to the present analysis, his analysis has some implication for my analysis in section 3.5.2, so let us review his analysis of Split QP. What he calls Split QP construction is exemplified in (38b) below (Takahashi's (5b):

(38) a. **Dare mo**-ga kaita hon-ga omosiroi.
person every-Nom wrote book-Nom is-interesting
'The book that everyone wrote is interesting.'

b. **Dare**-ga kaita hon **mo** omosiroi. (Split-QP)
person-Nom wrote book every is-interesting
'lit. Every book that a person wrote is interesting.'

In (38a), *mo* takes *dare* as its complement but in (38b), *mo* is separated from *dare*. He analyzes (38b) as follows:

(39)



He assumes that the movement of *mo* is a scope shifting operation in the sense of Fox (1995). I will not repeat the details of his analysis, but he argues that his analysis is supported by the fact that *mo* will not show up in the positions that do not change the

scope of *mo* in comparison to its base generated position.[21]

Takahashi proposes that the same movement analysis can apply to the NPI *mo*, as shown below (Takahashi's (76b) and (77b).

(40) a. daRE -ga kaita hon **mo** omosirokunai. NPI mo
person -Nom wrote book any not-interesting
'lit. Any book that a person wrote is not interesting.'

b. * daRE -ga kaita hon **mo** omosiroi. NPI mo
person -Nom wrote book any not-interesting

Based on the pitch accent of *dare*, he argues that *mo* in (40a) is an NPI *mo* and that it has moved from inside the DP *dare-mo*.[22]

Although his account of the distribution of *mo* in the Split QP is interesting, there are some obvious problems. Apart from the problem of the non-standard head movement that is required to derive the proposed structure, his analysis cannot explain why (41) below is unacceptable while (40a) is good.

(41) * daRE-**MO**-ga kaka-na-katta hon NPI mo
person-any-Nom write-Neg-Past book
Intended: 'the book that nobody wrote'

If *mo* moves for a scope shift purpose in (40a) and *mo* is base generated as a head of the DP *dare-mo* in (40a), it is not clear why (41) is unacceptable, considering that (41) is the version of (40a) with *mo* in the base position with verbal negation to license the NPI.

Furthermore, in the case of (40a), unlike the universal *mo*, the movement of *mo* is

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[21] It is not clear what the exact meaning of (38b) is. It seems possible to paraphrase its meaning as 'for all x, x is a person, the book that x wrote was interesting', in which case, the scope of the universal quantifier is over person. I think this is a plausible reading of (38b).

[22] In standard Japanese there is no pitch accent distinction in the Split QP construction, although *daREMO* (NPI) and *DAremo* (universal) distinction exists as mentioned in footnote 3. (40a) has the pitch accent pattern shown in (i) and either an NPI or a universal reading is possible in standard Japanese.

(i) DAre -ga kaita hon **mo** omosirokunai
who-Nom wrote book-MO interesting-Neg
Lit. 'Any book that a person wrote is not interesting.' or

obligatory rather than optional scope induced movement since the sentence is ungrammatical when *mo* stays in the base position as shown in (42).

(42) * daRE-**mo** ga kaita hon omosirokunai NPI mo
person- any Nom wrote book not-interesting
'lit. The book that any person wrote is not interesting.'

It is not clear how (42) and (40a) are derivationally related. If *mo* moves for a scope reason, the base position reading should be possible since *mo* has a different scope in (40a) and (42). Namely, the scope of *mo* in (40a) is over a *book-person* pair while its scope in (42) is over only *person* if we follow Takahashi's analysis.

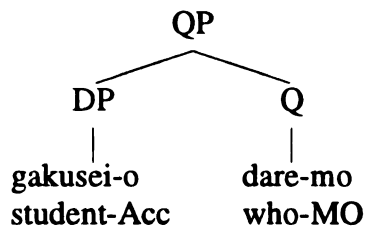
To summarize, it is clear that Takahashi's analysis of Split QP cannot account for the distribution of the NPI and the universal *dare-mo*.

3.2.2.3 *Dare-mo* as a quantifier head

Kawashima (1994) proposes an analysis of *dare-mo* in a sentence like (43) as a head of Quantifier Phrase, as shown in (44) (Kawashima's (8), p.99).

(43) John-ga gakusei-o **dare-mo** syootaisi-na-katta.
J-Nom student-Acc who-MO invite-Neg-Past
'John didn't invite any student.'

(44)



Unlike Nishigauchi, Kawashima does not consider *mo* as a universal quantifier. Instead, she argues that *mo* has the same functions as English *any* as proposed by

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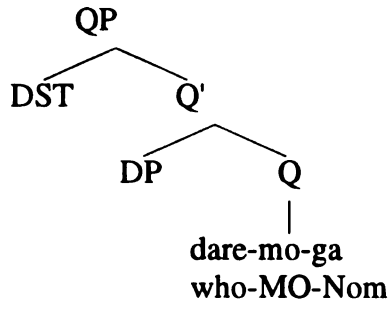
'Every book that a person wrote is not interesting.'

Kadmon and Landman (1993).[23] In her analysis, the universal quantificational force of *dare-mo-ga* 'everyone' comes from a Distributive operator (DST) generated in the spec of QP. She suggests the structure of *dare-mo-ga* as in (45) (Kawashima 1994:159, footnote 15 (i)).

(45)



In (45), the phrase *dare-mo-ga* as a whole is the head of QP, and the DST in the Spec QP gives the universal quantificational force to the QP.

There are at least two problems with her analysis. One is that the structures given in (44) and (45) cannot explain why only the QP *dare-mo-ga* has a DST operator in its Spec and behaves as a non-NPI while the QP *dare-mo* does not have DST in its Spec and requires negation. Such contrast is puzzling considering that they have exactly the same structure.[24]

Another problem is that the evidence for *dare-mo* as a Q head is not very sound. Under the assumption that the quantificational expressions like *subete* 'all/every' in Japanese is a head of QP, Kawashima's argument for the QP analysis of NP+*dare-mo* is based on the distributional similarity between *subete* 'all/every' and *dare-mo* as shown below (modified from Kawashima's (4) and (5), p.98).

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[23] Kadmon and Landman (1993) propose that core functions of *any* is semantic 'strengthening' and 'widening'. The details of its application to Japanese *mo* will be discussed in section 3.4.

[24] Kawashima suggests that definiteness of *dare-mo-ga* 'everyone-Nom' may have something to do with

(46) a. John-ga gakusei-o **san-nin** **subete** syootaisi-ta.
J-Nom student-Acc **3-CL** **all** invite-Past
'John invited all of the three students.'

b. * John-ga gakusei-o **subete san-nin** syootaisi-na-katta.
J-Nom student-Acc **all** **3-CL** invite-Neg-Past

(47) a. John-ga gakusei-o **san-nin** **daremo** syootaisi-na-katta.
J-Nom student-Acc **3-CL** **who-MO** invite-Neg-Past
'John didn't invite any of the three students.'

b. * John-ga gakusei-o **dare-mo** **san-nin** syootaisi-na-katta.
J-Nom student-Acc **who-MO** **3-CL** invite-Neg-Past

However, to my own native institution and my informants', (47a) is not acceptable. We find the co-occurrence of numeral classifier phrase and *subete* 'all/every' acceptable while the co-occurrence of numeral classifier phrase and *dare-mo* unacceptable. Therefore, the distributional similarity Kawashima claims as the evidence for *dare-mo* being the head of QP is not as sound. Moreover, there are additional examples which show that *subete* 'all' and the NPI *dare-mo* 'any' have a different distributional property:

(48) a. John-ga gakusei-o **subete** syootaisi-ta.
J-Nom student-Acc **all** invite-Past
'John invited all the students.'

b. ? John-ga **subete** gakusei-o syootaisi-ta.
J-Nom **all** student-Acc invite-Past
Intended: 'John invited all the students.'

c. * **Subete** John-ga gakusei-o syootaisi-ta.
all J-Nom student-Acc invite-Past
Intended: 'John invited all the students.'

(49) a. John-ga gakusei-o **dare-mo** syootaisi-na-katta.
J-Nom student-Acc **who-MO** invite-Neg-Past
'John didn't invite any student.'

b. John-ga **dare-mo** gakusei-o syootaisi-na-katta.
J-Nom **who-MO** student-Acc invite-Neg-Past
'John didn't invite any student.'

c. **Dare-mo** John-ga gakusei-o syootaisi-na-katta.
who-MO J-Nom student-Acc invite-Neg-Past
'John didn't invite any student.'

---

the introduction of DST operator in the Spec QP, but the idea is not elaborated further.

The examples in (48) show that the acceptability of the sentence decrease when *subete* appears pre-nominally as in (48b) or becomes completely bad when the subject intervenes between the two as in (48c), while in (49) the NPI *dare-mo* shows freer distribution. *Dare-mo* may precede its associate NP as in (49b) and the subject can intervene between the two as in (49c). If we assume *subete* 'all' to be the head of a QP, it is more plausible to treat *dare-mo* to be in a different structural position as *subete* 'all' based on their distinctive distributions.

3.2.3 The present analysis of the NPI *dare-mo*

In this subsection I first illustrate the distribution of *dare-mo* 'anyone' which parallels that of a Haitian Creole negative indefinite *pèsonn* 'anyone'. Then in 3.2.3.2, I introduce my analysis of the NPI *dare-mo* 'anyone' as a DP with an empty D (variable), adopting Déprez's analysis of *pèsonn* 'anyone' discussed in section 3.2.1.2. I propose that the movement of *dare-mo* from Spec NumP to Spec DP licenses the empty head, much like the structure of *pèsonn*.

3.2.3.1 Parallel between the NPI *dare-mo* 'anyone' and *pèsonn* 'anyone'

As discussed above, unlike English *anyone*, *pèsonn* in Haitian Creole can appear freely in both subject and object positions in negative sentences with an NPI reading. The examples are repeated in (50) for convenience.

(50) a. M **pa** we pèsonn.
I Neg saw anyone
'I did not see anyone.'
b. Pèsonn **pa** rele'm.
anyone Neg called me
'Nobody called me.'

Similarly, *dare-mo* 'anyone' in Japanese may appear in both subject and object positions as shown below.

(51) Dare-mo hon-o yoma-na-i.
who-MO book-Acc read-Neg-pres
'No one reads books.'

(52) John-wa dare-mo sinji-na-i.
J-Top who-MO believe-Neg-pres
'John doesn't believe anyone.'

In addition, both *pèsonn* and *dare-mo* can be licensed only by syntactic negation. In other words, they cannot appear in contexts where NPIs in some other languages may be licensed, e.g. in the prostasis of a conditional (as in (53)), in a comparative (as in (54), in the first argument of a universal quantifier (as in (55)), and so on (HC examples are from Déprez's (20)).[25]

(53) a. * Si ou touye **pèsonn**, ou pral nan prizon. (HC)
anyone
Intended: 'If you kill anyone, you will go to jail.'
b. * **Dare-mo** korose-ba keemusyo-ni hairu (J)
who-MO kill-if jail-to enter
Intended: 'If you kill anyone, you will go to jail.'

(54) a. * Jean pi gwo pase **pèsonn**. (HC)
anyone
Intended: 'John is bigger than anyone.'
b. * John-ga dare-mo yori ookii. (J)
J-Nom who-MO more-than big
Intended: 'John is bigger than anyone.'

(55) a. * Tout timoun ki wè **anyen** dwe di'm. (HC)
anything
Intended: 'Every child who sees anything must tell me.'
b. * Nani-mo mita kodomo-subete-wa houkokusuru-bekida. (J)
what-MO saw child-all-Top report-must
Intended: 'Every child who sees anything must tell me.'

Another similarity is that these expressions allow modification by universal modifiers like *almost* (Déprez's (22a)).

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[25] I could not provide glosses for Haitian Creole examples since Déprez does not gloss these examples.

(56) a. Jan **pa** te envite **preske** pèsonn. (HC)
almost anyone
'John invited almost no one.'

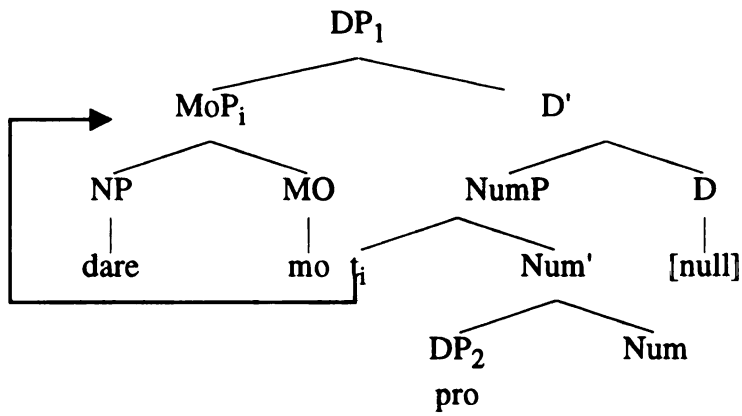
b. John-ga **hotondo** dare-mo yoba-na-katta. (J)
J-Nom almost who-MO invite-Neg-Past
'John invited almost no one.'

Now that it is clear that the distribution of Japanese NPI *dare-mo* is identical to Haitian Creole *pèsonn*, let us see how Déprez's analysis of *pèsonn* may be applied to the structural analysis of the NPI *dare-mo* 'anyone'.

3.2.3.2 The internal structure of the NPI *Dare-mo*

Following Déprez's analysis of *pèsonn*, I propose the structure of *dare-mo* 'anyone' as in (57) below:

(57)



In this structure, the Num head takes DP_2*pro* as its complement and forms a NumP, and consequently the null D takes NumP as its complement (Ritter 1991, Li 1998, Cheng and Sybesma 1999 and others). Strictly speaking, the DP_2 may be embedded further in a classifier phrase (ClP) if we are to keep the uniform structure of NumP proposed in chapter 2.[26] Yet since no overt classifier co-occurs with an indefinite pronoun, I will

[26] See Visonyanggoon (2000) for the structure of Thai nominal phrases, Cheng, and Sybesma (1999) for Chinese.

omit it here. I assume *mo* is some kind of functional head that may take an NP as its complement and projects its own phrase. I will call it MoP for the purpose of exposition in this analysis. The MoP *dare-mo* moves from the spec of NumP to the spec of DP in order to license the null D head in Déprez's sense.[27] In Minimalist terms (Chomsky 1995), we can say that the null D has some formal feature that needs to be checked off by MoP before Spell-out. But for the sake of simplicity, I will use 'license' to refer to the movement to the Spec DP.

A piece of evidence for this internal structure given in (57) is the inability of *dare-mo* to be modified by demonstratives or adjectives.[28]

Regular pronouns in Japanese can be modified by demonstratives and adjectives as shown in (58-59).

(58) Ano kare-ga hito-o korosi-ta (sooda).
that he-Nom person-Acc killed (heard)
Lit. '(I heard that)that he killed a someon.'

(59) Wakai kare-ga ayamachi-o okasi-ta.
young he-Nom mistake-Acc commit-Past
'He, who is young, made a mistake'

Pronouns in Japanese are like common nouns (Kuroda 1965:105). Therefore assuming that a Case particle is a D (Fukuda 1993, Tateishi 1989 and Kakegawa 2000) and

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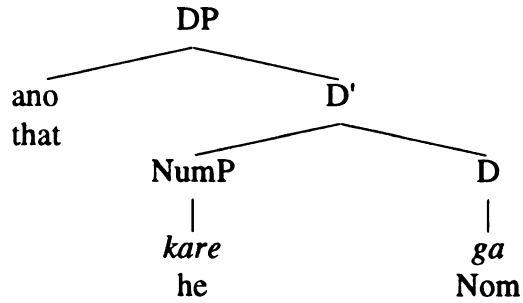
[27] In Chapter 2, I argued for the NumP analysis of indefinite Numeral Classifier phrases as follows:
$[_{NumP}$ gakusei-ga $[_{ClP}$ san $[_{DP}$ t] nin $_{Cl}]$ $_{Num}]$
$[_{NumP}$ student-Nom $[_{ClP}$ three $[_{DP}$ t] Cl $_{Cl}]$ $_{Num}]$
The structure proposed in (57) is compatible with the analysis of NumP except for the presence of the null D in the NPI *dare-mo*.

[28] Under the adverbial analysis of the NPI *dare-mo*, Fujita (1994) argues that the fact that the NPI *dare-mo* cannot be modified follows from its status as an adverb. However, some adverbs can be modified, as shown in (i).

(i) Bounasu-ga takusan deta yoru, bokutati-wa sukiyaki-o tabeta.
bonus-Nom a lot came out night we-Top sukiyaki-Acc ate
'We ate sukiyaki the night I received a lot of bonus.'

demonstratives are in Spec DP (Bernstein 1996, Murasugi 1995, Campbell 1996), *ano-kare-ga* in (58) can be given the structure as in (60).

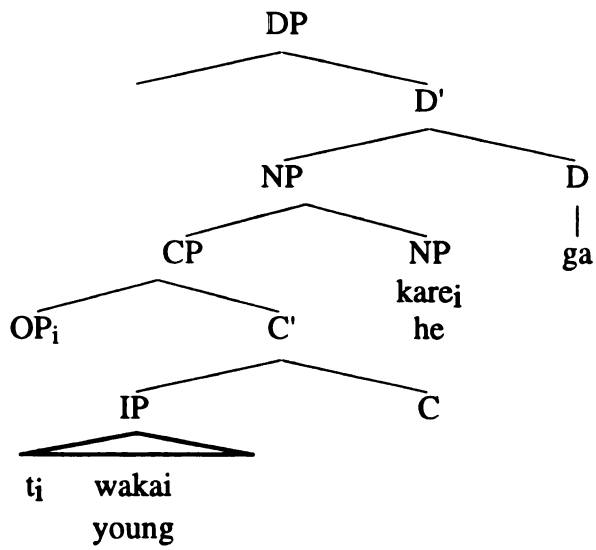
(60)



The D takes NumP as its complement and the demonstrative *ano* is in Spec DP.[29]

In addition, if we take Japanese adjectives to be relative clauses as argued in Kuno (1972), Whitman (1981) and Nishiyama (1999), and assume the standard adjunction structure for relative clauses, *wakai kare* in (59) can be analyzed as shown in (61).

(61)



The NPI *dare-mo* 'anyone', however, cannot be modified by demonstratives,

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Therefore, it is not clear if being an adverb should prevent modification.

[29] The pronoun *kare* is specified for singular, so the head of NumP carries the feature singular. For completeness, I assume that NumP here has an internal structure [$_{NumP}$ [$_{ClP}$ [$_{NP}$ *kare*]]] with the head of ClP being a phonetically null classifier specified for [human].

adjectives or relative clauses as shown in (62-64).

(62) * Ano dare-mo ko-na-katta.
that who-MO come-Neg-Past
Intended: 'None of those people came.'

(63) * Wakai dare-mo ko-na-katta.
young who-MO come-Neg-Past
Intended: 'Nobody young came.'

(64) * [John-ga syootaisita] dare-mo kona-katta.
J-Nom invited who-MO come-Neg-Past
Intended: 'Nobody John invited came.'

The structure proposed in (57) accounts for the contrast between regular pronouns and *dare-mo*. In (57), Spec DP is filled by the moved *dare-mo*, and hence demonstratives, which are arguably in Spec DP as shown in (60), cannot appear with *dare-mo*. Under the Minimalist Program (Chomsky 1995), overt movement is motivated by the necessity to check off strong features of functional heads. In the case of (57), from the derivational view of the structure, it means that at the point of derivation when D merges with NumP, the head D has some feature that needs to be checked off by MoP in Spec-Head relation and hence it attracts MoP.[30] If a demonstrative merges with D', the feature of D is not checked off and the derivation will not converge.

The fact that adjectives and relative clauses cannot modify the NPI *dare-mo* as shown in (63) and (64) also follows from the structure of *dare-mo* in (57). If the restrictive relative clause is adjunction to NP (or NumP) but not to DP, since the NPI *dare-mo* is necessarily a DP with a null head in the present analysis, then it is natural that

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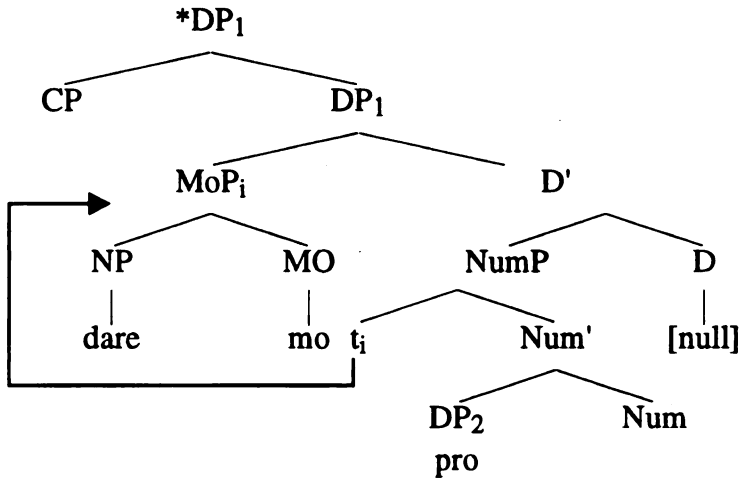
[30] There is an issue of whether D is always strong, in which case it will always require something in its Spec to check the strong feature. However, it does not seem to be the case. A possible solution to this problem is to say that only the empty D has a strong F that attracts MoP. Alternatively, if we say that D is always strong, the strong F may be checked either by Spec-Head agreement or by agree with the complement as suggested by Cristina Schmitt (p.c.).

adjectives (and relative clauses) cannot modify *dare-mo*, as the structure shown below would be illegitimate.[31]

(65)

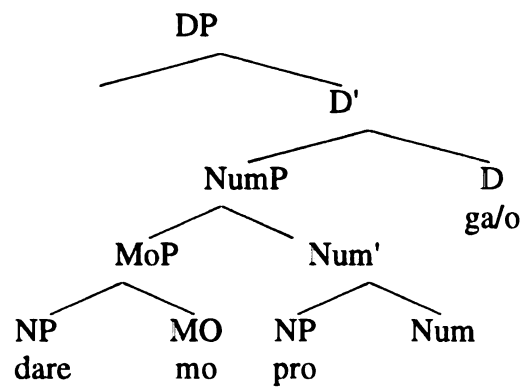


In (65), CP (adjectives or relative clauses) adjoin to DP after MoP moves from Spec NumP to Spec DP. This is not a well-formed structure for the restrictive relative clauses. Hence the NPI *dare-mo* cannot be modified.[32]

3.2.4 The structure of the universal *dare-mo* 'everyone'

While the NPI *dare-mo* 'anyone' is a DP with a null D head, I propose the structure in (66) for the universal *dare-mo-ga/o* 'everyone-Nom/Acc'.

(66)



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[31] The exact structure of relative clauses (RCs) does not affect my analysis at this point. (63) and (64) can be also ruled out under Kaynean analysis of RCs (Kayne 1994). In his analysis, RCs in Japanese is in Spec DP, and hence, given the structure (57), RCs cannot cooccur with *dare-mo* since the Spec DP is filled by the moved *dare-mo*.

[32] How about the possibility of modification by non-restrictive relative clauses, which are argued to be an adjunction to DPs? That may be ruled out by anomalous semantics. For example, an appositive reading of (64) would be 'Nobody, whom John invited, came', and such sentence is uninterpretable.

An important difference between the structure of the NPI *dare-mo* in (57) and that of the universal *dare-mo-ga/o* in (66) is that in (66) the head D is overtly filled by a Case particle. Another difference is that Num takes NP as its complement in (66) rather than DP.[33] This parallels the structure I proposed in Chapter 2 for the Case-final form, i.e., Cl takes NP as its complement. MoP in (66) originates in Spec NumP in the same way as in (57). However, unlike MoP in (57), MoP in (66) does not move to Spec DP since it does not need to license the head D as the D is filled overtly. So the movement of MoP to Spec DP is not possible in (66).

According to Déprez (2000), a DP with a filled D head as in French *personne* illustrated in (32) has an intrinsic quantificational force. The Japanese data support this analysis: *dare-mo-ga*, which is a DP with a filled D head, has an intrinsic quantificational force and not bound by Neg OP, while the NPI *dare-mo* with a null D is, as shown in (67).

(67) a. DAre-mo-ga hon-o katta.
who-MO-Nom book-Acc bought
'For all x, such that x is a person, x bought books.'
(Everyone bought books.)

b. DAre-mo-ga hon-o kawana-katta.
who-MO-Nom book-Acc didn't buy
'For all x, such that x is a person, x did not buy books.'
(Everyone didn't buy books. Note: only wide scope for 'every')

In (67a) it is clear that *dare-mo-ga* has a universally quantified interpretation, unlike *dare-mo* 'anyone'. In addition, when appearing in a negative sentence, the universal *dare-mo* takes a scope over the negation as in (67b) and cannot be bound by the Neg operator. However, the DP *personne* and the DP *dare-mo* have a different property as well. While

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[33] The NP complement is further embedded in ClP. I omit the detail for simplicity here.

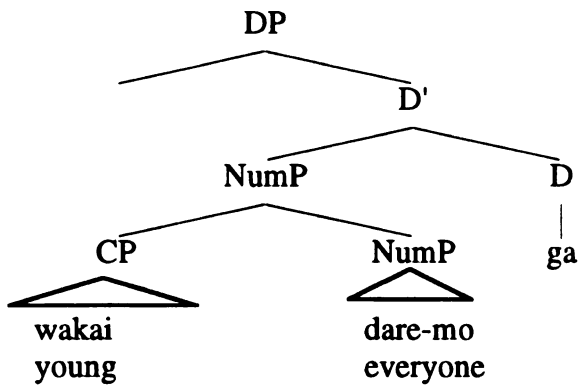
French *personne* is an indefinite, Japanese universal *dare-mo* is a definite/specific. I will discuss how the proposed structure accounts for the definite interpretation associated with the universal *dare-mo* in section 3.2.5.

In the structure proposed in (66), note that the D is filled overtly, and hence MoP *dare-mo* does not have to move to Spec DP to license a null D head. Therefore, Spec DP is not filled. Since the Spec DP is available, we predict that demonstratives or adjectives should be able to co-occur with the universal *dare-mo*. This prediction is borne out as shown in (68).

(68) a. (?) Sorerano dare-mo-ga ki-ta.
those who-MO-Nom come-Past
'All those people came.'
b. Wakai dare-mo-ga ki-ta.
young who-MO-Nom come-Past
'Everyone young came.'

Although (68a) may be somewhat marginal, it is much better than **ano dare-mo* 'none of those people' in (62) in which the NPI *dare-mo* is modified by a demonstrative. In (68b) *wakai dare-mo-ga* is well-formed because the adjective *wakai* 'young' can adjoin to NumP since *dare-mo* does not need to move to Spec DP in (66). This is illustrated schematically in (69).

(69)



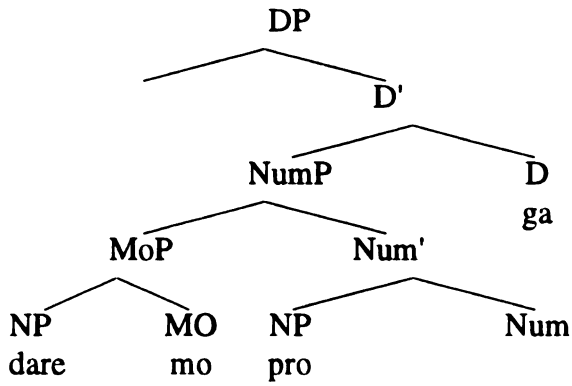
3.2.5 Parallel between the structures of NCP and *dare-mo* phrases

One of the important consequences of the present analyses of the NPI and the universal *dare-mo* is that the Case particle is not merely marking morphological Case but when combined with NumP it has a significant semantic contribution. This is the same conclusion at which we arrived in Chapter 2 through the analysis of numeral classifier phrases (NCPs) as well. Both analyses support the treatment of a Case particle as a determiner (D). Furthermore, the structures proposed in Chapter 2 and the ones I have proposed in this chapter show an interesting parallel. Let us point out some connections between them in this subsection.

In Chapter 2, I proposed that definite noun phrases in Japanese have the structure in which a Case particle (D) takes NumP as its complement. The argument was based on the fact that noun phrases of the form NP-CASE-NCP (the Case-medial form) get an indefinite interpretation while NP-NCL-CASE phrases (the Case-final form) get a definite interpretation.

In the structure proposed for *dare-mo-ga* 'everyone' in (66), repeated here as (70), an overt D takes NumP as its complement, and therefore we expect a definite reading for *dare-mo-ga.*

(70)



The prediction that *dare-mo-ga* should be definite is born out. As Kawashima (1994) points out in her footnote, *dare-mo-ga* shows the definiteness effect, as exemplified below ((71a) is Kawashima's footnote 14 (iv), p.157, (71b) is my own):

(71) a. * John-ni dare-mo-ga iru.
John-to who-MO-Nom exist
Intended: '*John has everyone.'

b. * Sono geinou-jimusyo-ni dai-sutaa dare-mo-ga iru.
that entertainment-office-to big-star everyone-Nom exist
Intended: '*The entertainment company has every big star.'

It is not clear whether (71a) is unacceptable because of the definiteness effect since it seems impossible to give a context where the meaning of this sentence should be pragmatically good. (71b) is my attempt to give a pragmatically plausible sentence that shows the definiteness effect. It is plausible for 'having all the big stars' to be characteristic of 'an entertainment company', but the sentence (71b) is still not well-formed. There is nothing obviously wrong with the sentence syntactically. Hence, ungrammaticality of (71b) may suggest a definiteness effect.

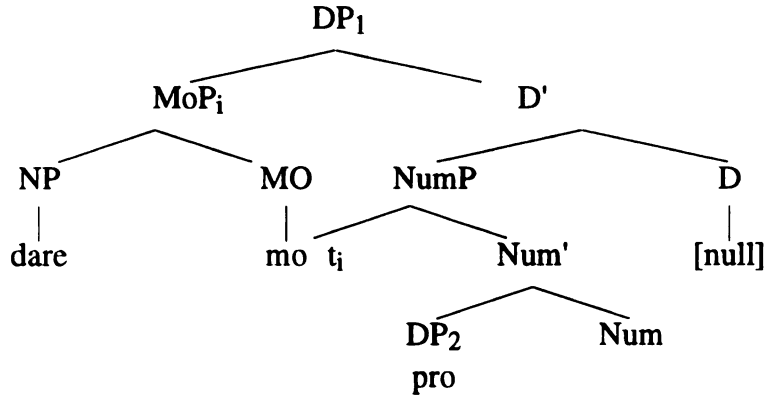
On the other hand, the NPI *dare-mo* 'anyone' does not show a definiteness effect, as shown below:

(72) a. John-ni huan-ga dare-mo i-nai.
John-to fan-Nom who-MO exist-Neg
'John does not have any fan.'

b. Sono geinou-jimusyo-ni daisutaa-ga dare-mo i-nai.
that entertainment-office-to big star-Nom who-MO exist-Neg
'The entertainment company does not have any big star.'

In Chapter 2, I have proposed that indefinites in Japanese (the Case-medial form) form NumPs. However, in the structure proposed for the NPI *dare-mo* 'anyone' in (57), repeated in (73) below, a null D takes NumP as its complement:

(73)



Assuming that the NPI *dare-mo* is indefinite based on the data in (72), we have to say that the combination of a null D and NumP does not give raise to a definite interpretation. This implies that a null D and an overt D have different semantic effects. In Chapter 2, I proposed that Japanese indefinite noun phrases like *gakusei-ga san-nin* (student-CASE three-Cl) 'three students' are NumPs. We might be able to treat them as DPs with a null D head in light of the analysis proposed for the NPI *dare-mo* in this chapter.

That the NPI *dare-mo* has a structure for indefinites and the universal *dare-mo* has the structure of definite noun phrases reflects an interesting fact about NPIs in general. That is, NPIs are usually indefinite, and when they take a definite morphological piece, they cease to be an NPI. This can be seen in the English examples in (74).[34]

(74) a. Mary didn't date a single guy.
NPI reading: 'Mary didn't date anyone.'
non-NPI reading: 'Mary didn't date an unmarried man.'
b. Mary didn't date the single guy.
non-NPI reading only: 'Mary didn't date the unmarried man.'

In (74a), 'single guy' has an indefinite article, and it may have an NPI reading 'anyone'. On the other hand, when it has a definite article as in (74b), it cannot have the NPI reading. This contrast exactly parallels the fact that the *dare-mo* that has the structure of

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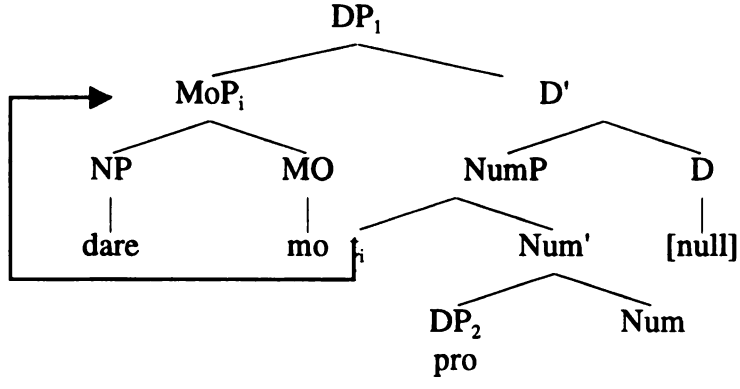
[34] These examples are due to Alan Munn (p.c.).

an indefinite is an NPI and the *dare-mo* that has the structure of a definite is a non-NPI. It seems that having an NPI reading is contingent upon having the structure of an indefinite NP. On the other hand, having the structure of a definite NP blocks the NPI reading. In Japanese, having a Case particle turns the NPI *dare-mo* to the non-NPI (universal) *dare-mo*. This fact supports the analysis of Case particles as Ds, which may give rise to a definite interpretation of NPs. If there is no syntactic position for the Case particle, it is mysterious why the lack of Case particles is necessary for the NPI *dare-mo* and the presence of it turns it into a definite noun phrase. Therefore, this fact supports the analysis of Case particles as Ds.

3.2.6 The structure and the interpretation of the generic *DAre-mo*

I propose that the structure for the generic *dare-mo* is the same as the NPI *dare-mo*, as shown in (57), repeated here in (75).[35]

(75)



Recall that the generic *dare-mo* appears in non-episodic, generic sentences without a Case particle, and it co-occurs with a topic DP, as shown in (9). I repeat some of the examples below.

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[35] The generic *dare-mo* and the NPI *dare-mo* have the same structure but their pitch accent patterns differ

(76) a. Hito-wa DAre-mo kodoku dearu.
person-Top who-MO lonely Cop
'All human beings are lonely.'
b. Otoko-wa DAre-mo ookami dearu.
male-Top who-MO wolf Cop
'All men are beasts.'

For the analysis of the NPI *dare-mo*, I have proposed that the null D is a variable and is bound by the Neg OP, and as a result, it receives an NPI reading. If the generic *dare-mo* has the same structure, we may expect that the generic *dare-mo* is bound by the Neg OP if the clause contains Neg OP. However, this prediction does not seem to bear out, as shown in (77):

(77) a. Hito-wa DAre-mo ziyuu-ja-nai.
person-Top who-MO free-Cop-Neg
'All human beings are not free.'
b. Otoko-wa DAre-mo ikuzi-ga nai.
male-Top who-MO guts-Nom Neg
'All men don't have guts.'

I propose that, following the idea that the subject of the individual-level predicates is interpreted in a position higher than the subject of the stage-level predicates (Diesing 1992), the generic *dare-mo* is in a position higher than the Neg OP. The structure I assume is illustrated schematically in (78).

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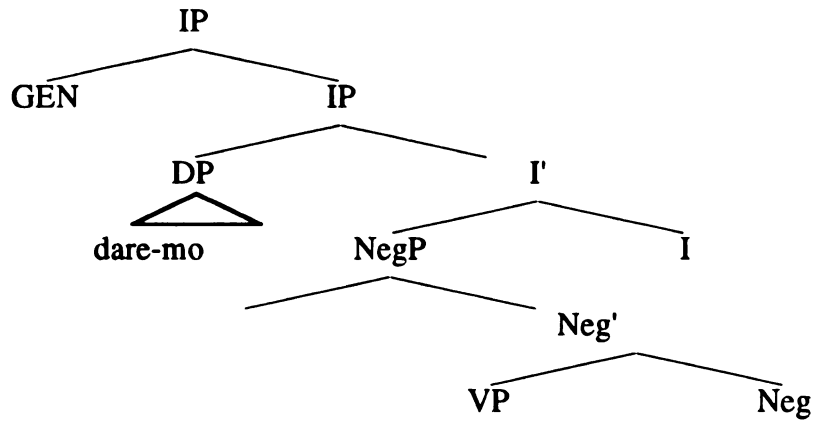
because *mo* in the NPI *dare-mo* is focused.

(78)



In the above structure, *dare-mo* cannot be bound by Neg OP because it is interpreted in a position higher than NegP, and hence it cannot get an NPI reading. On the other hand, it is bound by GEN since the head of DP in (75) is null and it functions as a variable.[36] Therefore, the examples in (9) receive the generic interpretation by being bound by the generic operator.

On the other hand, when the D is filled as in the case of the universal *dare-mo-ga/o*, it cannot be bound by GEN (nor Neg OP), so it should not get the generic reading or the NPI reading. This prediction is borne out, as shown in (79) and (80).

(79) a. DAre-mo-ga kodoku dearu.
who-MO-Nom lonely Cop
'All the people are lonely.'

b. DAre-mo-ga sankasi-ta.
who-MO-Nom participate-Past
'Everyone participated.'

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[36] Generic operator (GEN) is widely assumed in semantics in order to express the meaning of a generic statement like (i).

(i) a. Dogs have four legs. (Papafragou 1996:16 (40))
b. GEN (x is a dog; x has four legs)

GEN binds variables, i.e. x in (ib), in its scope. The exact interpretations of generic statements and how best to express them are still a topic of debate, but GEN must be different from the universal quantifier since a generic statement like 'A bird lays eggs' is acceptable even though not all birds lay eggs, as only female ones do, for example.

(80) DAre-mo-ga kisoku-o mamor-ana-katta.
who-MO-Nom rule-Acc follow-Neg-Past
'Everyone did not follow the rules.'
(For all x, x a person, x did not follow the rules.)
(* It is not the case that for all x, x a person, x follows the rules.)

(79a) sounds like a statement about a specific group of people, of which all of them are lonely, rather than a statement about people in general. Importantly, while the generic *dare-mo* cannot appear in an episodic sentence, as shown in (10), the universal *dare-mo* can, as seen in (79b). This indicates that the universal quantificational force of *dare-mo-ga/o* is independent of GEN operator. In addition, the only reading we can get from (80) is the reading in which the universal quantifier takes wide scope over negation. Therefore, it shows that *dare-mo* is not bound by NEG.

It is worth noting that the semantic and structural contrast between the generic *dare-mo* and the universal *dare-mo-ga/o* parallel the difference between English 'all NP' and 'all the NP' in two respects: i) 'all NP', like the generic *dare-mo*, can be used in a generic sentence and not in an episodic sentence, as shown in (81), whereas 'all the NP', like the universal *dare-mo-ga/o*, cannot be used as generic, and ii) 'all NP' does not have an overt D, while 'all the NP' has an overt D.

(81) a. All women are tough. (Generic)
b. * All women came to the party. (Episodic)
c. All the women are tough. (*Generic)

Under the present analysis, Case particles are analyzed as Ds, and hence, the generic *dare-mo* lacks an overt D, like 'all NP'. On the other hand, the universal *dare-mo-ga/o* has an overt D, like 'all the NP'. Therefore, if we take Case particles as Ds, the semantic and the distributional similarities between *dare-mo* and 'all NP', and *dare-mo-ga* and 'all the NP' may be explained structurally.

3.2.7 Summary of section 3.2

In this section, I have proposed internal structures for the NPI and the generic *dare-mo* and the universal *dare-mo-ga/o* and presented some evidence that supports their structural differences. I showed that the consequences of the present analysis argue for the treatment of Case particles as Ds. In the next section, I discuss distribution of the NPI and the universal *dare-mo* with respect to their associate NPs and demonstrate that the proposed internal structures of the NPI and the universal *dare-mo* can account for their distribution.

3.3 Distribution of the NPI and the universal *dare-mo*

In this section I will discuss the distribution of the NPI *dare-mo* 'anyone' first and refrain from the analysis of the universal *dare-mo-ga/o* 'everyone-Nom/Acc' until section 3.3.3.2. In analyzing the distribution of *dare-mo*, it is crucial to investigate the licensing condition of NPIs.

3.3.1 General Issues of NPI licensing

It has been widely acknowledged that not all NPIs are licensed in the same manner. This is very clear by merely looking at the difference between English *anyone* and Japanese *dare-mo* 'anyone' in the following examples (English examples are from Progovac 1994:55).

(82) Mary did not see anyone.

(83) Did Mary see anyone?

(84) If Mary saw anyone, she will let us know.

(85) Mary did not say that she had seen anyone.

Anyone is licensed by negation in (82), by question in (83), and by conditional in (84).

Also *anyone* in an embedded clause can be licensed by matrix clause negation as in (85). On the other hand, as discussed in section 1, Japanese *dare-mo* is licensed only by negation in the same tensed clause:

(86) Mary-ga dare-mo mi-na-katta.
M-Nom anyone see-Neg-past
'Mary didn't see anyone.'

(87) * Mary-ga dare-mo mi-ta to iw-ana-katta.
M-Nom anyone see-past Comp say-Neg-past
'Mary did not say that she had seen anyone.'

(88) * Mary-ga dare-mo mi-ta-ka.
M-Nom anyone see-past-Q
'Did Mary see anyone?'

(89) * Mary-ga dare-mo mi-reba, watasitati-ni sirase-ru desyoo.
M-Nom anyone see-if we-Dat tell-Pres will
'If Mary see anyone, she will tell us.'

In (86) *dare-mo* is licensed by the negation in the same clause but in (87) matrix negation cannot license *dare-mo* inside the embedded clause. The question in (88) and the conditional in (89) cannot license *dare-mo* either.

Even when NPIs are licensed by negation in both languages, there is another difference between English and Japanese NPIs. As seen in (82) and (86), a clause mate negation can license an NPI in the object position in both languages but only Japanese allows NPIs to be in the subject position as shown in (90).

(90) a. * Anyone didn't buy a car.
b. Dare-mo kuruma-o kaw-ana-katta.
anyone car-Acc buy-Neg-Past
'Anyone didn't buy a car.'

It has been argued that NPIs like Japanese *dare-mo*, which need clause-mate negation, require "strong licensing" and NPIs like English *anyone* require "weak licensing". Strong licensing is done in the form of Spec-Head agreement and weak

licensing via operator binding, i.e. the relevant operator must c-command the NPI (Ladusaw 1994). However, in the case of Moroccan Arabic NPIs, Benmamoun (1997) proposes that either Spec-Head agreement or c-command can license NPIs and both kinds of licensing are necessary to account for the distribution of NPIs in this language.[37]

In both kinds of licensing, whether such licensing conditions should hold at S-structure or at LF is another topic of debate. In terms of syntactic licensing of NPIs in English, it is first proposed by Klima (1964) that the NPIs need to be c-commanded at S-structure by an affective expression, e.g. overt negation. But more recently, Uribe-Etxebarria (1995) argues that NPIs are licensed at LF in English. Giannakidou (1998) also comes to the conclusion that NPIs are licensed at LF based on Greek and some other languages.

In the case of Japanese, some recent syntactic analyses of NPIs argue that they are licensed by Spec-Head agreement with the head of Negation Phrase (NegP) at S-structure (or before Spell-Out in the Minimalist Program perspective). In the next subsection, I review the overt movement analyses of NPIs by Kawashima (1994), Kawashima and Kitahara (1992), Sohn (1996) and Yoshimoto (1998), whose basic tenets I will adopt in the analysis that follows in this chapter.

3.3.2 Previous analyses

3.3.2.1 English *anyone* vs. Japanese *dare-mo*

Under the Minimalist Program, Spec-Head agreement analysis of an NPI and Negation is translated into feature-checking requirement. That is, the movement of an

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[37] Nam (1994) and Zwarts (1993) classify NPIs into three types depending on their licensors. But see Krifka (1994) for the discussion of problems with their categorizations.

NPI to Spec NegP is motivated by the necessity to check off some morphological feature in Spec-Head configuration between an NPI and the head of NegP.[38] Kawashima (1994) and Kawashima and Kitahara (1992) attempt to account for the fact that NPI *dare-mo* 'anyone' in Japanese may appear in the subject position while English *any* cannot appear in the subject in a matrix clause based on the feature checking requirement of NPIs. They propose that an NPI has a morphological feature Neg which needs to be checked off under Spec-Head relation with the head of NegP. Kawashima (1994) argues that the contrast between English and Japanese NPIs illustrated in (86) is deducible from an interaction between the principle of derivational economy and the structure of noun phrases containing NPIs.

(91) a. Gakusei-ga dare-mo hon-o kaw-ana-katta.
student-Nom anyone book-Acc buy-Neg-Past
'No student bought a book.'
b. * Any student didn't buy a book.

Kawashima analyzes the derivation of (91b) as follows (Kawashima 1994:108 (18)):

English NPI

(92) a. $[_{IP}\ [_{NegP}\ [_{AgroP}\ [_{VP}$ any student$_1$ $[_{V'}$ buy a book]]]]
b. *any student* moves to Spec, IP
$[_{IP}$ any student$_1$ $[_{NegP}\ [_{AgroP}\ [_{VP}\ t_1\ [_{V'}$ buy [a book]$_2$]]]]
c. t_1 (a copy of *any student*) moves to Spec, NegP at LF
$[_{IP}$ any student$_1$ $[_{NegP}\ t_1\ [_{AgroP}\ [_{VP}\ t'_1\ [_{V'}$ buy [a book]$_2$]]]]

[38] It is commonly assumed that movement of NPIs is triggered by Greed in many analyses. However, as Lasnik (1999) argues, Greed as the motivation for movement presents many problems and "enlightened self interest" as the trigger is preferred. In the feature-checking account of NPI licensing, it is the NEG head that has an uninterpretable feature that needs to be checked by an NPI. This is what I will assume in my analysis. I am aware that under this assumption, a regular negative sentence without NPI raises some issues. That is, how can the strong NEG feature be checked if there is no NPI in the sentence? Yoshimoto (1996) suggests that the strong NEG feature of NegP is optional. This allows regular negative sentences to not have the strong NEG feature, and hence Spec NegP does not have to be filled overtly. Another possible approach suggested by Alan Munn (p.c.) is that the NEG feature is always strong and is checked by the movement of whatever is the focus of negation to Spec NegP. I will leave the issue of how to account for regular negative sentences under "enlightened self interest" approach for future research.

In (92a), both subject and object are generated VP internally. The subject *any student* has to move to Spec IP to check Case feature in (92b). At LF, a copy of *any student* (t_1 in (92b)) moves to Spec NegP to check off NEG feature. Therefore, all the morphological features are checked off in (92). Kawashima argues that the derivation above is ruled out by Condition C of the Binding Theory, which says: "An R-expression (e.g. a variable) is A-free in the first maximal projection dominating the head of the linked chain" (Kawashima 1994:109, adopted from Chomsky 1986). In (92c), the linked chain *any student*- t_1-t'_1 violates BT-C because t_1 is A-bound by *any student*. Therefore, (91b) is ungrammatical.

Although I think the logic of her account is correct, it is not clear why 'the copy' of *any student* has to move in (92c). In addition, although (92c) amounts to saying that NPIs in English are licensed at LF, Kawashima does not have any argument to say that such is the case. Therefore, I suggest that we can rule out (91b) without LF movement of the copy by the derivation given in (93) rather than (92).

(93) a. $[_{IP}\ [_{NegP}\ [_{AgroP}\ [_{VP}$ any student$_1$ $[_{V'}$ buy a book]]]]

b. *any student* moves to Spec, NegP to check Neg feature
$[_{IP}\ [_{NegP}$ any student$_1$ $[_{AgroP}\ [_{VP}\ t_1\ [_{V'}$ buy [a book]$_2$]]]]

c. *any student* moves to Spec, IP to check Case and EPP features
$[_{IP}$ any student$_1$ $[_{NegP}\ t_1\ [_{AgroP}\ [_{VP}\ t'_1\ [_{V'}$ buy [a book]$_2$]]]]

In (93), on the assumption that NegP is an A' position, the resulting sentence has an illegitimate chain *any student*- t_1- t'_1 since t_1 is A-bound. Therefore, the condition C of the Binding Theory will rule out the sentence as Kawashima argues, but in (93) we do not have to assume movement of a copy.

On the other hand, (91a) is well-formed because its derivation, shown in (94),

does not violate BT-C (Kawashima 1994:113 (27) with minor modification).

(94) a. $[_{IP}\ [_{NegP}\ [_{AgroP}\ [_{VP}\ [_{QP}\ [_{NP}$ gakusei-ga$]_1$ daremo $]_2\ [_{V'}\ DP_{obj}\ t_V]]]]$
b. QP moves to Spec, NegP
$[_{IP}\ [_{NegP}\ [_{QP}\ [_{NP}$ gakusei-ga$]_1$ daremo $]_2\ [_{AgroP}\ [_{VP}\ t_2\ [_{V'}\ DP_{obj}\ t_V]]]]$
c. *gakusei-ga* moves to Spec, IP
$[_{IP}\ [_{NP}$ gakusei-ga$]_1\ [_{NegP}\ t_1\ [_{QP}$ daremo $]_2\ [_{AgroP}\ [_{VP}\ t_2\ [_{V'}\ DP_{obj}\ t_V]]]]$

In (94b), QP moves overtly to Spec NegP to check off NEG feature. Consequently, the NP *gakusei-ga* moves overtly out of QP to Spec IP in order to check Case in (94c). The resulting sentence in (94c) contains two distinct chains and they do not violate BT-C: t_2 is A'-bound and not A-bound. Therefore, the sentence is well-formed.

Kawashima's account seems right except for the minor detail discussed in (93). The support for her analysis is the fact that it captures the contrast between the subject NPI in English and Japanese, but she does not give language internal evidence that argues for overt movement. In the next section, I review empirical evidence discussed by Sohn (1996) and Yoshimoto (1998) that supports overt movement of *dare-mo* to Spec NegP.

3.3.2.2 Overt movement of NPIs in Japanese

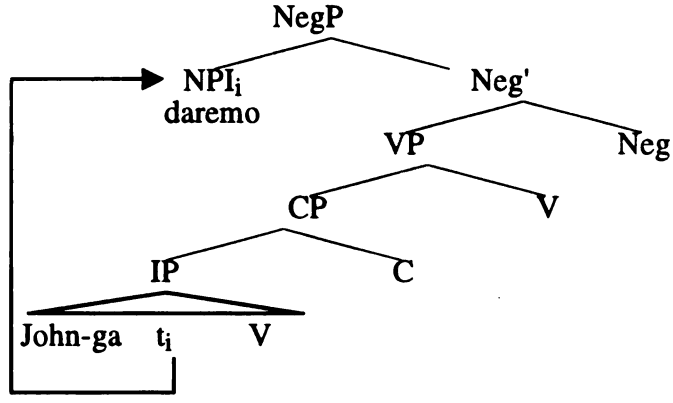
Sohn (1996) proposes that NPIs in Japanese and Korean are licensed by overt movement to Spec NegP. The movement is triggerted by the strong Neg feature of NPI that needs to be checked off by the head of NegP before Spell-out, in the same way as Kawashima and Kitahara (1992) and Kawashima (1994). He argues that the contrast between (95) and (96) provides a piece of evidence for overt movement of an NPI to Spec NegP (Sohn 1996: 362 (2ab')).

(95) * Boku-wa $[_{CP}$ John-ga dare-mo nagu-tta to] sinji-nai.
I-Top $[_{CP}$ J-Nom anyone hit-past Comp] believe-Neg
'I don't believe that John hit anyone.'

(96) Dare-mo$_i$ boku-wa $[_{CP}$ John-ga t_i nagu-tta to] sinji-nai.
anyone I-Top $[_{CP}$ J-Nom hit-past Comp] believe-Neg
'I don't believe that John hit anyone.'

In general, Japanese NPIs in embedded clauses cannot be licensed by the negation of matrix clause when it stays inside the embedded clause, unlike English, as in (95).[39] However, overt movement of the NPI to the matrix clause as in (96) improves the sentence. This is expected under Sohn's analysis: in (95), the strong Neg feature of *dare-mo* cannot be checked off because *dare-mo* and Neg are not in Spec-Head relation, and hence the derivation does not converge. On the other hand, in (96) the NPI moves overtly to the matrix NegP and checks off its Neg feature as illustrated schematically in (97) (Sohn's (16)).

(97)



In (97), the NPI in the embedded IP overtly moves to the matrix Spec NegP. Therefore, +Neg feature is checked off and the sentence is well formed.

3.3.2.3 Additional support for overt movement analysis

Based on the similar data used by Sohn (1996), Yoshimoto (1998) also argue that NPIs in Japanese move overtly to Spec NegP to be licensed. Additional evidence given by Yoshimoto is a blocking effect of VP adverbs and the fact that NPI is not licensed

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[39] The grammatical judgment here is Sohn's. McGloin (1972) states that negative-raising verbs like *omou* 'think', *hosii* 'want', *hazuda* 'is supposed to' and so on, allow NPIs to appear in lower clauses. I do not find those sentences perfect while the sentence with fronted NPI sounds much better.

inside the islands for movement. I will first introduce the blocking effect of VP adverbs, as exemplified in (98) (Yoshimoto's (10).

(98) a. Ken-wa [$_{NP}$ [$_{IP}$ *e* dokoemo iku] koto]-ga deki-na-katta.
K-Top anywhere go Nlz-Nom can-Neg-Past
'Ken could not go anywhere.'

b. * Ken-wa [$_{NP}$ [$_{IP}$ *e* isoide dokoemo iku] koto]-ga deki-na-katta.
K-Top quickly anywhere go Nlz-Nom can-Neg-Past
'Ken could not go anywhere quickly.'

The NPI *dokoemo* 'anywhere' is licensed inside an embedded clause in (98a), but not in (98b) when there is a VP adverb *isoide* 'quickly'. The VP adverb is adjoined to the VP in the embedded clause, and since the NPI *dokoemo* follows the VP adverb in (98b), it is clear that it remains VP internal. The unacceptability of (98b) follows if the NPI must move overtly to Spec NegP. In (98a), the sentence is grammatical because the NPI may move to the matrix Spec NegP to check the relevant feature. This analysis is supported by the fact that when the NPI is moved over the VP adverb, the sentence becomes acceptable, as shown in (99) (Yoshimoto's (11)).

(99) Ken-wa [$_{NegP}$ dokoemo [$_{NP}$ [$_{IP}$ *e* isoide t_i iku] koto]-ga deki-na-katta.
K-Top anywhere quickly go Nlz-Nom can-Neg-Past
'Ken could not go anywhere quickly.'

The sentence in (99) is well formed because the Neg feature of the NPI is checked successfully in the Spec NegP of the matrix clause.

Another support for the overt movement analysis comes from the fact that NPI cannot be licensed inside islands. McGloin (1972) observes that *to*-complementizer plus Neg-raising verbs like *sinjiru* 'believe' may license an NPI in the lower clause while *koto*-complementizer does not allow the NPI in the embedded clause as in the examples below (McGloin 1972:107-118):

(100) Taroo-wa dare-mo sin-da-to sinji-na-katta.
Taroo-Top who-MO die-Past-Comp believe-Neg-Past
'Taroo didn't believe that anyone died.'

(101) * Taroo-wa dare-mo sin-da-koto-o sinji-na-katta.
Taroo-Top who-MO die-Past-fact-Acc believe-Neg-Past
'Taroo didn't believe the fact that anyone died.'

Yoshimoto (1998) argues that the contrast between (100) and (101) can be accounted for by the requirement for the NPI to move overtly to Spec NegP. In (100), *dare-mo* can move to Spec NegP, as analyzed below.

(102) Taroo-wa $[_{NegP}$ dare-mo$_i$ $[_{CP}$ t_i $[_{IP}$ t_i sin-da]to] sinji-na]-katta
Taroo-Top$[_{NegP}$ who-MO$_i$ $[_{CP}$ $[_{IP}$ t_i die-Past]Comp] believe-Neg]-Past
'Taroo didn't believe that anyone died.'

The movement of *dare-mo* from inside CP to the matrix NegP does not violate any constraint on movement. Therefore, the strong Neg feature of NegP is successfully checked off. On the other hand, in the case of (101), since *dare-mo sinda koto-o* forms a complex NP as shown below, *dare-mo* cannot move out of it to check the strong Neg feature.

(103) * Taroo-wa $[_{NegP}$ $[_{DP}$ $[_{IP}$ dare-mo sin-da-] **koto**-o] sinji-na]-katta
Taroo-Top $[_{NegP}[_{DP}$ $[_{IP}$ who-MO die-Past-]**fact**-Acc] believe-Neg]-Past
'Taroo didn't believe the fact that anyone died.'

The sentence is ungrammatical because the strong Neg feature on the Neg head is not checked off. In general, a complex NP is an island for movement and therefore overt movement of a phrase out of a complex NP is prohibited.[40] For example, in English, overt movement of WH-phrases out of complex NP causes ungrammaticality as shown in (104).

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[40] Yoshimoto does not give any explanation for why the movement of *koto* phrase (NP) in a sentence like (98) is allowed while the movement in a sentence like (103) is not. I assume that *koto* in some set phrases

(104) * Who$_i$ did you believe [$_{DP}$ the [$_{NP}$ fact] [$_{CP}$ that t_i died]]?

On the other hand, the equivalent question with wh-in-situ construction in Japanese is grammatical as in (105):

(105) John-wa [$_{DP}$ dare-ga sinda-koto-o] sinji-ta-ka.
J-TOP who-Nom died-fact-Acc believe-Past-Q
'Lit. Who did John believe the fact that died?'

Assuming that WH-phrases in wh-in-situ languages should raise to Spec CP at LF (Huang 1981), covert movement seems to be insensitive to the island constraint in Japanese. That is, in (105), *dare-ga* 'who-Nom' may move out of the DP covertly and the sentence is grammatical. The sentence becomes ungrammatical when *dare-ga* moves overtly out of the DP as shown in (106):

(106) * Dare-ga$_i$ John-wa [$_{DP}$ t_i sinda-koto-o] sinji-ta-ka
who-Nom$_i$ J-TOP [$_{DP}$ t_i died-fact-Acc] believe-Past-Q
'Who did John believe the fact that died?'

The contrast between (105) and (106) shows that overt movement out of a complex NP causes ungrammaticality in Japanese while covert movement does not. Therefore, if covert movement of the NPI *dare-mo* to matrix NegP can license the NPI, (103) should be grammatical. The ungrammaticality of (103) supports overt movement analysis of NPI to Spec NegP.[41]

The arguments for overt movement of NPIs to Spec NegP seem quite convincing, and therefore, I adopt the mechanism in the following analysis. In the next subsection I show that the distribution of *dare-mo* with respect to its associate NP can be accounted

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like *koto-ga dekiru* 'can' and *koto-ga aru* 'have done' is reanalyzed as a part of predicate, and hence, does not form a complex NP.

[41] Yoshimoto also shows that NPI is sensitive to Adjunct island, as seen in (i) (Yoshimoto's (16)).

(i) * Naomi-wa [PRO nanimo kiki]-nagara sigoto-o si-na-katta.
N-Top anything listen-while work-Acc do-Neg-Past

for by assuming overt NPI to Spec NegP movement and the internal structures of *dare-mo* proposed in the section 3.2.3.2.

3.3.3 Distribution of the NPI *dare-mo*+NP

The NPI d*are-mo* 'anyone' can co-occur with a Case marked NP and it appears quite freely as shown in (107)-(114) below. In this section, I will show that distribution of *dare-mo* in relation to its associate NP follows from assuming overt movement of *dare-mo* to Spec NegP.

The NPI *Dare-mo* 'anyone' can co-occur with its associate NP in both Subject and Object positions when they are adjacent as in (107)-(110):

(107) **Gakusei-ga dare-mo** Bill-o yoba-na-katta.
student-Nom who-MO B-Acc invite-Neg-Past
'No student invited Bill.'

(108) **Dare-mo gakusei-ga** Bill-o yoba-na-katta.
who-MO student-Nom B-Acc invite-Neg-Past
'No student invited Bill.'

(109) Bill-ga **gakusei-o dare-mo** yoba-na-katta.
B-Nom student-Acc who-MO invite-Neg-Past
'Bill didn't invite any students.'

(110) John-ga **dare-mo gakusei-o** yoba-na-katta.
J-Nom who-MO student-Acc invite-Neg-Past
'John didn't invite any students.'

Also in both positions, temporal adverbs can intervene between the associate NP and *dare-mo* 'anyone' as in (111) and (112):

(111) John-ga **gakusei-o** sen-shuu **dare-mo** yoba-na-katta.
J-Nom student-Acc last-week who-MO invite-Neg-Past
'John didn't invite any students.'

Intended: 'Naomi did not work while listening to anything.'

(112) **Gakusei-ga** sen-shuu **dare-mo** Bill-o yoba-na-katta.
student-Nom last-week who-MO B-Acc invite-Neg-Past
'No student invited Bill last week.'

However, while the subject can intervene between the associate object NP and *dare-mo* 'anyone' as in (114), the object cannot intervene between the subject and *dare-mo* as shown in (113) (data adopted from Kawashima 1994).

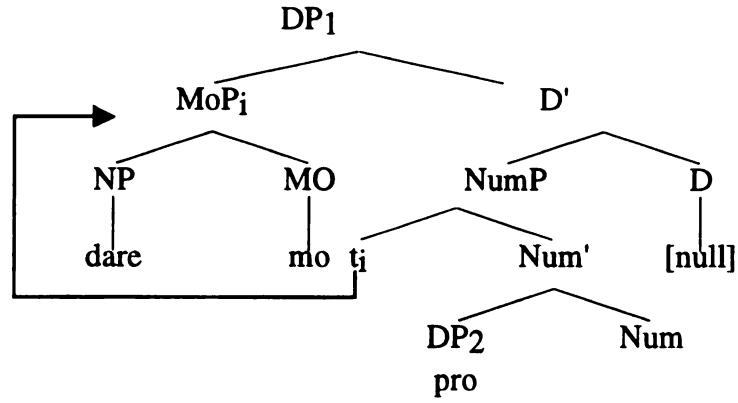
(113) * **Gakusei-ga** Bill-o **dare-mo** yoba-naka-tta.
student-Nom B-Acc who-MO invite-Neg-Past
'No student invited Bill.'

(114) **Gakusei-o** Bill-ga **dare-mo** yoba-na-katta.
student-Acc B-Nom who-MO invite-Neg-Past
'Bill didn't invite any student.'

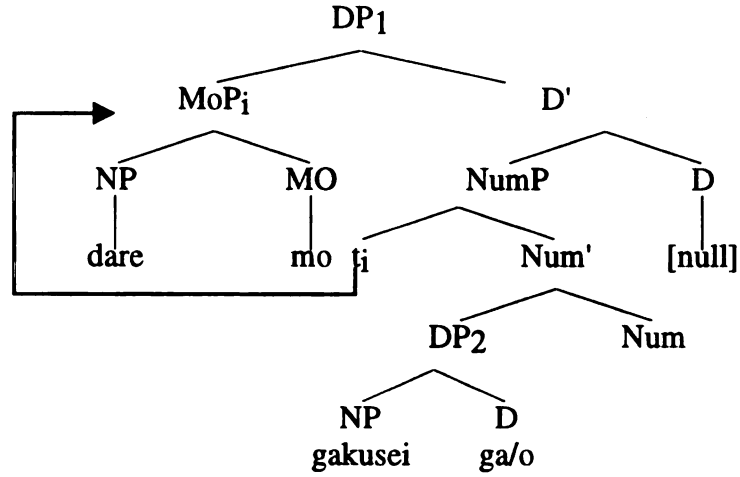
3.3.3.1 The structure of the NPI *dare-mo* and its associate NP

We can account for the distribution of the NPI *dare-mo* if we assume that *dare-mo* must move to Spec NegP in order to check off strong +NEG feature of NEG head before Spell-out. In the structure proposed for *dare-mo* in (57), repeated here in (115a), there is a *pro* in the complement of Num head. I propose that when *dare-mo* co-occurs with an associate NP, the associate NP replaces the *pro* in the structure as shown in (115b).

(115) a.



b.

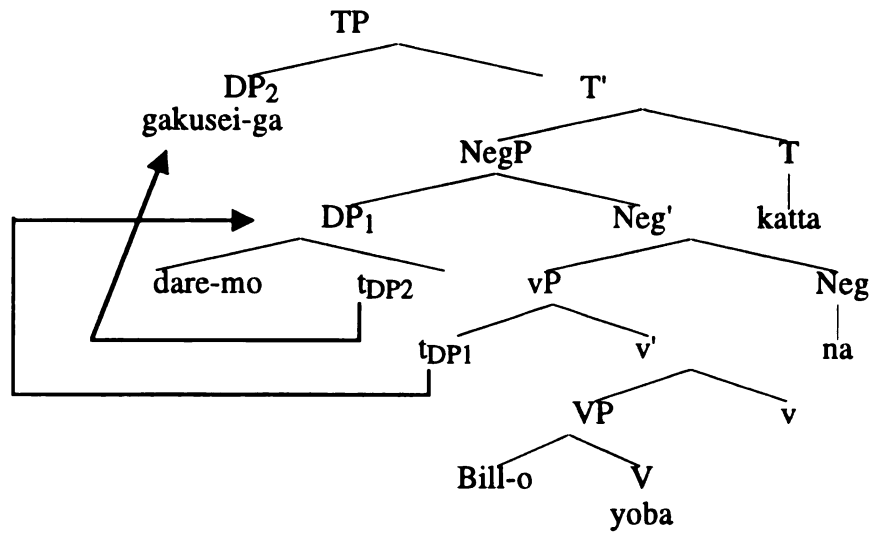


Based on this structure and the requirement for the NPI to move to Spec NegP, the subject/object asymmetry illustrated in (113-114) can be explained. (113) could be derived if *Bill-o* in (107), repeated here as (116), scrambles to the position between *gakusei-ga* and *dare-mo*.

(116) **Gakusei-ga dare-mo** Bill-o yoba-na-katta
student-Nom who-MO B-Acc invite-Neg-Past
'No student invited Bill.'

However, (113) is ill-formed because, as discussed in Chapter 2 section 2.4.4.1, there is no legitimate landing site for *Bill-o* in the representation of (116), given in (117):

(117)



In (117), DP_1 moves to Spec NegP to check off the Neg feature. At the point of derivation when T merges with NegP, T has a Case feature that needs to be checked off. Since DP_2 is the closest DP with a Case feature, it is attracted to Spec TP.[42] *Bill-o* cannot move because it is farther away from T than DP_2 *gakusei-ga*. Therefore, the movement necessary to derive (113) is not motivated and hence it is ungrammatical.[43]

On the other hand, (114) is well-formed because it can be legitimately derived from (110) repeated here as (118).

(118) Bill-ga **dare-mo** **gakusei-o** yoba-na-katta.
B-Nom student-Acc who-MO invite-Neg-Past
'Bill didn't invite any students.'

If the object *gakusei-o* in (118) moves to a position above the subject in Spec TP, we get the sentence in (114). The structure of (114) repeated here as (119a) is analyzed as in (119b):

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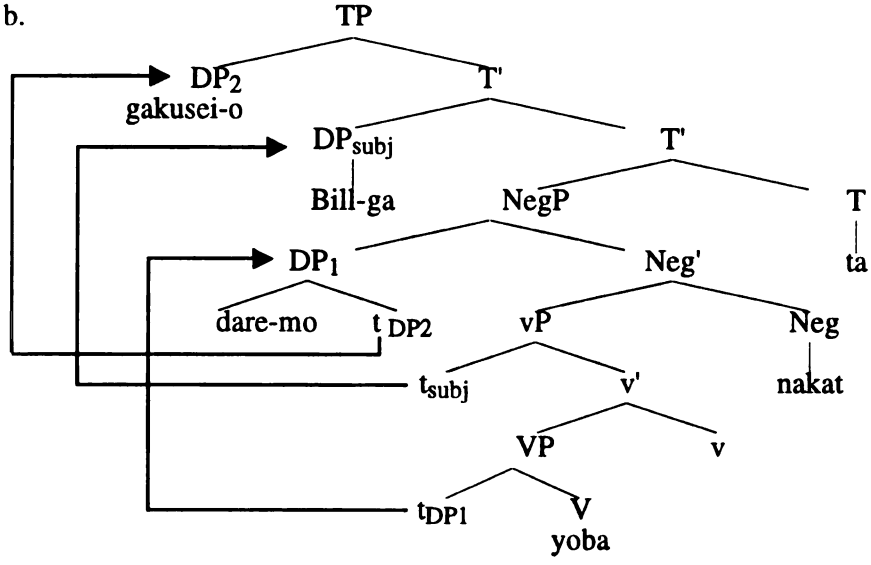
[42] DP_1 may be the closest DP that can check the Case feature of T, but if DP_1 moves to Spec TP, the derivation does not converge because of an ill-formed chain, assuming Spec NegP is an A-bar position and Spec TP an A-position.

[43] The same result obtains under the Split VP hypothesis adopted in Chapter 2. For the interest of space, I use vP representation here.

(119) a. **Gakusei-o** Bill-ga **dare-mo** yoba-na-katta.
student-Acc B-Nom who-MO invite-Neg-Past
'Bill didn't invite any student.'

b.



Following Miyagawa (1997) discussed in Chapter 2, I assume that scrambled object *gakusei-o* in this sentence is in the outer Spec of TP, checking off one of the multiple Case features of T. Therefore in (119b), the movement of *gakusei-o* is legitimate and hence (122) is grammatical.[44]

Next, the sentence in (108), repeated here as (120) can be easily derived from the representation given in (117).

(120) **Dare-mo gakusei-ga** Bill-o yoba-na-katta.
who-MO student-Nom B-Acc invite-Neg-Past
'No student invited Bill.'

In (120), *dare-mo* moves from Spec NegP to a focus phrase above TP, as schematically

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[44] Note that we must assume the operation "tucking-in", following Richards (1998), to get the right word order. T first attracts the object DP since it is closest and then the subject DP. Alternatively, it may be that *dare-mo* by itself moves to Spec NegP without pied-piping the whole DP_1. Then, the multiple Case feature of T attracts DP_{Subj} first, then DP_1, without "tucking-in". In either way, (119a) can be derived

illustrated in (121).

(121) [FP dare-mo$_i$ [TP gakusei-ga [NegP t_i [vP Bill-o yoba-na-katta]]]]
who-MO student-Nom B-Acc invite-Neg-Past

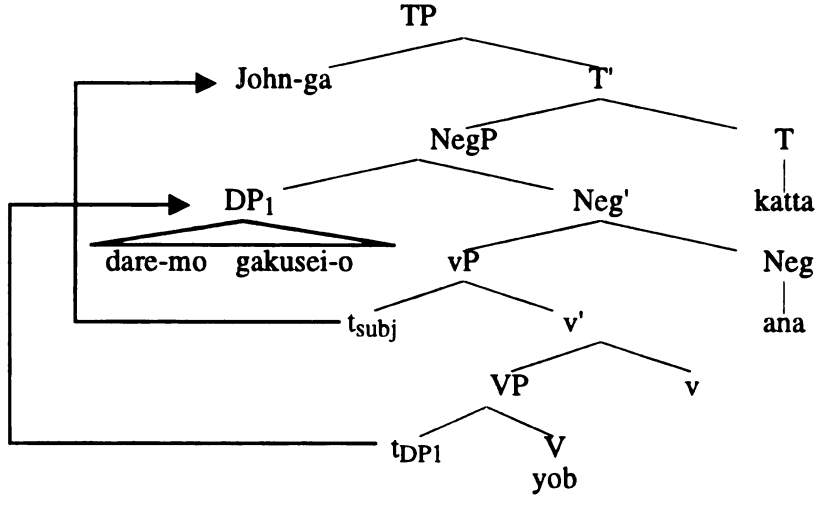
In addition, (112), repeated here as (122), can be derived if we adjoin the temporal adverb *senshuu* 'last week' to NegP in (117).

(122) **Gakusei-ga** sen-shuu **dare-mo** Bill-o yoba-na-katta.
student-Nom last-week who-MO B-Acc invite-Neg-Past
'No student invited Bill last week.'

Now, let us look at the cases when *dare-mo* is associated with an object phrase as in (110) repeated here as (123). It can be given the analysis as in (124) below.

(123) John-ga **dare-mo** **gakusei-o** yoba-na-katta.
J-Nom who-MO student-Acc invite-Neg-Past
'John didn't invite any students.'

(124)



In (124), DP_1 moves to Spec NegP to check NEG feature, and the subject DP *Bill-ga* checks the Case feature of T by moving to Spec TP. If we assume that the Case feature

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legitimately.

of small v is weak in Japanese (Tada 1993), it can be checked off at LF by the DP *gakusei-o* 'student-Acc'.

The structure for (109), repeated here as (125), can be derived from the structure given in (119b).

(125) Bill-ga **gakusei-o** **dare-mo** yoba-na-katta.
B-Nom student-Acc who-MO invite-Neg-Past
'Bill didn't invite any students.'

In the structure given in (119b), the subject DP *Bill-ga* is in the lower Spec TP. (125) can be derived if *Bill-ga* scrambles further to the position above TP.

3.3.3.2 The distribution and the structure of the universal *dare-mo* + NP

Unlike the NPI *dare-mo* 'anyone', which occurs quite freely with an associate NP, the distribution of the universal *dare-mo* 'everyone' is very limited, as shown below.

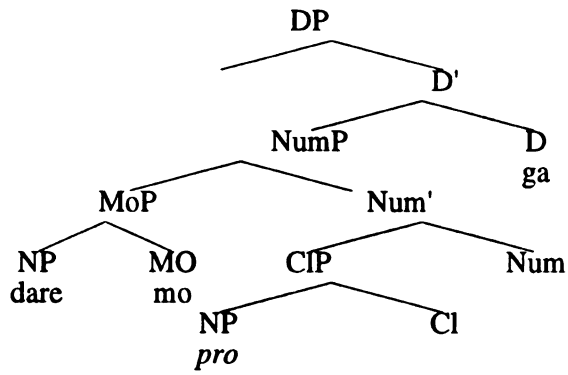
(126) Gakusei dare-mo-ga ki-ta.
student who-MO-Nom come-Past
'Every student came.'

(127) * Dare-mo-ga gakusei ki-ta.
who-MO-Nom student come-Past
'Every student came.'

(128) * **Gakusei** kinoo **dare-mo-ga** ki-ta.
student yesterday who-MO-Nom come-Past
'Every student came yesterday.'

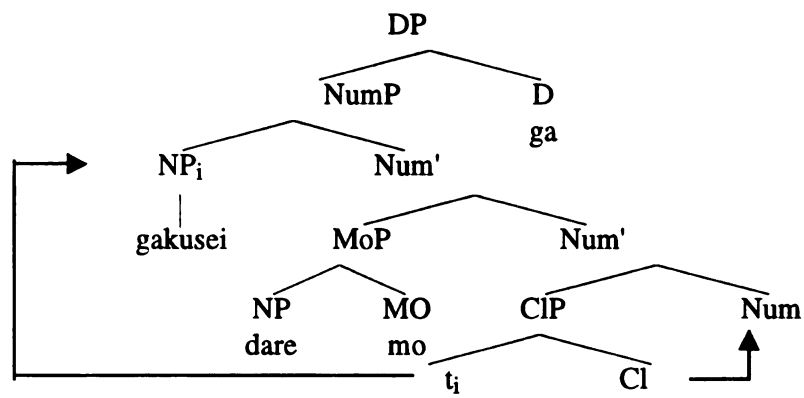
In (126), the associate NP *gakusei* 'student' can immediately precede *dare-mo-ga*. But as you can be seen in (128), when an adverb intervenes between them, the sentence becomes ungrammatical. In addition, the universal *dare-mo* cannot precede its associate NP as in (127). The only way for the associate NP to co-occur with the universal *dare-mo* is to precede it. This is expected given the internal structure proposed in section 3.2.4, repeated with more details here in (129).

(129)



The head of ClP is phonetically null, but we can assume that it may have some phi-feature [human] since the indeterminate pronoun *dare-mo* refers only to human. I assume that the head Cl raises to Num to check off some formal feature of Num. In the phrase *dare-mo-ga* 'everyone-Nom' in (129) it has *pro,* but the *pro* is replaced by *gakusei* 'student' in (130) below. Furthermore, *gakusei* moves to a multiple Spec position of NumP in order to enter a Spec-Head relation with Cl, which is now adjoined to Num, in order to check a phi-feature [human] of Cl. The resulting structure is given in (130):

(130)



In (130), since *dare-mo-ga* does not form a constituent, it is natural that *dare-mo-ga* cannot be separated from *gakusei.* Also, since Cl takes NP, rather than DP, as its complement, the whole DP is an extended projection of the head noun *gakusei.* Therefore, g*akusei-dare-mo-ga* is a single DP that functions as a single argument.

Multiple Spec positions for NumP may be motivated if we assume parallel structures between noun phrases and clauses. The structural parallel between CP and DP has been argued by many researchers (Abney 1987, Fukui and Speas 1986, Kuroda 1988, Szabolcsi 1989, Li 1998, Visonyanggoon 2000 and others). DP can be equated with CP as they both function as arguments, and NP with VP since they both function as predicates. C takes IP as its complement and D takes NumP as its complement. So we can say that NumP is equivalent to IP at the clausal level. This seems plausible since both Num and I are related to the inflection of lexical head: number inflection of nouns and tense inflection of verb. Multiple Spec for IP has been proposed in order to account for multiple nominative constructions in Japanese. Then it is natural that in the nominal domain, NumP might have multiple Spec positions.

3.4. A compositional analysis of the meaning of *dare-mo*

In section 2 and 3 I have argued for internal structure of *dare-mo* and *dare-mo-ga/o* 'everyone' and proposed an account for its distribution. In this section I will discuss semantics of the NPI *dare-mo* 'anyone'. I suggest that the meaning of *dare-mo* as an NPI may be derived compositionally by taking *mo* to have a meaning similar to *even*. Although the analysis will be incomplete, I will also make an attempt at deriving the meaning of the universal *dare-mo* compositionally.

3.4.1 Previous analysis of the semantics of *dare-mo*

Kawashima (1994) proposes that the function of WH-MO phrase is equivalent to the semantics of *any* as discussed in Kadmon and Landman (1993). They propose that "an NP of the form any CN (any potato, any potatoes) should be regarded semantically as the corresponding indefinite NP (a potato, potatoes)". *Any* contributes some additional

characteristics to the indefinite NP. They argue that the additional characteristics of *any* are widening the denotation of the common noun and strengthening the statement it occurs in. Widening and strengthening are defined as in (131a) and (131b) respectively (Kadmon and Landman 1993:361, 369).

(131) a. WIDENING
In an NP of the form *any CN*, *any* widens the interpretation of the common noun phrase (CN) along a contextual dimension.

b. STRENGTHENING
Any is licensed only if the widening that it induces creates a stronger statement, i.e., only if the statement on the wide interpretation = > the statement on the narrow interpretation.

Kawashima argues that WH-MO has the same two properties of *any*: the requirement that *any* induces pragmatic widening of the domain of restriction and the requirement that after pragmatic widening, the resultant statement be stronger than without widening. She illustrates these properties of *dare-mo* with the example below (Kawashima 1994:145 (28)).[45]

(132)	A: gakusei-wa yob-ana-katta. student-Top invite-Neg-Past	'I didn't invite students.'
	B: John (who is a student)-wa yonda-desyo. J-Top invited-TQ	'You invited John, didn't you?'
	A: iya, **dare-mo** yob-ana-katta. no anyone invite-Neg-Past	'No, I didn't invite any student.'

In this example Kawashima explains that the domain of an indefinite noun *gakusei* 'student' is widened by including *John* in it (no student, including John, was invited) and the resulting statement is stronger than the first one.

Although there are some problems with the analysis of *any* as strengthening and widening function (see Krifka 1995: 195-6), I think Kawashima's analysis of the NPI

dare-mo is on the right track.[46] In particular, I agree with the idea that *dare-mo* is indefinite. However, she does not deal with the issue of how the meaning of the NPI *dare-mo* that parallel *any* derives compositionally from the morphemes *dare* and *mo*. I suggest a way of analyzing the compositional meaning of the NPI *dare-mo*. Following Hagstrom (1998), I assume that *dare* is the extensional property of being human. I make this assumption and analyze the morpheme *mo* in NPIs as equivalent to *even*. Given that, we can derive the meaning of *dare-mo* that is compatible with the NPI reading of the phrase.

3.4.2 Compositional meaning of NPIs

Lahiri (1998) analyzes NPIs in Hindi, which are made up of an indefinite existential or weak predicate and a morpheme that means 'also' or 'even'. He argues that NPIs cannot appear in non-generic or upward-entailing contexts because of a contradictory implicature that arises from the semantics of weak predicate plus 'even' when they are used in those environments. Considering the compositional similarity between Japanese *dare-mo* (the property of being human-also/even) 'anyone' and Hindi *koii bhii* 'anyone' (someone-also/even), which will be discussed shortly, if Lahiri's account is correct, a similar semantic analysis should apply for the NPI *dare-mo*.

3.4.2.1 Meaning of *Mo*

Before discussing Lahiri's analysis in more detail, I show that the morpheme *mo* in NPIs has the meaning of 'even'. *Mo* may have a meaning of 'also' when it is used with

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[45] Glosses are provided by the present author.

[46] One of the problems discussed in Krifka 1994 is that *any* expresses widening only when it is stressed. I think the same applies to *dare-mo*.

non-wh-phrases as shown below.[47]

(133) Mary-**mo** party-ni kita.
M-**also** party-to came
'Mary also came to the party.'

This sentence implies that there was someone other than Mary who came to the party. If *Mary* is stressed (focused), however, it can be construed as 'even Mary came to the party', implying that *Mary* is one of the less likely people to have shown up at the party. It is not clear from this example whether *mo* has both meanings *also* and *even*, since we could say that it is a property of focus that adds the meaning of *even*. However, in the following examples, *mo* expresses the meaning of *even* without particular stress on the preceding phrases *sukosi* 'a little' or *ichi-mai* 'one-Cl'.[48]

(134) a. John-ga pan-o sukosi-**mo** tabe-na-katta.
J-Nom bread-Acc little-**even** eat-Neg-Past
'John didn't eat even a little bit of bread (= any bread).'

b. Kinoo-wa ichi-mai-mo CD-o kik-ana-katta.
yesterday-Top 1-Cl-even CD-Acc listen-Neg-Past
'Yesterday, I didn't listen to even one CD (= any CD).'

When *mo* is attached to phrases that express small amount (e.g., a little or one-CL) and

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[47] Nishigauchi (1990) takes *mo* to be a universal quantifier when appearing with wh-word. On the other hand, Sato-Zhu (1996) proposes that the universal quantificational force of *mo*-phrases come form distributive operator. Under their analyses, it seems that we will need at least two kinds of *mo*, one used with wh-word and functions as a universal quantifier, and another one used with non-wh-word, meaning 'also/even'.

[48] In the cases where *mo* attaches to a verb in gerund form, *mo* derives the meaning of *even*.

i) John-ga tomete-mo watasi-wa iku 'I will go even if John stops me'
J-Nom stop-MO I-Top go

ii) Hon-o yonde-mo ii-desu 'You may read a book' (Lit. It is good even if you read a book)
book-Acc read-MO good-Cop

iii) Dare-ga kite-mo aw-anai 'No matter who comes, I will not see him/her'
who-Nom come-MO meet-Neg
(Lit. I will not see him/her even if anyone comes)

used in the scope of negation, it is construed as *even*.[49]

On the other hand, if the amount is large and the sentence is affirmative, *mo* is interpreted as *as much as*. An example is given below.

(135) Mary-ga go-jikan-**mo** benkyoosita.
M-Nom 5-hour-**as much** **as** studied
'Mary studied as much as 5 hours.'

The sentence implies that the speaker thinks five hours is a lot of time for studying.[50]

In the previous examples with negation (134ab), the negation takes wide scope over the *mo*-marked phrases and it gives rise to an NPI reading 'even NP'. In general, when an NPI is in a negative sentence, negation must take wide scope over the NPI. On the other hand, in the following examples, in which XP-*mo* is used as a non-NPI, there are two scope possibilities for negation:

(136) John-ga ni-jikan-**mo** benkyoosi-na-katta.
J-Nom 2-hour-MO study-neg-Past
(i) 'John studied NOT two hours, but some other amount less than two hour.'
(Neg>Two hrs) (no focus on *mo*)
(ii) 'There were two hours during which John did not study.' (Two hrs> Neg)
(focus on *mo*)

(137) Bill-ga san-punkan-**mo** kokyuu-o si-na-katta
B-Nom 3-minute-MO breathe-Neg-Past
'John didn't breath as long as 3 minutes.'
(i) Bill breathed NOT three minutes, but may be two minutes or so.
(Neg>Three mins) (no focus on *mo*)

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[49] As for *sukosi-mo* 'even a little', it cannot appear without clause mate negation. Therefore it is a negative polarity item. '1-Cl-Mo' may appear without negation as follows.

i) Mary-ga biiru-o ip-pon-mo nonda 'Mary drank as much as 1 bottle of beer'
M-Nom beer-Acc 1-Cl-MO drank

This sentence is felicitous in the context where Mary is a person who normally doesn't drink beer at all, and the speaker is surprised to see her drink one whole bottle. However, the pitch accent pattern of 1-CL-MO is different when it is used in non-negative context. The generalization is that when XP-mo is used as NPI, the pitch accent pattern is low-high, but when it is non-NPI, the pattern in (low)-high-low.

[50] In English, a sentence like (i) may have a similar implicature.

(i) Mary even studied five hours.

In this sentence, the implication is that five-hours is a lot for Mary to study. If that is the case, *mo* seems to corresponds to *even* in the affirmative context as well.

(ii) There were three minutes during which Bill didn't breathe
(Three mins>Neg) (focus on *mo*)

In those cases, one reading is more plausible than the other due to pragmatic constraints. In (136), the (i) reading is more salient, and in (137), the (ii) reading is the only contextually plausible reading (unless Bill is a zombie who came back to life and breathed for less than three minutes and died again). Note that the readings similar to (i) (Neg >amount-MO), are derived in English if *mo* is construed as *even* (e.g. John didn't even study two hours).

Based on the observation made above, it is fair to say that *mo* in NPIs has a meaning similar to *even* in English. In the next subsections, I will discuss the semantics of Hindi *bhii* 'even/also' in *koii bhii* 'anyone'.

3.4.2.2 Compositional analysis of Hindi *koii bhii* 'anyone'

Lahiri (1998) argues that *koii bhii* cannot appear in non-negative sentences as shown in (138) because it leads to conflicting implicatures (Lahiri's (61)).[51]

(138) * Koii bhii aayaa.
'Anyone came.'

The sentence (138) asserts (139):

(139) There is one person who came.[52] **(Assertion)**

The morpheme *bhii* 'even' induces two implicatures in (140).

(140) a. For some cardinality predicate other than one, say Z, Z number of people came.

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[51] I have simplified Lahiri's notations, avoiding semantic formulas as much as possible. What is reproduced here is just the gist of his analysis. See Lahiri (1998: 86-88) for details.

[52] Lahiri assumes that indefinites are cardinality predicates in the count cases. He states "this claim has been put forward for indefinites containing determiners like *two, three,* ... etc." But in addition to those cases, he supposes simple existential indefinites to be treated as cardinality predicates. For example, Hindi *ek* 'one' is "a predicate *one* that is true of anything that contains at least one atomic part" (p.82).

b. For every cardinality predicate other than one, say U, if it is the case that U number of people came, then it is more likely for U number of people to come than one person to come.

From (140), (141) follows:

(141) It is more likely for Z number of people to come than for one person to come. **(Implicature 1 induced by (140))**

In addition, Lahiri assumes that (142) holds for cardinality predicates:

(142) For all x, if x is true of some cardinal number P, then it is true of *one*.[53]

Due to (142), (140a) 'Z number of people came' entails (139) 'one person came'. Further, this entailment relation implicates the proposition (143).

(143) It is less or equally likely for Z-number of person to come than for one person to come. **(Implicature 2 induced by (140a) and (142))**

Note that (143) contradicts (141). Lahiri concludes that (138) is not felicitous because of this contradiction. To summarize, (138) has a scalar implicature that says 'it is less likely for one person to come than for more than one person' but this implicature contradicts with the implicature of the alternative reading of (138) which says 'it is less likely for some number of person to come than for one person to come'.

On the other hand, Lahiri shows that, when *koii bhii* is used in a negative sentence (or in any other downward-entailing context), no conflicting implicatures result from the sentence, as described below:

(144) Koii bhii nahiiN aayaa.
anyone didn't come
'No one came.'

(144) asserts (145):

(145) It is not the case that one person came.

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[53] Lahiri states, "one is the weakest possible predicate, and true of everything that exists" (p.87)

(145) implicates (146):

(146) a. For some cardinality predicate other than one, say Z, it is not the case that Z number of people came.
b. For every cardinality predicate other than one, say U, if it is not the case that U number of people came, then, it is more likely for U number of people to not come than for one person to not come.

(146) implies (147):

(147) It is more likely for Z number of people to not come than for one person to not come. (Implicature induced by (146))

Assuming (142) again, (146a) 'it is not the case that Z number of people came' entails (145) 'it is not the case that one person came'. From this entailment relation, (148) obtains :

(148) If one person didn't come, then Z number of people didn't come.

As a result, (149) follows:

(149) It is less or equally likely for one person to not come than for Z number of people to not come.

(149) doe not contradict (147), and hence, (144) is well formed. Lahiri states that the same analysis works for all downward entailing contexts.

Based on the similar morphological and syntactic properties of *dare-mo* and *koii bhii,* I suggest that a similar semantic account should work for Japanese *dare-mo* 'anyone'. I will illustrate their similar morphological composition and distributional properties in the following subsection.

3.4.2.3 Parallel between *koii bhii* and *dare-mo*

Japanese *dare-mo* and Hindi *koii bhii* show distributional similarities as illustrated below. In both languages, NPIs cannot appear in affirmative non-generic sentences as in (150).

(150)

	Hindi	Japanese
a. *	Koii bhii aayaa. anyone came '*Anyone came.'	
b. *		Dare-mo kita. anyone came '*Anyone came.'

Unlike English, Japanese and Hindi can license the NPI in the subject position as in (172). Both *koii bhii* and *dare-mo* may appear in the preverbal subject position of negative sentence.

(172)

	Hindi	Japanese
a.	Koii bhii nahiiN aayaa. anyone not came 'No one came.'	
b.		Dare-mo ko-na-katta. anyone come-not-past 'No one came.'

In addition, both of them may co-occur with an associate NP, as shown in (166).

(166)

Hindi	Japanese
a. Koii bhii aadmii nahiiN aayaa any human not came 'No one came.'	b. Dare-mo hito-ga ko-na-katta any human-Nom come-not-Past 'No one came.'

As for morphological similarity, in both Japanese and Hindi, the negative polarity indefinite pronouns contain a morpheme meaning 'even'. As discussed in 3.4.2.1, the morpheme *mo* in Japanese has a meaning of also/even, with *also* reading more prominent when it appears with a non-wh-phrase as in (133) repeated here in (151a):

(151) a. Mary-**mo** party-ni kita.
M-**also** party-to came
'Mary also came to the party.'

b. MARY-**mo** party-ni kita.
M-**also** party-to came
'Even Mary came to the party.'

However, with phonetic emphasis on *Mary* as in (151b), *MARY-mo* can be construed as 'even Mary' as discussed before.

Similarly, Hindi *bhii* is ambiguous between the meanings *also* and *even*, with the *even* meaning showing up in focused contexts and the *also* reading being prominent in non-focused contexts as illustrated in the following examples.

(152) a. Raam bhii aayaa.
Ram also came
'Ram also came.'
b. RAAM bhii aayaa.
'Even Ram came.'

(152a) implicates that there was someone other than Ram who came while (152b) has a scalar implicature which says 'Ram is one of the least likely persons to come' as well. Lahiri argues that it is reasonable to assume that *bhii* means *even* in focus-affected contexts, and since NPIs in Hindi are focused, *bhii* in these contexts simply corresponds to the English *even*.[54] I think exactly the same reasoning applies to Japanese *mo* in NPIs; that is, *mo* in NPIs focused and it means 'even'.[55]

The following data also demonstrate the similarity between *mo* and *bhii*. They do not only appear in negative polarity pronouns at issue, *dare-mo* and *koii bhii* 'anyone', but they create NPIs when they adjoin to other phrases (the (a)-examples are in Hindi (Lahiri 1998), the (b)-examples are in Japanese).

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[54] Lahiri explains why *bhii* loses the 'also'-reading when it associates with predicates like *koi* 'some' or *ek* 'one' as follows –"If the also-reading were to exist in a sentence like *ek bhii aadmii aayaa (Also one person came), we should have a situation where the sentence asserted that at least one person came, but implicated that there is some number other than 1, say *n*, such that at least n people came, which is a stronger claim than the assertion. This would violate the Gricean principle that one must make the strongest possible assertion that one has evidence for".

[55] This may be related to why the NPI and the universal *dare-mo* have different pitch accent patterns. As noted before, the NPI one is daRE-MO, while the universal one is DAre-mo. DAre is the regular pitch accent pattern for the indeterminate pronoun *dare* 'who'. Standard Japanese does not allow HLH pattern within a word, and hence DAreMO, if taken as one word, is not well formed. So in order to have a focused MO, which has a high pitch, following *dare*, only possible pattern is daRE MO, due to the requirement that the first and the second morae must have a different pitch. On the other hand, when *mo* is not a part of the word, it does not change the preceding word's pitch accent pattern, as shown in (i).

(153)	a.	kuch 'something'	→	kuch **bhii**	'anything'
	b.	nani 'what'	→	nani-**mo**	'anything
(154)	a.	zaraa 'a little'	→	zaraa **bhii**	'even a little'
	b.	sukosi 'a little'	→	sukosi-**mo**	'even a little'
(155)	a.	ek 'one'	→	ek **bhii**	'even one, any'
	b.	hito-tsu 'one-Cl'	→	hito-tsu-**mo**	'even one, any'

In (153a), when *bhii* and *kuch* 'something' combine, they become the NPI 'anything'. Similarly in (153b) *mo* adjoins to *nani* 'what' to become 'anything'.[56] In (154) and (155), both *mo* and *bhii* create an NPI by adjoining to an amount phrase which expresses the smallest amount possible. In (154), when 'a little' combines with 'even', both languages give rise to an NPI. In the case of Japanese (154b) *sukosi* 'a little' is an adverb and *sukosi-mo* becomes an NPI adverb. In (155a) *ek* 'one' plus *bhii* 'even' means 'even one' or 'any', again an NPI. In the Japanese example (155b), what is different from Hindi is that Japanese numerals require classifier phrase, so instead of 'one' plus 'even', we get *hito* 'one' plus *tsu* 'Cl' plus *mo* 'even' combination to give rise to the meaning 'even one' or 'any'. Disregarding the classifier phrase in Japanese, we can say that *ek bhii* and *hito-tsu-mo* are also identical.

Now let us look at the other constituent of *koii bhii* 'anyone' and *dare-mo* 'anyone'. At first glance, *koii* 'someone (indefinite)' and *dare* 'who' may look semantically distinct. However, the real meaning of *dare* may not be so different from *koii* if we take *dare* to be a predicate that expresses the extensional property of being human, following Hagstrom

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(i) Huyu-MO ii. 'Also/even winter is good.'
winter-also/even good

56 *Kuch* 'something' and *nani* 'what' is not very different either. In many languages, interrogative pronouns are used as indefinite pronouns as well (Haspelmath 1997). As discussed in Kuroda (1965), Japanese wh-word *dare* 'who' *nani* 'what' *doko* 'where' etc do not have the force of interrogative pronouns. Kuroda calls them 'indeterminate' pronouns.

(1998). Although 'who' is the standard gloss given for *dare* in the literature, strictly speaking, 'who' and *dare* are not the same. Similarly, although *koii* by itself is glossed as *someone*, Lahiri states that *koii* is a weak predicate like *one*, rather than an individual. So it seems that the difference between *koii* and *dare* is that while *dare* is limited to predicating human, *koii* is not. Also, while *koii* is overtly cardinal (one), *dare* does not overtly express cardinality. [57] However, since it is not possible to be a human that is half a person or more than one person, let us assume that one of the properties of being human is being one. Then *dare*, being the extensional property of being human, implicitly contains the property of one. Now *koii* and *dare* seem very similar: they are both some predicate that contains the meaning of one.[58]

The data discussed above present striking similarities between Japanese *dare-mo* and Hindi *koii bhii* in their syntactic properties and their morphological make up. Therefore it is natural to analyze them in the same way. The fact that *koii bhii* may appear in context other than negative while *dare-mo* is limited to a negative context, we may say, is due to the syntactic property of *dare-mo*, which requires [+NEG] feature of *dare-mo* to be checked off in the Spec NegP in Japanese. On the other hand, in Hindi *koii bhii* can be licensed on solely semantic grounds (being under the scope of some affective operator). According to the semantic analysis of *dare-mo* suggested here, the sentence like **dare-mo kita* 'anyone came' is ruled out both syntactically and

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[57] Since Lahiri's account of Hindi NPI *koii bhii 'anyone'* introduced in section 3.4.2.2 explicitly make use of the cardinality of *koii* to derive various implicatures, this difference could be crucial in analyzing *dare-mo* 'anyone' in the same way as *koii bhii*.

[58] However, I assume that the head of NumP that dominates the NP *dare* is empty, and its content is provided contextually. That is, *dare* is not syntactically specified as one or singular.

semantically: syntactically, because Neg feature of the NPI is not checked, and semantically, due to conflicting implicatures discussed in 3.4.2.2.

Let us now go back to how *dare-mo* may have the same function as English *any* as discussed by Kawashima (1994). The semantic analysis of *dare-mo* proposed in this paper is compatible with Kawashima's analysis. Recall her account of semantics of *dare-mo* in (132), repeated here as (156):

(156) A: gakusei-wa yob-ana-katta. 'I didn't invite students.'
student-Top invite-Neg-Past
B: John (who is a student)-wa yonda-desyo. 'You invited John, didn't you?'
J-Top invited-TQ
A: iya, **dare-mo** yob-ana-katta. 'No, I didn't invite any student.'
no anyone invite-Neg-Past

She proposed that *dare-mo* in this example widen the domain of an indefinite noun *gakusei* 'student' to include *John* in it (no student, including John, was invited). We can derive the same effect if we take *mo* to mean *even* here. *Dare*, the property of being human, is restricted to student in this context. Assuming that *dare* contains property of one, *dare-mo* in (156) is equivalent to 'even one student'. In the following example, it is natural that *John* is included in the students who were not invited.

(157) A: I didn't invite students.
B: But you invited John (who is a student), didn't you?
A: I didn't invite even one student.

In this context, if *John* is a student and *A* says that he did not invite even one student, it implies that *John* was not invited either. This, in Kawashima's sense, is equivalent to 'widening' the domain of indefinite students to include *John*.

3.5. Remaining issues

3.5.1 Compositional meaning of the universal *dare-mo*

Now let us suggest a possible approach to how we might get the compositional

meaning of the universal *dare-mo* although I will not propose a formal mechanism. The intuition we want to capture is that the morpheme *mo* may have a universal interpretation when *dare-mo* is not bound by the Neg operator. Structurally, this can be achieved in two ways: one is when there is no Neg OP in the same clause and the other is when the head of the DP is filled and blocks the binding of *dare-mo* by Neg OP even when there is a NegOP in the same clause. This is why in the universal *dare-mo* 'everyone', the head of DP must be filled by a Case particle while in the NPI *dare-mo*, D is empty.

Semantically, we can derive the different meanings of the NPI and the universal *dare-mo* at least in two ways:[59] one is to take the semantics of the morpheme *mo* to be something that, when it is bound by the negation, is construed as 'even', and otherwise 'also'. Then the NPI *dare-mo* is analyzed as proposed by Lahiri (1998) for Hindi *koii bhii* 'anyone' in the previous section, and the universal meaning of *dare-mo* would derive when *mo* is construed as 'also' as proposed in McGloin 1972. Under her analysis, given a context with a set of people A, B, and C, the sentence in (158) means that 'A also came, B also came, and C also came', and therefore, 'everyone came'.[60]

(158) DAre-mo-ga kita.
who-MO-Nom came
'Everyone came.'

This kind of approach seems more desirable than positing two distinct morphemes, one

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59 I do not commit to either analysis in this dissertation.

60 In her analysis, McGloin also treat the NPI *mo* as 'also', and hence, a sentence like (i) is interpreted as in (ii) (McGloin's (28) and (70)).

(i) Dare-mo ko-na-katta. 'Nobody came.'

(ii) (watasi-no tomodati-wa) Taroo-mo konakatta, Ziroo-mo konakatta, Saburoo-mo konakatta...
my friend-Top T-also didn't come, Z-also didn't come, S-also didn't come,
(n)-mo kanakatta.
n-also didn't come

She proposes that (i) means nobody came by negating each one of the members of a predetermined set.

specified as [+negative polarity, -Case] and the other specified as [+Case] and meaning 'every' as suggested by Takahashi (2002). Yet it is not an easy task to formalize a core meaning of *mo* that may be construed as 'even' or 'also' depending on the presence of negation. I will leave the exact formalization of such semantics for future research.

Another approach, which is an even more uniform analysis of *mo*, is to claim that *mo* means *even* in both the NPI and the universal *dare-mo*. Although I do not have a complete analysis, I will illustrate how such analysis may work. The analysis relies on three factors; the interaction between *even* and the negation, the different implicatures induced by such interaction, and a syntactic effect of Case particles. Let us first discuss conventional implicatures associated with *even* in the literature.

The sentence in (159a) has two implicatures stated in (159ab) induced by *even* (Karttunen and Peter 1979, Wilkinson 1996).

(159) Conventional Implicatures of Even (Wilkinson's (1))
- a. Sara read even Ulysses.
- b. Existential implicature: Sara read something other than Ulysses.
- c. Scalar implicature: Ulysses is the least likely thing for Sara to read.

(159b,c) are the conventional implicatures of (159a) induced by *even* in an affirmative sentence.

On the other hand, if we follow Wilkinson's (1996) analysis, *even* in a negative sentence like (160a) induces the implicatures in (160b,c).

(160)
- a. John didn't read even Mother Goose.
- b. There is something other than Mother Goose that John didn't read.
- c. Mother Goose is the most likely thing that John reads.

Now, assuming that *dare* is the extensional property of being human (Hagstrom 1999) and *mo* means *even*, the meaning of the universal *dare-mo-ga* may derive as shown in (161).

(161) a. DAre-mo-ga ki-ta.
person-even-Nom came
b. There is someone other than a person who came.
c. A person is the least likely thing to come.

Since *mo* 'even' is in an affirmative sentence, following the conventional implicatures induced by *even* in (159), we can assume that *mo* induces the implicatures in (161a,b). Since the person least likely to come came, it may be possible that the sentence have extended to mean that 'everyone came'.

On the other hand, the NPI *dare-mo* can be analyzed as follows, again taking *mo* to be *even*.

(162) a. daRE-MO ko-nakat-ta.
person-even come-Neg-Past
b. There is someone other than a person who didn't come.
c. A person is the most likely thing to come.

Following Wilkinson's analysis, *even* in a negative sentence induces the implicatures in (162b,c) As a result, since the sentence says that the person who is most likely to come didn't come, it may have extended to mean that 'nobody came'.

Under the present analysis of internal structure of the universal *dare-mo-ga/o*, Case particles are in D, and it blocks the binding of the DP by the negative operator. Therefore, we may predict that the *mo* in the universal *dare-mo* would interact with the negation differently from the *mo* in the NPI *dare-mo*. This speculation may account for the fact that (163) below does not express the same meaning as (162).

(163) DAre-mo-ga ko-nakat-ta.
person-even-Nom come-Neg-Past
'Everyone did not come.'

In (163), even though the subject consists of the morpheme *dare* and *mo*, the presence of the Case particle blocks the NPI reading.

Finally, unlike Lahiri's analysis, under this approach, the fact that NPIs in Japanese need syntactic licensing is not redundant for ruling-out a sentence like (164).[61]

(164) * daRE-MO kita.
anyone came

Under the analysis proposed above, since (164) does not involve negation, *mo* may induce the conventional implicatures like that of (161a), and may mean *everyone came*. Therefore, ill-formedness of (164) is not semantic. Therefore, it seems that what rules out (164) is the syntactic requirement to check some feature of *dare-mo* that is not satisfied. That is, following the movement analysis of NPI licensing discussed in section 3.3.2.2, (164) is ruled out because the Neg feature of *dare-mo* is not checked due to the absence of NegP in the clause.

3.5.2 Other Case and non-Case particles

In this chapter so far we have looked at *ga* 'Nom' and *o* 'Acc' in relation to the NPI and the non-NPI uses of *dare-mo*. In this section I investigate how other Case and non-Case particles behave in relation to the NPI and the universal *dare-mo*. Observe the following examples with a postposition *kara* 'from':[62]

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[61] Under Lahiri's analysis, a sentence like (164) is ruled out on a purely semantic ground, due to conflicting implicatures derived in his analysis, as discussed in section 3.4.2.2.

[62] Other postpositions seem to behave in the same way. The following shows the distribution of *to* 'with'.

(i) a. Dare-mo to asonda.
who-MO with played
'John played with everyone.'

b. * Dare-mo to asob-ana-katta.
who-MO with play-Neg-Past
Intended: 'I didn't play with anyone.'
Possible reading: 'I didn't play with everyone.'

c. * Dare-mo asob-ana-katta.
who-Mo play-Neg-Past
Intended: 'I didn't play with anyone.'

d. Dare-to mo asob-ana-katta. 'I didn't play with anyone.'
who-with MO play-Neg-Past

(165) a. DAre-mo kara tegami-ga kita.
who-MO from letter-Nom came
'Letters came from everyone.'

b. * daRE-MO kara tegami-ga ko-na-katta
who-MO from letter-Nom come-Neg-Past
Intended: 'Letters did not come from anyone.'

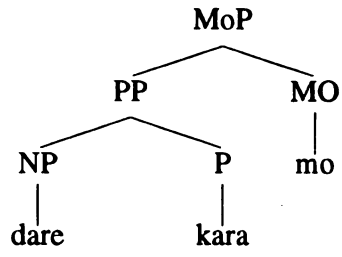
c. * daRE-MO tegami-ga ko-na-katta.
who-Mo letter-Nom come-Neg-Past
Intended: 'Letters did not come from anyone.'

d. daRE-KARA-MO tegami-ga ko-na-katta.
who-from Mo l etter-Nom come-Neg-Past
'Letters did not come from anyone.'

As (165b) shows, when *dare-mo* occurs within a PP, it cannot have the NPI reading. Ungrammaticality of (165b) could be due to two things. One is that, as discussed in 3.3.2.2, the NPI *dare-mo* needs to move overtly to Spec NegP in order to check the strong Neg feature. Therefore, (165b) may be ruled out because *dare-mo* cannot move out of the PP to check the necessary feature. Alternatively, if we assume that the PP containing *dare-mo* can check Neg feature, (165b) may be ruled out because the postposition *kara* 'from' blocks the binding of *dare-mo* by the Neg OP. It follows from the present analysis that since the Neg OP cannot bind *dare-mo* within a PP, the universal reading of *dare-mo* is possible in (165b). Also, in the affirmative clause in (165a), *dare-mo* within PP can get the universal reading since it is not bound by Neg OP. While the absence of the Case particles *ga* and *o* allows *dare-mo* to get the NPI reading, *kara* is required for the NPI *dare-mo* as shown in (165c,d). (165c) is ill-formed because *dare-mo* cannot receive a theta role without *kara*, but as shown in (165b), when there is *kara*, it cannot be bound by Neg OP and the NPI reading does not arise. Interestingly, when *kara* appears between *dare* and *mo* as in (165d), the sentence becomes well formed with the NPI reading. If the NPI reading is derived by NegOP binding the morpheme *mo* and if P blocks the binding of *mo* by the Neg OP, *mo* has to be placed higher than P in order to get the NPI reading.

Therefore, I propose that *dare-kara-mo* has the structure given in (166) below.

(166)



In this structure, since MoP does not have an overt D that can block the binding by Neg, it can receive the NPI interpretation.[63/64]

Lastly, let us examine how the particle *ni* behaves with respect to *dare-mo*. In the literature, it has been argued that *ni* is ambiguous between a Dative Case particle and a postposition (Miyagawa 1989, Sadakane and Koizumi 1995). If it is a Case particle, we expect that it will behave like *ga* and *o*, but this prediction is not borne out. The following examples show that *ni* behaves more like postpositions.

(167) a. * Sensei-wa daRE-MO-**ni** A-o age-na-katta.
teacher-Top anyone (**Dat**) A-Acc give-Neg-Past
Intended: 'The teacher didn't give an A to anyone.'

b. * Sensei-wa daRE-MO A-o age-na-katta.
teacher-Top anyone(Dat) A-Acc give-Neg-Past
Intended reading: 'The teacher didn't give an A to anyone.'

c. Sensei -wa daRE-**NI**-MO A-o agenakatta.
teacher-Top who-**Dat**-MO A-Acc didn't give
'The teacher did not give an A to anyone.'

In (167a), we see that *ni* blocks the NPI reading of *dare-mo* and gives it a universal reading. But this fact alone cannot decide whether *ni* is like a D or a P since both of them block the NPI reading. However, (167b,c) show that *ni* is more like a P than a D. When

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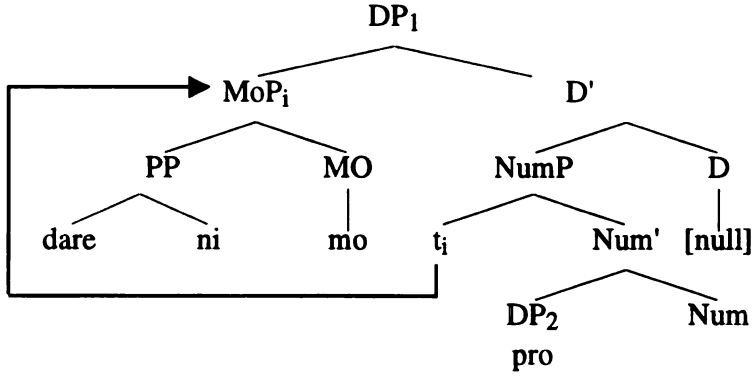
63 Recall Takahashi's (2002) analysis of Split QPs introduced in section 3.2.2.2. Under his analysis, *mo* in (166) moves from within PP to take scope over P. I do not assume such movement in my analysis.

64 If we want to keep the analysis of the null D head being the variable that is bound by Neg OP in the NPI, we can say that the structure in (166) has a null D head that takes the MoP as its complement.

the NPI *dare-mo* is associated with a nominative or an accusative argument, no Case marker appears between *dare* and *mo*. But as seen in (167c), when the NPI *dare-mo* is a dative argument, *ni* must appear between them. Without *ni* the sentence is ill-formed as in (167b). This is the same pattern we see with a postposition *kara* in (165). Therefore, I suggest (168) as the structure for *dare-ni-mo*.

(168)



The structure in (168) differs from the structure of the NPI *dare-mo* in (57) minimally in that MO takes PP as its complement rather than NP. As a whole, I assume that it is a DP with a null D head and the null D gets bound by Neg OP.

The following examples demonstrate the distribution of *ni* when there is an associate NP of the NPI *dare-mo*.

(169) a. Sensei-wa gakusei-**ni** daRE-**NI**-MO A-o agenakatta.
teacher-Top student-**Dat** anyone (**Dat**) A-Acc didn't give
'The teacher did not give an A to any student.'

b (?) Sensei-wa gakusei-**ni** daRE-MO A-o agenakatta.
teacher-Top student-**Dat** anyone A-Acc didn't give
'The teacher did not give an A to any student.'

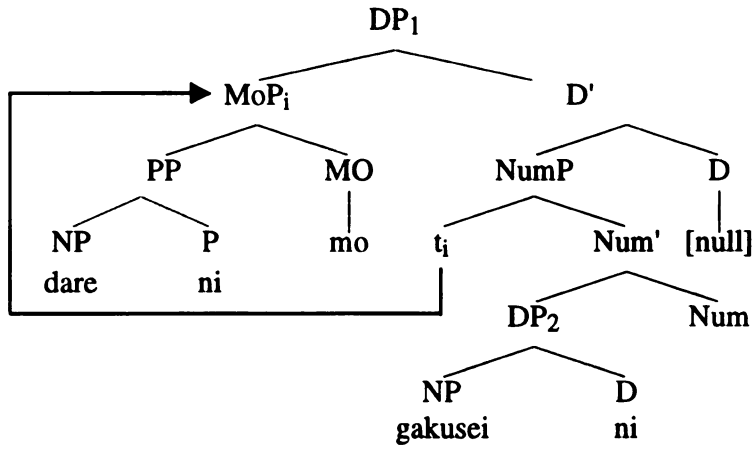
c. * Sensei-wa gakusei daRE-**NI**-MO A-o agenakatta.
teacher-Top student anyone (**Dat**) A-Acc didn't give

These examples indicate that if *ni* appears on the associate NP, then, *dare-mo* may or may not appear with *ni*. In (169a), *ni* appears on both *gakusei* 'student' and *dare* 'who', and in (169b), *ni* appears only with *gakusei* 'student' but the sentence is somewhat

marginally acceptable. However, as shown in (169c), when *gakusei* 'student' does not have *ni*, the sentence becomes ill-formed even though *ni* appears with *dare*.

If we interpret the ambiguity of *ni* between a Case particle and a postposition as its ability to appear either in D or P, the distribution of the associate NP in (169) follows from the structure proposed for the NPI *dare-ni-mo* in (168). This is illustrated in (170) below.

(170)



We have to assume that DP_2 moves out of the DP_1 in order to check some feature so that the right word order derives. If that is possible, then, when MO takes a PP as its complement, (169a) derives, and when the complement of MO is an NP, (169b). (169c) cannot be derived because the complement of Num is a DP, but *gakusei* in (169c) is not a DP.

The data in (171) below show that the associate NP of the universal *dare-mo* cannot be *ni*-marked.

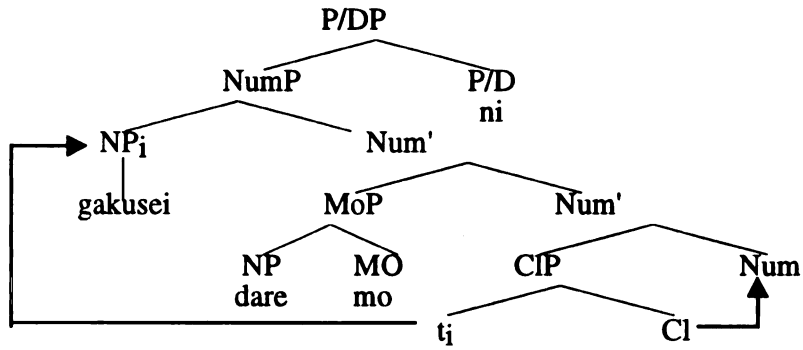
(171) a. Sensei-wa gakusei DAre-mo-ni A-o ageta.
teacher-Top student everyone (Dat) A-Acc gave
'The teacher gave an A to every stdutent.'

b. * Sensei-wa gakusei-ni DAre-mo-ni A-o ageta.
teacher-Top student-Dat everyone-Dat A-Acc gave

In (171a), the associate NP *gakusei* 'student' is not marked with *ni* and the sentence is

grammatical, but when it is marked with *ni* as in (171b), the sentence becomes ungrammatical. This is expected under the proposed analysis because the associate of the universal *dare-mo* is an NP as shown in (129). Therefore, (171a) has the structure in (172).

(172)



It is not clear whether *ni* should be treated as a D or a P in this structure since as long as a P can block the binding by Neg OP, the universal reading should be possible. The analysis of *ni* in relation to the NPI and the universal *dare-mo* suggests that *ni* is in fact ambiguous in its syntactic status.

3.6. Conclusion

In this Chapter, I have argued in section 3.2 that *dare-mo* is a DP with an empty head D that functions as a variable. Following Déprez (2000), I proposed that the variable in this DP is bound by NEG operator, which explains why *dare-mo* 'anyone' receives the NPI reading. This structural analysis was supported by the distributional and interpretational differences between the NPI *dare-mo* 'anyone' and the universal *dare-mo* 'everyone'. Since D is filled with a Case-particle in the universal *dare-mo*, D is no longer a variable and cannot be bound by negation, and hence, does not receive the NPI reading. This accounts for non-NPI status of *dare-mo-ga*. In addition my analysis shows that

Case-particles are not merely marking a morphological Case but it has a syntactic position and when combined with NumP it functions like a determiner in inducing a strong (presuppositional) reading of NPs.

In section 3.3 I have also shown that the proposed internal structure of the NPI *dare-mo* is compatible with the Feature Checking account of NPI licensing. I have argued that, in conjunction with the movement analysis of NPI in Japanese, the proposed internal structure of the NPI *dare-mo* could account for the distribution of *dare-mo* and its associate NP. Furthermore, I have shown that the limited distribution of the universal *dare-mo* 'everyone' with respect to its associate NP follows from its internal structure. In section 3.4, I have suggested that the compositional meaning of *dare-mo* 'anyone' as an NPI can be derived in the similar manner as Lahiri's (1998) account of *koii bhii* 'anyone' based on their similar syntactic distribution and morphological constructions. On the other hand, I have suggested two different approaches to derive the compositional meaning of the universal *dare-mo* 'everyone'. One is to analyze *mo* in the universal *dare-mo* as 'also', and the other relies on the implicatures induced by *mo* as 'even'.

3.7 Additional issues of the NPI *dare-mo:* comments on an adverbial analysis

Both floating quantifiers (FQs) and the NPI *dare-mo* have been treated as an adverbial element in the literature (Hasegawa 1993, Fujita 1994, Sasaki Alam 1997). In this appendix, I demonstrate that the arguments used in support of adverbial analysis are compatible with the present analysis of FQ and *dare-mo* as a quantificational element within the noun phrase, therefore, they do not constitute evidence against the nominal treatment.

In Fujita's analysis, there are three initial motivations to treat NPI *dare-mo* as an adverb: the NPI *dare-mo* occurs with an associate NP, it cannot be Case-marked, and it cannot be modified. Below I will review Fujita's basic arguments and point out that each phenomenon can be accounted for under the present analysis without treating the NPI *dare-mo* as an adverb.

3.7.1. Occurrence with an associate NP

The first motivation for treating the NPI *dare-mo* as an adverb is the fact that the NPI *dare-mo* occurs with an associate NP or *pro*, like an FQ, as shown in (173) ((a) is Fujita's (22)).

(173) a. Gakusei-ga dare-mo ko-na-katta.
Student-Nom anyone come-Neg-Past
'No student came.'

b. Gakusei-ga san-nin kita.
student-Nom 3-Cl came
'Three students came.' or 'Three of (the) students came.'

Fujita proposes that *gakusei-ga san-nin* in (173b) is structurally ambiguous between a single NP structure and an NP plus an FQ structure. He argues that when there is a pause between *gakusei-ga* and *san-nin*, it receives a partitive interpretation and that *san-nin* is an adverb in such a case. On the other hand, when there is no pause, *san-nin* is a part of

the NP and it has a non-partitive interpretation.[65] Since *dare-mo* appears in the same position as the FQ, which is argued to be an adverbial element, *dare-mo* is also analyzable as an adverb.[66]

Under the present analysis of NCP proposed in Chapter 2, the contrast between the partitive and the non-partitive interpretations is captured structurally, even though in both cases, the NCP is base-generated as a part of a nominal phrase (see section 2.4.4.2, Chap.2).

3.7.2 Non-occurrence of Case particle

The second motivation for treating the NPI *dare-mo* as an adverb is that the NPI *dare-mo* does not take any Case particle, as shown in (174) (Fujita's (24), Chap. 3).

(174) a. * [$_{NP}$ Daremo-no gakusei]-ga ko-na-katta.
anyone-Gen student-Nom come-Neg-Past
'No student (=Not any student) came.'[67]

b. * [$_{NP}$ Gakusei daremo]-ga ko-na-katta.
student anyone-Nom come-Neg-Past
'No student (=Not any student) came.'

This fact, however, does not rule out the possibility that *dare-mo* is a nominal quantificational element, like the numeral classifier shown in (175).

(175) a. A: Gakusei-ga nan-nin kimasi-ta ka.
student-Nom what-Cl come-Past-Q
'How many students came?'

b. B: [pro] san-nin kimasi-ta.
3-Cl come-Past
'Three came.'

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65 In the case of partitive reading, Fujita proposes that *gakusei* denotes a contextually relevant set, and it does not have to be a definite.

66 It is not clear if Fujita assumes *dare-mo* can also be a nominal constituent, like the numeral classifier. If *gakusei-ga san-nin* (student-Nom 3-Cl) in (173b) can be an NP, it is natural to think that *gakusei-ga daremo* can form an NP as well when there is no pause between *gakusei-ga* and *dare-mo*, following Fujita's analysis.

67 Another possible reading, which is also not available, is 'nobody's student came', if we interpret *no* to be a possessive marker, as in *John no gakusei* 'John's student'.

c. * San-nin-ga kimasi-ta.
3-Cl-Nom came

Crucially, (175b) does not have a partitive reading, 'three of some relevant set of students came', which, following Fujita's analysis, indicates that *san-nin* is not an FQ, but rather, is a part of the NP. Since it is not an FQ, it is not an adverbial element. However, *san-nin* in (175b) cannot be Case-marked, as shown in (175c). From this fact, we can conclude that not taking a Case particle does not indicate the NPI *dare-mo*'s status as an adverb. Under the present analysis, the absence of the Case particle with the NPI *dare-mo* is related to its phrasal structure and the nature of the NPI by taking Case particles as Ds (see section 3.2.3.2, Chap. 3).

3.7.3 The NPI *daremo* cannot be modified

The third motivation for treating the NPI *dare-mo* as an adverb is the fact that *dare-mo* cannot be modified, as shown in (176) (Fujita's (25), Chap.3).

(176) * $[_{NP}[_{CP}[_{IP}t_i$ Siken-ni oti-ta] $OP_i]$ $daremo_i]$ paatii-ni ko-na-katta.
exam-in fail-Past party-to come-Neg-Past
'(Lit.) Any student who failed in the exam did not come to the party.'

Fujita argues that since the relative head is N, the ungrammaticality of (176) is due to the fact that the NPI *dare-mo* is not an NP.

However, the fact that *dare-mo* cannot be modified is not incompatible with the analysis of *dare-mo* as a nominal quantificational element. For example, even though NCP in (177a) can be analyzed as a nominal constituent, it cannot be the head of the relative clause, as shown in (177b).

(177) a. (Gakusei-ga) san-nin siken-ni oti-ta.
student-Nom 3-Cl exam-in fail-Past
'Three (students) failed the exam.'

b. * [$_{NP}$[$_{CP}$[$_{IP}$$t_i$ Siken-ni oti-ta] OP_i] san-nin$_i$] paatii-ni ko-na-katta.
exam-in fail-Past party-to come-Neg-Past
Intended: 'The three who failed the exam did not come to the party.'

Therefore, the unmodifiability of *dare-mo* does not have to be related to its status as an adverb. On the other hand, it is compatible with the analysis of the NPI *dare-mo* as a part of a nominal constituent.

CHAPTER 4

THE SYNTACTIC POSITION OF *NO* IN JAPANESE

4.1 Introduction

In the previous two chapters (Chapter 2 and Chapter 3), I have motivated the status of Case particles as Ds based on the analyses of numeral classifier phrases and the NPI and the universal *dare-mo* phrases with a focus on *ga* (nominative) and *o* (accusative). In this chapter, I investigate what the consequences of the present analysis may be for the analysis of the particle *no* in Japanese. The following examples demonstrate various usages of *no*.

(1) NP modifiers
   a. Kore-wa Bill-**no** hon desu.
      this-Top Bill-NO book Cop
      'This is Bill's book.'
   b. Are-wa John-**no** desu.
      that-Top John-NO Cop
      'That is John's.'

(2) Adjectival modifiers
   a. Bill-ga [takai] hon-o katta.
      B-Nom expensive book-Acc bought.
      'Bill bought an expensive book.'
   b. John-wa [yasui]-**no**-o katta.
      J-Top cheap-NO-Acc bought
      'John bought a cheap one.'

(3) Head External Relative Clause (HERC)
   a. [Bill-ga katta] hon-wa takakatta.
      B-Nom bought book-Top was.expensive
      'The book Bill bought was expensive.'
   b. [John-ga katta]-**no**-wa yasukatta.
      J-Nom bought-NO-Top was.cheap
      'The one John bought was cheap.'

In (1a), *no* appears between two nouns, *Bill* and *hon* 'book', and *Bill* modifies *hon*. In (1b), descriptively, *no* appears with a modifying noun phrase *John* but the modified noun phrase is omitted. In (2a), when the modifier is adjectival (*takai* 'expensive'), *no* is not used. However, *no* appears with an adjectival modifier when the modified noun phrase is omitted in (2b). The data in (3) are descriptively similar to the ones in (2) in that the modifier does not require *no* in (3a) when the modified noun phrase *hon* 'book' is overt, but when it is covert, *no* is required with the modifier, as in (3b). On the other hand, the instances of *no* in examples (4)-(6) seem a little different from the usages in the above examples.

(4) Nominalized Clauses

a. [Naomi-ga piano-o hiku]-**no**-wa zizitu desu.
N-Nom piano-Acc play-NO-Top fact Cop
'It is a fact that Naomi plays piano.'

b. Boku-wa Naomi-ga piano-o hiku-**no**-o kiita.
I-Top N-Nom piano-Acc play-NO-Acc heard
'I heard Naomi play the piano.'

(Kitagawa and Ross 1982:(49), (51))

(5) Head Internal Relative Clause (HIRC)

Boku-wa [sutoobu-kara hi-ga dete-iru **no**] o mita.
I-Top stove-from fire-Nom exiting-be NO-Acc saw
'I saw that the fire was coming out of the stove.'
'I saw the fire coming out of the stove.'
'I saw the stove the fire was coming from.'

(Kitagawa and Ross 1982:(54))

(6) Cleft

[Taroo-ga [*e*]$_i$ atta-no] wa Yamada sensei$_i$ desu.
T-Nom met-NO Top Yamada teacher Cop
'It was Prof. Yamada that Taro met.'

Descriptively, *no* is used to nominalize the clause so that it can be the topic of the sentence in (4a) and the direct object in (4b) and (5). The example in (6) shows the cleft

construction in Japanese. The clause that contains the gap with which the clefted noun phrase is associated is marked with *no* and a topic marker *wa*.

The example below represents another usage of *no*.

(7) *Ga-no* conversion

[kaze-no sizukana] yoru (Matsushita 1961:260)
wind-NO quiet night
'a night with a quiet wind'[1]

No in (7) marks the subject of the modifying clause. This phenomenon is called "*ga-no* conversion" in the literature since the regular particle for the subject is *ga*. *No* cannot be used to indicate subject in the matrix clause, whereas either *ga* or *no* is possible in the modifying clause, as shown in (8).[2]

(8) a. kaze-ga/*no sizuka da.
wind-Nom quiet Cop
'The wind is calm.'

b. kaze-ga/no sizuka na yoru
wind-Nom/Gen quiet Cop night
'a night with a quiet wind'

Various analyses of Japanese *no* have been proposed in the literature: *No* in (1) and (7) are generally treated as a genitive Case particle (Matsushita 1961, Ishiguro 1992, Murasugi 1991) or as a modification marker (Kitagawa and Ross 1982), and under such analyses, this kind of *no* does not have a syntactic position and proposed to be inserted postsyntactically. Alternatively, under an antisymmetry approach (Kayne 1994), Whitman (1997) and Koike (1999) treat the genitive *no* as a head of DP, with a head initial structure. On the other hand, *no* in (2)-(3) are analyzed as pronouns (Kamio 1983, McGloin 1985, Murasugi 1991), and those in (4)-(6) are commonly treated as a

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[1] The translation is provided by the present author.

[2] *Ga-no* conversion will be discussed in section 4.4.

complementizer or a nominalizer (Murasugi 1991, Kaplan and Whitman 1995, Hiraiwa 2000).

In the previous chapters, I have proposed that Case particles like *ga* and *o* are Ds. To be consistent with this analysis, if some of the usages of *no* are considered Case particles like *ga* and *o*, then those instances of *no* should be analyzed as Ds. In this chapter, I investigate the possibility of analyzing *no* as a D, but in the end, reject the analysis in favor of analyzing *no* as uniformly a C.

This chapter is organized as follows. In section 2, I discuss some predictions from the current analysis of Case particles as Ds. In section 3, I review a non-unified analysis of *no* by Murasugi (1991) and a unified analysis by Kitagawa and Ross (1982). Section 4 suggests a possible unified analysis of *no* and the consequence of such an analysis on the analysis of *dare-mo* and NCP phrases. Section 5 concludes the chapter.

4.2 Is the "genitive" *no* a D?

As introduced above, there are a couple of possibilities for the syntactic status of *no*: (i) no syntactic position (a P like element inserted postsyntactically, i.e., a dummy Case marker), (ii) a determiner (D), and (iii) a complementizer (C). Under the present analysis proposed for the Case particles *ga* and *o*, if *no* in the XP *no* NP phrases is a genitive Case particle as proposed by some researchers (Murasugi 1991, Ishiguro 1992), we should treat it as a D, like *ga* and *o*. If it is a D, we have some predictions as to how it should behave with respect to numeral classifier phrases and the NPI *dare-mo* 'anyone'.

In the analysis proposed in Chapter 2, we have seen that NP-NCP combination followed directly by a Case particle (overt D) gives rise to a definite reading of the resulting phrase, as shown in (9).

(9) John-wa [$_{CP}$ hon san-satu-o] kaban-ni ireta.
J-Top [$_{DP}$ book 3-Cl-Acc] bag-to entered
'John put the three books into a bag.'

Therefore, if *no* is a D, we predict that [NP-NCP-*no*] should have a definite interpretation. Let us see if this prediction holds.

(10) John-wa hon san-satu-no hyousi-o yabutta.
J-Top book 3-Cl-Gen cover-Acc ripped
'John ripped covers of three books/the three books.'

Contrary to our prediction, it seems that *hon san-satsu-no* in (10) allows both a definite and an indefinite reading for *hon san-satsu* depending on the context. On the other hand, as discussed in Chapter 2, section 2.3.2, the phrase like *hon san-satu-o* in (9) cannot be indefinite. Therefore our first prediction is not borne out.

Another prediction, based on the analysis of the NPI and the universal *dare-mo* in Chapter 3, is that, if *no* is a D, *dare-mo-no* should get only a universal reading, and should not be able to get the NPI reading since D is overtly filled. This prediction is borne out as shown in (11).

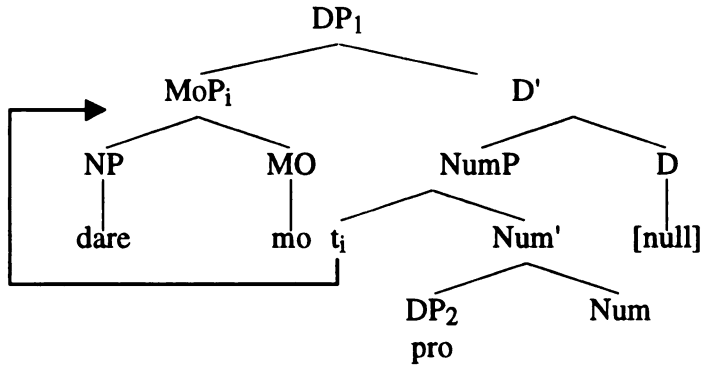
(11) Sono hanasi-wa **DAre-mo-no** kokoro-ni kibou-no hi-o tomosita.
that story-Top who-MO-NO heart-Dat hope-Gen fire-Acc lit
'The story lit a fire of hope in everyone's heart.'

In (11) *dare-mo-no* only means "everyone's" and hence it has a universal reading. Even when we put the phrase in a negative sentence, we still do not get the NPI reading for *dare-mo-no*, as shown in (12).

(12) * Sono hanasi-wa **daRE-MO-no** kokoro-ni kibou-no hi-o tomos-anakat-ta.
that story-Top who-MO-gen heart-Dat hope-Gen fire-Acc light-Neg-Past
Intended: 'The story didn't light a fire of hope in anyone's heart.'

In (12), *dare-mo-no* cannot mean "anyone's". Therefore, it seems that *no* is behaving syntactically like *ga* and *o* in blocking the NPI reading.[3] Under the present analysis of the NPI *dare-mo* proposed in Chapter 3, repeated here in (13), if *no* is a D, it follows that *dare-mo-no* cannot be an NPI since D is filled by *no*. Recall that in the NPI *dare-mo*, the D needs to be null in order to function as a variable that is bound by a Neg OP. If D is filled by a Case particle it cannot be bound by the Neg OP, and hence it cannot receive the NPI reading.

(13) NPI *dare-mo*



The data with the NPI *dare-mo* seem to support the analysis of *no* as a D. However, there is a problem with pushing this line of argument. Observe the following example.

(14) * Tegami-ga daRE-MO kara ko-nakat-ta.
letter-Nom who-MO from come-Neg-Past
Intended: 'A letter didn't come from anyone.'

The morpheme *kara* is generally taken to be a postposition, not a Case particle. Yet in (14), *dare-mo kara* cannot mean 'from anyone' and it seems that *kara* blocks the NPI

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[3] This fact supports the idea that *no* actually has a syntactic position like *ga* and *o*, because if it is inserted postsyntactically to indicate modification structures, it is mysterious why *dare-mo-no* cannot have an NPI reading. That is, the postsyntactic insertion analysis cannot explain why the NPI *dare-mo* can't be marked as a prenominal modifier like any other nominal modifiers. This phenomenon will be given an analysis in section 4.3.5.

reading of *dare-mo*. Suppose that *kara*, P, takes the DP *daRE-MO* as its complement. The ungrammaticality of (14) suggests that the null D head cannot be bound by the Neg OP when embedded inside PP. Therefore, the fact that *dare-mo-no* cannot have an NPI reading is not a strong enough argument for treating *no* as a D.

At this point, let us turn to other possible analyses of *no* and investigate alternative ways to account for the loss of NPI reading in *dare-mo-no* and the possibility of an indefinite reading in NP-NCP-*no* phrases. These issues will be dealt with in detail in section 4.3.5.

4.3 Previous analyses of *no*

Some researchers have treated *no* in the different constructions given in (1) - (6) above as syntactically distinct elements. Most commonly, it is argued that there are at least three kinds of *no*; namely, a genitive or modification marker *no*, a pronominal *no*, and a complementizer/nominalizer *no*.[4]

While it is possible for a language to have homonyms that have distinct meanings and functions, when we investigate the general environments in which *no* can appear in Japanese, it seems to be too much of a coincidence for them to be distinct morphemes that happen to have the same sound. Let us first look at Kitagawa and Ross's (1982) analysis that strongly argues for the unified analysis of all instances of *no*.[5]

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[4] Although it does not seem to be a very widely held view, Okutsu (1978) argues that *no* in (1a) should be treated as an adnominal form of copula *da*.

[5] See also Koike (1999) for a unified analysis of *no* as a linker D under the antisymmetry hypothesis.

4.2.1 A unified analysis of *no*

Kitagawa and Ross (1982) show that all instances of structures that require *no*, like the sentences in (1) – (6), involve a modification. Their analysis, to which I will turn shortly, answers the question of why *no* occurs only when a modification structure is involved: that is, as illustrated in (15), *no* never functions as a pronoun by itself (Kitagawa and Ross's (12) and (13)).

(15) a. Ookii-no-o kudasai.
big-NO-Acc give.me
'Give me a big one.'
b. * No-o kudasai.
NO-Acc give.me
Intended: 'Give me one.'

Kitagawa and Ross propose that all instances of *no* are modification markers and the distribution of *no* follows from the two rules stated as follows (Kitagawa and Ross 1982: 23):

(16) MOD insertion rule[6]
$[_{NP}$ X NP] ---> $[_{NP}$ X MOD NP]

(17) *NO*-deletion
$[_{NP}$ X no NP] ---> $[_{NP}$ X NP]
where (a) NP $\neq$ *e* (i.e., the head NP is occupied by a phonologically full lexical item); and
(b) X = [. . . tense] (i.e., X is tensed [+V] final)

In Japanese, the MOD insertion rule inserts *no* whenever an NP has a modifier. The rule does not distinguish between NP modifiers, which appear with *no* when modifying another NP, as shown in (1a), and adjectival/clausal modifiers, which do not occur with

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[6] MOD stands for prenominal modification marker, and X stands for any category functioning as a modifier.

no when the modified NP is overt, as shown in (2a) and (3a). Those examples are repeated below in (18) for convenience.

(18) a. Kore-wa Bill-**no** hon desu. (=1a)
this-Top Bill-NO book Cop
'This is Bill's book.'

b. Bill-ga [takai] hon-o katta. (=2a)
B-Nom expensive book-Acc bought.
'Bill bought an expensive book.'

c. [Bill-ga katta] hon-wa takakatta. (=3a)
B-Nom bought book-Top was.expensive
'The book Bill bought was expensive.'

In order to avoid over-generating *no* in examples like (18), Kitagawa and Ross need the *NO*-deletion rule in (17).

In the following, I illustrate how the two rules derive the relevant *no* phrases in (1) - (5), using (1) and (2) as examples:

(19) a. $[_{NP}\ [_{NP}$ Bill$]\ [_{NP}$ hon $]]$ (MOD insertion) ➜ $[_{NP}$ Bill no $[_{NP}$ hon $]]$ (=1a)
book Bill NO book

b. $[_{NP}\ [_{NP}$ John$]\ [_{NP}$ PRO $]]$ (MOD insertion) ➜ $[_{NP}$ John no $[_{NP}$ PRO $]]$(=1b)
"John's"

(20) a. $[_{NP}$ takai $[_{NP}$ hon$]]$ (MOD insertion) ➜ $[_{NP}$ takai no $[_{NP}$ hon$]]$ ➜
[expensive [book]] expensive NO book

(*NO*-deletion) ➜ $[_{NP}$ takai $[_{NP}$ hon$]]$ (=2a)
expensive book

b. $[_{NP}$ takai $[_{NP}$ PRO$]]$ (MOD insertion) ➜ $[_{NP}$ takai no $[_{NP}$ PRO$]]$ (=2b)
[expensive [PRO]] "expensive one"

In (19), *no* is inserted between two NPs in modifier-modifiee relation, and since the modifier is not a [+V] category, *NO*-deletion does not apply. In (20a), the MOD insertion rule applies and *no* is inserted following AP *takai* 'expensive'. Then, since AP in

Japanese is a Tensed [+V] category,[7] *NO*-deletion also applies, and *no* is deleted.[8] Therefore we correctly get *takai hon*. On the other hand, when the modified NP is phonetically null, as in (20b), *NO*-deletion does not apply and *takai-no* 'expensive one' is derived. The same explanation applies to (21-23) below.

(21) a. $[_{NP}$ [Bill-ga katta] $[_{NP}$ hon]] (MOD insertion)
$[_{NP}$ [B-Nom bought] $[_{NP}$ book]]
➜ $[_{NP}$ [Bill-ga katta] no$[_{NP}$ hon]] (*NO*-deletion applies as *katta* is tensed [+V])
➜ $[_{NP}$ [Bill-ga katta] $[_{NP}$ hon]] (=3a)
"the book Bill bought"

b. $[_{NP}$ [Bill-ga katta] $[_{NP}$ PRO]] (MOD insertion)
[[B-Nom bought] [PRO]]
➜ $[_{NP}$ [Bill-ga katta]-no $[_{NP}$ PRO]] (*NO*-deletion does not apply) (=3b)
"the one Bill bought"

(22) $[_{NP}$ [Naomi-ga piano-o hiku]-**no** $[_{NP}$ PRO]] (=4)
$[_{NP}$ [N-Nom piano-Acc play]-**MOD** $[_{NP}$ PRO]]
'Naomi's playing of the piano'

(23) $[_{NP}$ [sutoobu-kara hi-ga dete-iru] **no** $[_{NP}$ PRO]] (=5)
$[_{NP}$ [stove-from fire-Nom exiting-be]-**MOD** $[_{NP}$ PRO]]
'fire coming out from the stove'

Under Kitagawa and Ross's (1982) analysis, whenever a null NP modifiee is involved, *no* should appear. Therefore, their analysis captures the correlation between the presence of *no* and the absence of overt modifiees. Furthermore, their analysis does not need to assume different categories for different instances of *no*, such as the pronoun *no* and the nominalizer *no*. Both of them can be analyzed as the MOD marker *no* plus a null NP, as shown in (19)-(21) for the pronoun *no*, and in (22) for the nominalizer *no*.

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[7] Japanese adjectives are considered [+V] elements since they inflects for Tense, as shown in (i).

(i) a. taka-i kuruma 'expensive car'
expensive-Pres car
b. taka-katta kuruma 'car that was expensive'
expensive-Past car

[8] The *NO*-deletion rule is required to derive the right surface form when the adjective or the relative clause modifies an overt NP, since $[_{NP}$ $[_{AP}$ *takai*] $[_{MOD}$ *no*] hon] is not a well formed surface structure.

In addition to allowing *no* to be treated uniformly, Kitagawa and Ross's analysis can also explain how the head internal relative clause (HIRC) is interpreted. In (5), the sentence can be interpreted in various ways, repeated here in (24) below.

(24) Boku-wa [sutoobu-kara hi-ga dete-iru **no**] o mita.
I-Top stove-from fire-Nom exiting-be NO-Acc saw
a. 'I saw that the fire was coming out of the stove.'
b. 'I saw the fire coming out of the stove.'
c. 'I saw the stove the fire was coming from.'

In (24b), the object of the verb is 'the fire', in (24c) 'the stove', but in (24a) it is the whole event 'that the fire was coming out of the stove'. Kitagawa and Ross analyze (24) as follows (Kitagawa and Ross's (57)):

(25) $[_{NP}[_{S}$ sutoobu-kara hi-ga dete-iru] $[_{NP}$ PRO]]
stove-from fire-Nom exiting-be
Lit. 'fire is coming out from the stove'

They propose that the availability of various interpretations, shown in (24), has to do with the interpretation of PRO. The identity of PRO is determined contextually, and depending on the context, it can refer to the entire clause or an NP within the clause.

4.2.2 A non-unified analysis of *no*

While Kitagawa and Ross's (1982) uniform analysis of *no* is quite attractive, some researchers have pointed out potential problems (McGloin 1985, Murasugi 1991). The main arguments against the uniform analysis come from the following phenomena: the fact that *no* cannot be used when it is interpreted as referring to abstract nouns and humans, the difference between the *no* in the cleft construction and the "pronoun" *no*, and the data from some dialects. In this subsection, let us examine Murasugi's arguments against their analysis and her arguments for a non-unified analysis of *no*.

Murasugi (1991) argues that there are at least three kinds of *no*; namely, the genitive Case marker *no*, the pronoun *no* and the complementizer *no*. Below I describe her arguments for each kind of *no*.

4.2.2.1 Arguments for the genitive Case marker *no*

Murasugi's argument for treating *no* that is used between two NPs or PP and NP as a dummy Case marker inserted postsyntactically is based on her observation that the distribution of such *no* corresponds to a dummy *of* in English. Contrary to the parallel commonly drawn between English possessive *'s* and Japanese *no*, as shown in (26) (Murasugi's (1) and (6)), Murasugi argues that Japanese *no* actually corresponds to English *of*, as shown in (27) (Murasugi's (7) and (8)).

(26) a. John**'s** cup
b. John-**no** kappu
J-Gen cup
'John's cup'
c. the city**'s** destruction
d. tosi-**no** hakai
city-Gen destruction
' the city's destruction'

(27) a. men-**no** syatu
cotton-Gen shirt
'a shirt **of** cotton'
b. syuukyou-**no** hito
religion-Gen person
'a man **of** religion'

She further argues that where *'s* is used for the possessive relation or an argument relation in English, it is possible to express the same relation with *of*-insertion, as shown in (28) and (29), respectively (Murasugi 1991:24 (11), (15)).[9]

(28) a. John's sister
b. a sister **of** John

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[9] Murasugi notes that the acceptability of (29d) seems to vary among native speakers of English. She suggests that it may sound degraded because abstract Case is available for the NP in this case (Murasugi 1991:24, fn.14).

(29) a. the city's destruction
b. the destruction **of** the city
c. the barbarian's destruction **of** the city
d. the destruction of the city **of** the barbarian

Based on Anderson's (1983) analysis of English *of*, which classifies *of* into two types, a dummy Case marker and a preposition, Murasugi argues that the *no* that appears between two NPs or PP and NP is a dummy genitive Case marker. Under Anderson's analysis, a dummy *of* cannot appear with a copular predicate while a preposition *of* can, as shown in (30) (Murasugi's (20) and (21)).

(30) a. * The destruction was of the city.
b. * The destruction was of the barbarian.
c. The shirt is of plaid flannel.
d. The matter is of great delicacy.

Since the *no* that appears between two NPs or PP and NP cannot appear in the predicate position as shown in (31) and (32), Murasugi argues that this kind of *no* is a dummy Case marker just like the dummy *of* (Murasugi's (23) and (24), respectively).

(31) a. oka-no ue-no hito
hill on person
'a man on the hill'
b. * Sono hito-wa oka-no ue-no *e* da.
that person-Top hill on Cop
'That person is on the hill.'

(32) a. tosi-no hakai
city destruction
'the destruction of the city'
b. * Sono hakai-wa tosi-no da.
that destruction-Top city Cop
'that destruction is the city's'

Murasugi supports a *no* insertion rule proposed by other Japanese linguists (Bedell 1972, Saito 1982, Fukui 1986), which defines the rule contextually, as in (33) (Murasugi's (27)).

(33) $[_X Y \_\_\_]$, where Y is NP or PP, X immediately dominates Y, and X is a projection of N.

She argues that a dummy Case marker *no* is not an overt realization of abstract Case because its appearance is obligatory, following Saito (1985), who argues that overt realization of abstract Case is optional but the contextually inserted Case marker is obligatory in Japanese. The contrast between the accusative Case particle *o*, which is argued to be a realization of abstract Case, and *no*, which is proposed to be contextually inserted, can be seen in the examples in (34) (Murasugi's (30)).

(34) a. John *(no) mise
J. *(Gen) store
'John's store'

b. John-ga gohan-(o) tabeta
J-Nom food-(Acc)ate
'John ate the food.'

While the absence of *no* makes (34a) ill-formed, the absence of *o* in (34b) does not affect the acceptability of the sentence.

To summarize, Murasugi's argument for treating *no* that appears between two NPs or PP and NP as a post-syntactically inserted genitive Case marker is based on the distribution of *no* that parallels English dummy *of* and the fact that *no* is obligatory in the position it appears.

4.2.2.2 Arguments for the pronoun *no*

There are three arguments Murasugi (1991) presents that motivate the analysis of *no* in examples like (1b), (2b) and (3b), repeated here in (35), as a pronoun.

(35) a. Are-wa John-**no** desu. (=1b)
that-Top John-NO Cop
'That is John's.'

b. John-wa [yasui]-**no**-o katta. (=2b)
J-Top cheap-NO-Acc bought
'John bought a cheap one.'

c. [John-ga katta]-**no**-wa yasukatta. (=3b)
J-Nom bought-NO-Top was.cheap
'The one John bought was cheap.'

Murasugi's first argument for treating *no* as a pronoun is that it has a similar distribution as the English pronoun *one*. As shown below, both *one* and the pronoun *no* require a modifier (Murasugi 1995:59 (63a))[10].

(36) Taroo-wa *(hidoi) no-o mita.
T-Top *(horrible) one-Acc saw
'Taro saw a *(horrible) one.'

The second argument for treating *no* as a pronoun rather than a genitive Case marker followed by a null NP is that it has some peculiar semantic properties: that is, it cannot refer to human beings to whom deference is due and it cannot substitute for abstract nouns (Kamio 1983, McGloin 1985).

(37) ?? Tooru-no sensei-wa kite-irassyaru kedo, Kenji-no wa
T-Gen teacher-Top come is-Hon but, K-Gen Top
mada kite-irassyaranai yoo da.
yet come-is-Hon seem
'Toru's teacher is here, but Kenji's does not seem to be here yet.'
(McGloin 1985:11 (31))

Murasugi argues that the somewhat degraded acceptability in (37) is explained if the pronoun *no* refers only to something that is not human. In that case, when we use *no* to refer to a human, we are degrading people to the level of inanimate objects. Therefore it sounds impolite to refer to someone of a higher status using the pronoun *no*.

Murasugi gives the following examples to show that *no* cannot be a substitute for abstract nouns (Murasugi's (66)).[11]

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[10] Murasugi considers *one* used without a modifier in (i) an instance of numeral *one*.
(i) John knows a Japanese song. Bill knows **one**, too.

[11] As I will discuss in section 4.3.2.1, example (38) does not really show inability of *no* to refer to an abstract noun because the sentence is bad even if we use the full noun instead of *no* as shown in (i).

(38) a. * [Sono toki-no Mary-e no izon]-wa [John-no] datta.
[that time's Mary-to 's reliance]-Top was
'*The reliance on Mary at that time was John's.'
b. [Sono hon]-wa [John-no] da.
that book-Top is
'That book is John's.'

She argues that the contrast between (38a) and (38b) is due to the fact that *no* can refer to a concrete object 'book' in (38b) but not to an abstract noun 'reliance' in (38a).

Murasugi's opposition to Kitagawa and Ross's proposal treating the *no* discussed above as the genitive Case marker modifying a null NP is as follows: if *no* is a pronoun, it can have a lexical specification that rules out abstract nouns and human reference. If the structure involves a null NP that is modified by a *no* phrase, however, she argues that we cannot explain why such a semantic restriction should apply to a null NP. Therefore, *no* in the above examples should be a pronoun and the restriction must be specified lexically.

The third argument for the pronoun *no* comes from the fact that some dialects allow the genitive *no* and the pronoun *no* to appear successively (Yuzawa 1953:302). The following example is cited in Murasugi (1991:70).[12]

(39) Kore-wa watasi-**no** **no** dewa arimasen.
this-Top **I-Gen** **one** is-not
Lit. 'This is not my one.'

Also, in the Toyama dialect, the genitive and the pronoun have different phonetic forms. The genitive *no* in standard Japanese is also realized as *no* in the dialect but the pronoun

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(i) * Sono toki-no Mary-e no izon-wa John-no izon datta.
that time's Mary-to 's reliance-Top reliance was
'*The reliance on Mary at that time was John's reliance.'

[12] It is not clear which dialect Yuzawa is talking about in the example given in (39). He does not mention any dialectal study. But (39) is not at all acceptable in the standard Japanese.

no is realized as *ga* in this dialect. The following data demonstrate the correspondence between the dialect and standard Japanese (Murasugi 1995:72 (86-87)).

(40)

Toyama Dialect	Standard Japanese
a. siroi ga white one	a'. siroi no white one
b. John no ga John's one	b'. John no John one
c. Arizona kara no ga from Gen one 'the one from Arizona'	c' Arizona kara no from one 'the one from Arizona'
d. hasitte iru-ga running-one 'the one who is running'	d'. hasitte iru-no running-one 'the one who is running'

The contrast between the Toyama dialect and standard Japanese suggests that there is an element other than the genitive *no* that is involved in a phrase like *John-no* 'John's' since in (40b) *ga* is used in addition to the genitive *no* in the Toyama dialect. It is reasonable to treat this *ga* as a pronominal element. Murasugi states that *ga* in the Toyama dialect has the same properties as the pronoun *no* discussed above (i.e., an inability to refer to abstract nouns and people of a higher status), and hence concludes that *ga* and *no* are both pronouns, distinct from the genitive Case marker.

4.2.2.3 Arguments for complementizer *no*

Murasugi gives two arguments against treating *no* in a cleft sentence like (41) below as the genitive *no* or the pronoun *no*.

(41)

[Yamada-ga	atta]-no	wa Russell	da.
Y-Nom	met	Top	Cop

'It was Russell that Yamada met.'

First, she argues that *no* in the cleft construction cannot be the genitive *no* because it is realized as *ga* in the Toyama dialect (Murasugi 1991: 95 (147a)).

(42) [Yamada-ga atta]-ga wa Russell da.
Y-Nom met Top Cop
'It was Russell that Yamada met.'

Since *ga* appears as a pronoun as well as in the cleft construction in the Toyama dialect, *ga* here could be a pronoun. However, she argues that *no* in the cleft construction cannot be the pronoun *no* because they have different properties, as seen in the following examples (Murasugi 1995:96 (149) (150)):

(43) Taroo-wa [[asoko-de tabete orareru] hito/*no] to hanasi-o sita.
T-Top there-at is-eating.Hon person/*NO with talk-Acc did
'Taro talked to the person/one who was eating there.'

(44) [[Asoko-de tabete orareru] no]-wa Tanaka sensei desu.
there-at is-eating.Hon NO-Top teacher Cop
'It is Prof. Tanaka that is eating over there.'

Since the pronoun *no* in (43) cannot refer to a human and makes the sentence unacceptable, Murasugi argues that (44) should be unacceptable if *no* is also the pronoun *no*. She concludes that (44) is grammatical because *no* in (44) can refer to a human, and therefore, it cannot be the same *no* as the one in (43). As a result, she follows Hoji's (1990) analysis of the cleft construction and takes *no* in (44) to be a complementizer (C). Therefore the structure of (44) is analyzed as (45) below (Murasugi's (161), p.99).

(45) $[_{CP}$ $[_{S}$Asoko-de tabete orareru] $[_{C}$ no]]-wa $[_{NP}$ Tanaka sensei] desu.
there-at is-eating.Hon NO-Top teacher Cop
'It is Prof. Tanaka that is eating over there.'

Murasugi argues that the reason why the topicalized element in the cleft construction (e.g., the *no* phrase in (45)) can be a human is because the pronoun *no* is not involved in the cleft construction.

In sum, Murasugi's analysis requires three different kinds of *no*; the genitive Case *no*, the pronoun *no*, and the complementizer *no*, in order to account for the following phenomena: (i) pronominal *no* cannot be a substitute for abstract nouns and humans, (ii) *no* in the cleft construction does not have the same constraints as the pronoun *no*, and (iii) the pronoun *ga* is used in the Toyama dialect in the position where *no* appears in standard Japanese. She argues that those phenomena cannot be explained if all the *no*'s are analyzed uniformly as a modification marker.[13]

4.3 Towards a unified analysis

While Murasugi's analysis is reasonable, I suggest some possible solutions to the problems raised against the unified analysis of *no* and propose an analysis of *no* as uniformly a C.

4.3.1 Sketch of the analysis

I propose an analysis of Japanese modifiers as uniformly CP. *No* may appear in the projection of C depending on the structure of the modified noun phrases. In particular, following Cheng's (1991) Clausal Typing Hypothesis, I propose that *no* is

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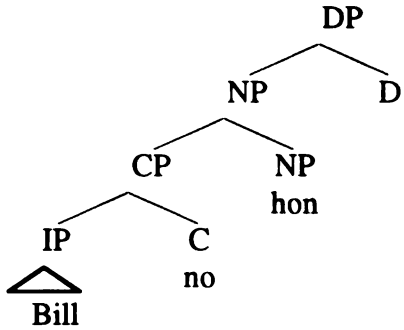
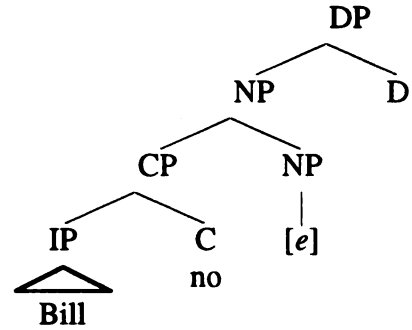
[13] One aspect of Murasugi's (1991) analysis that overlaps with Kitagawa and Ross's (1982) analysis is that the genitive Case marker *no* is inserted contextually. For Murasugi, the *No*-insertion rule targets only NP and PP modifiers in the context of [NP NP, NP] or [NP PP, NP]. The *No*-deletion rule deletes the genitive *no* when the modified NP is a pronoun *no*. On the other hand, for Kitagawa and Ross, the *No*-insertion rule targets all modifiers of NP. Then, the *No*-deletion rule deletes *no* when a modifier is a [+V] Tensed category. Therefore, in order to defend the unified analysis of Kitagawa and Ross (1982), it is necessary to show that the pronoun *no* and the complementizer *no* are analyzable as having [modifier] *no* [NP] structures. If this is possible, then, the only difference between the MOD marker *no* and the genitive Case marker *no* is that any instance of *no* that appears with a modifier can be analyzed as the MOD marker *no*, whereas the genitive Case marker *no* is supposed to be only the *no* that appears between two NPs or between an NP and a PP. It seems that the genitive Case marker *no* can be subsumed under the MOD marker *no*. Therefore, in this chapter, I concentrate on reducing all instances of *no* to a syntactic element that appears when modifications of overt and covert noun phrases are involved. I will leave out the issue of whether it is really necessary to treat some of them as a genitive Case marker rather than a modification marker.

required in C in order to "type" the CP as a modifying clause.[14] I will show that an overt C is required when the modified NP is null because of the way the null NP is licensed structurally. Under this analysis, *no* in the various constructions illustrated in section 4.1 are uniformly treated as a C. Let us present schematic structures for some of the examples.

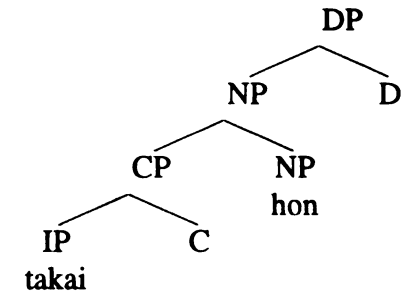
(46) a. Bill-no hon 'Bill's book'



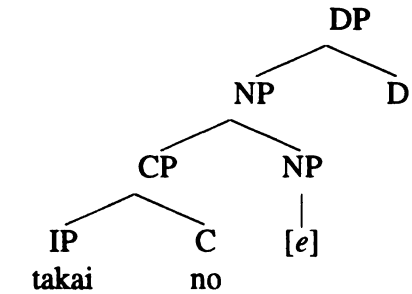
b. Bill-no 'Bill's' (=1ab)



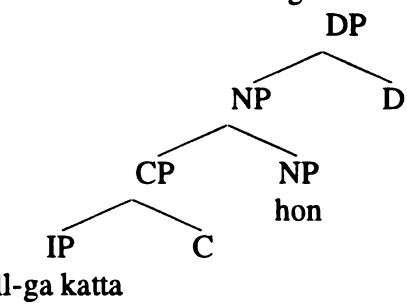
(47) a. takai hon 'expensive book'



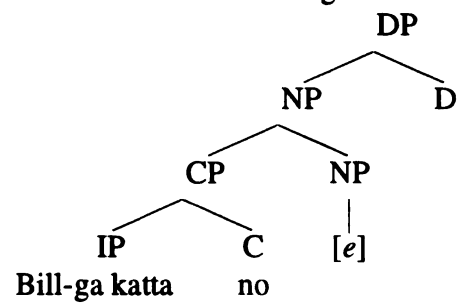
b. takai no 'expensive one' (=3ab)



(48) a. Bill-ga katta hon
B-Nom bought book
'the book Bill bought'



b. Bill-ga katta no (=4ab)
B-Nom bought
'the one Bill bought'



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[14] Cheng (1991) proposes Clausal Typing Hypothesis, which states that every clause needs to be typed. A clause can be typed by having an overt functional head or having its Spec filled.

In (47a) and (48a), when an overt NP is modified, *no* is not present, while in (47b) and (48b), *no* is required when the modified NP is covert. However, when a noun phrase modifies another NP, this description does not apply, since *no* is required in both (46a) and (46b). I will show that this follows from the CP internal structure of (46). A more detailed analysis will be provided in section 4.3.3. First we turn to some of the issues raised against the unified analysis of *no* and propose ways to deal with the problems without positing the pronoun *no*.

4.3.2 Responses to problems of the unified analysis

Let us recall some of Murasugi's arguments against Kitagawa and Ross's (1982) unified analysis of *no*. There are three main issues: i) pronominal *no* cannot be used when it is interpreted as referring to an abstract noun or human, ii) the difference between *no* in cleft and a pronoun *no*, and iii) dialect data.

4.3.2.1 Abstract vs. Concrete (and human vs. non-human)

The fact that *no* cannot refer to abstract nouns is illustrated using the following examples repeated from (38) (Murasugi 1991:(66)).

(49) a. * [Sono toki-no Mary-e no izon]-wa [John-no] datta.
[that time's Mary-to 's reliance]-Top was
'*The reliance on Mary at that time was John's.'

b. [Sono hon]-wa [John-no] da.
that book-Top is
'That book is John's.'

In (49b), *no* can "replace" *hon* 'book', which is a concrete noun, while in (49a), *no* cannot "replace" *izon* 'reliance', which is an abstract noun.[15] Under Kitagawa and Ross's analysis, *John-no* in (49) is analyzed as (50).

(50) $[_{NP}\ [_{NP}$ John] no $[_{NP}\ pro\ ]]$

Murasugi argues that since *pro* in Japanese can generally stand for an abstract noun, (49) cannot involve *pro*. For example, in (51b), *pro* can stand for *sinnen* 'belief', which is an abstract noun (Murasugi 1991:70(84)).

(51) a. Sinnen-ga$_i$ John-o kaeta.
belief-Nom J-Acc changed
'The belief$_i$ changed John.'

b. *pro*$_i$ John-o kaeta.
J-Acc changed
'*pro*$_i$ changed John.'

Hence she concludes that *no* in (49) is a pronoun and is lexically specified for concrete nouns. However, her line of argument is only tenable under the assumption that *pro* that stands for a full argument in (51) is the same entity as the *pro* in (50). According to Déchaine and Wiltschko (2002), not all pronouns have the same syntactic or semantic properties. They attribute this fact to the different syntactic structures of various pronouns. Some are *pro*-DPs, others may be *pro*-NP, and yet some others may be some projection between NP and DP (which they call ϕP). What is relevant for our analysis here is that the *pro* that functions as an argument by itself is a *pro*-DP, while the *pro* that is modified by other phrases is likely to be some projection smaller than DP. If they are both *pro*s and can have different properties, then the fact that *pro* in (51) can refer to an

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[15] I use "replace" in a descriptive sense without committing to the analysis of *no* as a pronoun that structurally replaces a full noun.

abstract noun but not in (50) is not an argument against the structure in (50). It may simply mean that *pro* in (50) has different properties.

In addition, as mentioned in footnote 4, (49a) is not acceptable even when we provide an overt noun phrase, as shown in (52).

(52) * [Sono toki-no Mary-e no izon]-wa [John-no izon] datta.
[that time's Mary-to 's reliance]-Top reliance was
'*The reliance on Mary at that time was John's reliance.'

Therefore, (49a) is ill-formed independent of whether *no* there can "refer" to an abstract noun or not. In addition, a sentence like (53) sounds fine to my ear even though *no* must "refer" to an abstract noun.

(53) [John-no sinnen]-wa [Bill-no] yori tuyoi.
J-Gen belief-Top B-Gen than strong
'John's belief is stronger than Bill's.'

It is true that there are cases in which an abstract noun cannot be "replaced" by *no* as shown below (Kamio 1983:82 (14)).

(54) a. katai sinnen-o motta hito
firm belief-Acc have person
'the person who has a firm belief'
b. * katai no-o motta hito
firm one-Acc have person

Therefore, it seems that abstract nouns may or may not be "replaced" by *no* depending on various factors. Furthermore, as pointed out by McGloin (1985), there are cases in which even concrete nouns cannot be "replaced" by *no* (McGloin's (24e).

(55) * Ee-kurasu-wa Mriko-no uti-de paatii-o sita. Bii-kurasu-wa
A-class-Top M-Gen house-at party-Acc did. B-class-Top
Taroo-no de paatii-o sita.
T-Gen at party-Acc did
Intended: 'Class A had a party at Mariko's house. Class B had a party at Taro's.'

(55) is unacceptable because *Taroo-no* cannot be interpreted as *Taro's house* for some reason. Therefore, we cannot explain the distribution of *no* by simply saying that *no* is a pronoun with a lexical specification for concreteness. We can just as easily say that *Bill-no* in (53) involves an empty NP as shown in (50) and whether such an empty NP may be licensed in a certain sentence depends on various factors.[16]

In a similar way, the fact that "pronoun" *no* cannot refer to humans could be due to the specification of *pro* that is licensed in the structure NP-*no* [*pro*].[17] Then again, the fact is not necessarily an argument for positing the pronoun *no* distinct from the modification marker *no* in regular NP-*no* NP structures. Therefore, Murasugi's argument for the pronominal *no* does not rule out the possibility of analyzing the "pronoun" *no* as in (56) instead of (57) below.

(56) [NP John] [no] [NP Ø] (unified analysis)
'John's one'

(57) [NP John] ~~no~~ [NP no] (pronoun analysis)
'John's one'

If (56) is a possible structure, the *no* in (56) can be analyzed as the genitive Case marker in Murasugi's analysis or the MOD marker in Kitagawa and Ross's analysis. In either case, the pronoun *no* can be reduced to the *no* plus a null noun phrase.

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[16] Recall that *katai no* in (54b) would have the structure in (i) under Kitagawa and Ross's analysis.
(i) [katai] no [*pro*]

[17] While *pro* in the modified structure in Japanese cannot refer to humans, we see an opposite phenomenon in English examples in (i).
(i) a. The rich should take care of the poor.
b. The young and the old were all gathered in one place.
In those examples, *the rich* may have a structure that involves *pro* as in [DP the [rich [pro]]], but it seems that this *pro* can only refer to humans. It seems that, languages allow *pro* to be specified for different semantic features.

4.3.2.2 Cleft vs. Relative Clause

Now, can we account for the contrast between (43) and (44), which are repeated here in (58-59) below, without positing the pronoun *no*?

(58) Taroo-wa [[asoko-de tabete orareru] hito/*no] to hanasi-o sita. (HERC)
T-Top there-at is-eating.Hon person/*NO with talk-Acc did
'Taro talked to the person/one who was eating there.'

(59) [[Asoko-de tabete orareru] no]-wa Tanaka sensei desu. (Cleft)
there-at is-eating.Hon NO-Top teacher Cop
'It is Prof. Tanaka that is eating over there.'

(58) contains a relative clause, and the sentence becomes unacceptable when the relative head *hito* 'person' is "replaced" by *no*. On the other hand, *no* can be used in the cleft sentence (59). Under Kitagawa and Ross's analysis, (58) with *no* and (59) can be analyzed as in (60) and (61), respectively.

(60) *$[_{DP}[_{CP}[_{IP}$ Asoko-de tabete-orareru] $[_{MOD}$ no]] $[_{NP}\ e]]$ to hanasi-o sita.
there-at eating-Cop.Hon NO with talk-Acc did
'I talked to the one who was eating there.'

(61) $[_{DP}\ [_{CP}[_{IP}$Asoko-de tabete-orareru] $[_{MOD}$ no]] $[_{NP}\ e]]$-wa] Tanaka sensei desu.
there-at eating-Cop.Hon NO -Top teacher Cop
'It is Prof. Tanaka that is eating over there.'

According to Murasugi's analysis, (60) cannot be the right structure because if the structure involved a null NP, the null NP should be able to refer to a human, and hence, the sentence should be grammatical but the reality is otherwise. Therefore Murasugi concludes that *no* in (60) is a pronoun. As a result *no* cannot be used in (58) because the "pronoun" *no* cannot refer to humans.

As for the structure of (59), Murasugi does not discuss a possibility of analyzing it as in (61). Instead she states that the *no*-phrase in (59) seems to be able to refer to a human and hence this *no* cannot be a pronoun. Therefore her conclusion is that the *no* in

(58) is a pronoun but the *no* in (59) is a complementizer (following Hoji 1990). To illustrate, (58) and (59) have the structures in (62) and (63), respectively.

(62) * [$_{NP}$[$_{CP}$ Asoko-de tabete-orareru] [$_{NP}$ no]] to hanasi-o sita.
there-at eating-Cop (+Hon) one with talk-Acc did
'I talked to the one who was eating there.'

(63) [$_{CP}$[$_{IP}$Asoko-de tabete-orareru] [$_{C}$ no]]-wa [$_{NP}$ Tanaka sensei] desu.
there-at eating-Cop (+Hon) -Top teacher Cop
'It is Prof. Tanaka that is eating over there.'

However, there is a way to explain the difference in acceptability between (58) and (59) without positing two distinct categories for *no*, which allows us to maintain the unified analysis of Kitagawa and Ross (1982) shown in (60) and (61) above. Under their analysis, the *no* phrases in (60) and (61) have the same structure; there is a null NP that is modified by a Tensed clause and the *no* is a modification marker. The difference between the *no* phrases in (60) and (61) is that the *no* phrase in (60) is an argument of the predicate, and hence it must be referential. That is, it must refer to "*a person*" *who was eating over there*. However, as discussed above, null NPs that are modified cannot refer to human beings.[18] Therefore, the use of the *no* phrase in (60) is not acceptable.

On the other hand, the *no* phrase in the cleft construction in (61) is a predicate; it describes what Prof. Tanaka is doing rather than refers to him. Since the *no* phrase in (61) does not refer at all, the fact that the null NP cannot refer to humans does not affect the grammaticality in (61). Therefore, Murasugi's argument that (60) is unacceptable because the *no* in (60) cannot refer to a human but (61) is acceptable because the *no* in (61) can refer to a human is not the best description of the data.

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[18] When null NPs are used to refer to a human, it sounds derogatory.

In sum, the contrast between (60) and (61) is not due to *no*'s ability to refer to humans in (61) and the lack of that ability in (60), but rather, because the null NP in (61) does not refer at all since the *no* phrase is a predicate of the clefted noun phrase, while the null NP in (60) is the head of the argument DP and therefore refers to a human. Given that both of the *no* phrases in (60) and (61) contain a null NP that cannot refer to a human, it is natural that (60), in which the *no* phrase must refer to a human, is unacceptable, and (61), whose *no* phrase is not referential, is acceptable. Therefore, this analysis allows us to treat *no* in both constructions uniformly.

4.3.2.3 Reinterpreting dialect data

The last issue I need to deal with is the dialect data, repeated in (64).

(64)

Toyama Dialect	Standard Japanese
a. siroi ga white one	a'. siroi no white one
b. John no ga John's one	b'. John no John one
c. Arizona kara no ga from Gen one 'the one from Arizona'	c' Arizona kara no from one 'the one from Arizona'
d. hasitte iru-ga running-one 'the one who is running'	d'. hasitte iru-no running-one 'the one who is running'

In the Toyama dialect, the genitive (or modification marker) *no* is realized as *no* just like standard Japanese as in (64bc), but a morpheme *ga* appears when a pronominal element is required. The way Murasugi interprets these data is that since *no* is used in standard Japanese where the pronominal *ga* is used in the Toyama dialect as in (64a') and (64d'), those *no* should be treated as pronouns. Note that in (64b-c), both the genitive *no* and the

pronoun *ga* appear in the Toyama dialect, but only one *no* is realized in standard Japanese, as in (64b'c'). In order to argue that those *no* in standard Japanese are pronominal, Murasugi has to adopt the genitive *no* deletion rule proposed by Okutsu (1974), which deletes the genitive *no* when it precedes the pronominal *no*.[19] Therefore (64b') is analyzed as follows:

(65) John ~~no~~ [$_{NP}$ no]
Gen one
'John's one'

I propose that there is another way to interpret these data. Instead of drawing a parallel between *no* and *ga* in (64b-b'), we can say that what corresponds to Toyama's *ga* in standard Japanese is the null pronoun, as shown in (66).

(66) a. Toyama dialect: John-no [$_{NP}$ **ga**] 'John's one'
b. Standard: John-no [$_{NP}$ ***pro***] 'John's one'

Under this approach, we do not need the *no* deletion rule, but the question now is how to account for the difference between (64a) and (64a') (and similarly between (64d) and (64d')). In those examples only the pronoun *ga* appears overtly in the Toyama dialect while only *no* is overt in standard Japanese. I propose the structures in (67) for those phrases.

(67) a. Toyama: [[$_{CP}$ siroi [$_{C}$ *e*]] [$_{NP}$ ga]]
b. Standard: [[$_{CP}$ siroi [$_{C}$ no]] [$_{NP}$ *pro*]]
white one

In the present analysis, *no* is the head of a modifying clause which must be overt when the modified NP is null. In the Toyama dialect, since the NP has an overt pronoun, the

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[19] Genitive *no* is not deleted when it follows the "pronoun" *no*, as shown in (i).
(i) John-no kuruma-no mado ga wareta. Boku-**no no** mado-wa warenakatta.
J-Gen car-Gen window-Nom broke. My-**one Gen** window-Top didn't break
'John's car's window broke. Mine's window did not break.'

modifier clause does not need an overt head to fill the position of C. [20] That is, the fact that (67a) does not require *no* is due to the same reason why *no* is not required in *siroi kutu* (white shoe), in which the modified NP is overt.

To summarize, none of the arguments for the pronoun *no* is absolute, and it is possible to account for the same range of data without positing the pronoun *no*. More specifically, the instance of pronoun *no* can be analyzed as the genitive Case or MOD marker plus a null NP. It is also possible to analyze a complementizer *no* proposed for the *no* in the cleft construction to be a C followed by a null NP, and hence, we can equate this *no* with a MOD marker *no* as well.

4.3.3 *No* as C analysis

Now that we have seen possible ways to subsume the pronoun *no* and the complementizer/nominalizer *no* under the MOD marker *no*, we can discuss how we may implement the ideas sketched in section 4.3.1. First let me recapitulate basic distributions of *no* schematically:

(68)

	Standard Japanese	Toyama dialect
a.	NP no NP	NP no NP
b.	PP no NP	PP no NP
c.	NP no [$_{NP}$ *e*]	NP no [$_{NP}$ *ga*]
d.	PP no [$_{NP}$ *e*]	PP no [$_{NP}$ *ga*]
e.	S no [$_{NP}$ *e*]	S ~~no~~ [$_{NP}$ *ga*]
f.	AP no [$_{NP}$ *e*]	AP ~~no~~ [$_{NP}$ *ga*]
g.	S ~~no~~ NP	S ~~no~~ NP
h.	AP ~~no~~ NP	AP ~~no~~ NP

Descriptively, *no* is required in standard Japanese when NP or PP modifies an NP regardless of whether the modified NP is overt or covert as in (68a-d). However, *no*

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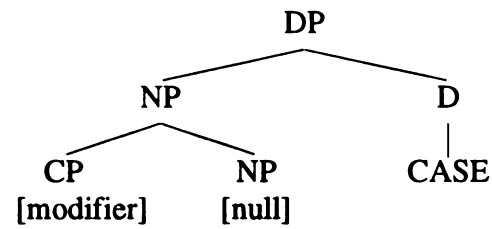
[20] Details of this analysis will be discussed and motivated in the next section.

cannot appear when the modifier is a clause or an AP and the modified NP is overt as indicated in (68g,h). Interestingly, though, *no* shows up again when the NP that is modified by a clause or an AP is covert, as shown in (68e,f).

To repeat my proposal, the basic idea is that the overt *no* is required when the head of a modifying clause (CP) is otherwise empty. I propose that the reason why the null NP modifiee seems to require the presence of *no* in (68e,f) has to do with the way the null NP is licensed. I assume that the null NP needs to be licensed by a functional head that takes the NP as its complement. In the present analysis, the relevant functional head is a D, as shown in (69).

(69)



However, as pointed out in Saito and Murasugi (1987:94, footnote 9), a functional head like D and C cannot license an empty complement by itself and needs its specifier position to be filled.[21] Therefore, we posit (70) as the licensing condition of the null NP modifiee.

(70) The null NP modifiee is licensed in the complement position of D when the Spec DP is filled.

Therefore, a null NP is licensed in the following configuration:

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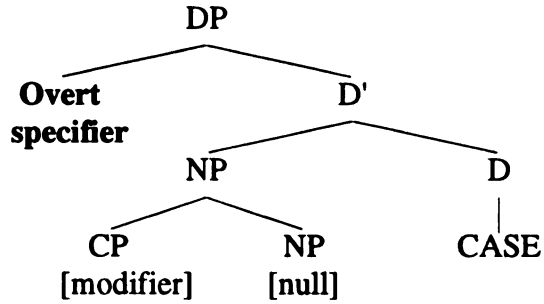
[21] This is true in the following English examples (Saito and Murasugi 1987:94 (iii)).

(i) I know that Mary bought something, but I don't know [$_{CP}$ *(what) [$_{C'}$ [$_{C}$ [$_{IP}$ [e]]]]]

(ii) I know that Mary left early, but I don't know [$_{CP}$ *(why) [$_{C'}$ [$_{C}$ [$_{IP}$ [e]]]]]

In the above examples, the complement of C is a null IP, and it cannot be licensed without WH-phrase in the SpecCP.

(71)



As for the question of what the syntactic category and the function of this *no* is, I propose that *no* in all the examples (except for the *ga-no* conversion in (7)) introduced at the beginning of this chapter, repeated below in (72), are Cs and its function is to "type" the CP as a modifying clause in Cheng's (1991) sense when the CP does not contain any overt element in its projection.[22]

(72) a. Kore-wa Bill-**no** hon desu. (NP modifiers)
this-Top Bill-NO book Cop
'This is Bill's book.'

b. Are-wa John-**no** desu.
that-Top John-NO Cop
'That is John's.'

c. John-wa [yasui]-**no**-o katta. (Adjectival modifiers)
J-Top cheap-NO-Acc bought
'John bought a cheap one.'

d. [John-ga katta]-**no**-wa yasukatta. (HERC)
J-Nom bought-NO-Top was.cheap
'The one John bought was cheap.'

e. Boku-wa Naomi-ga piano-o hiku-**no**-o kiita. (Nominalizer)
I-Top N-Nom piano-Acc play-NO-Acc heard
'I heard Naomi play the piano.'

f. Boku-wa [sutoobu-kara hi-ga dete-iru **no**] o mita. (HIRC)
I-Top stove-from fire-Nom exiting-be NO-Acc saw
'I saw that the fire was coming out of the stove.'
'I saw the fire coming out of the stove.'
'I saw the stove the fire was coming from.'

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[22] The present analysis of *no* as a C is different from Murasugi's analysis of *no* in a cleft as a C. Under her analysis, the *no* phrase in a cleft sentence does not involve a null NP, and therefore, the CP headed by *no* in the cleft sentence is not a modifier. In my analysis, all CPs whose head is *no* are treated as modifiers.

g. [Taroo-ga [*e*]$_i$ atta-**no**] wa Yamada sensei$_i$ desu. (Cleft)
T-Nom met-NO Top Yamada teacher Cop
'It was Prof. Yamada that Taro met.'

The present approach is in some sense an interpretation of Kitagawa and Ross's (1982) analysis of *no* as a modification marker (but not completely). It differs from their analysis in that *no* has a specific syntactic position and that my analysis does not need *NO*-deletion rule that is required in both Kitagawa and Ross's analysis and Murasugi's analysis. In my analysis, the presence and the absence of *no* in various cases are connected to the syntactic structure of modified noun phrases. Now let us discuss how these ideas may be implemented formally for each case; the relative clause modifier, NP modifiers, and PP modifiers.[23]

4.3.3.1 Relative clause modifiers

I first discuss the structure of the relative clauses introduced in (3), repeated here in (73).

(73) Head External Relative Clause (HERC)
a. [Bill-ga katta hon-ga] takakatta.
B-Nom bought book-Nom was.expensive
'The book Bill bought was expensive.'

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[23] I will not illustrate the *no* phrases in the complement clause (72e), HIRC (72f) and the cleft construction (72g) because they essentially have the same structures as the HERC with the null relative head analyzed in (75), following Kitagawa and Ross's analysis. Therefore, the account of HERC in (75) should apply to these constructions in the same way. Schematic structures of the *no* phrases in (72e-g) are given in (i)-(iii), respectively.

(i) [DP [CP [IP ... hiku] [C no] [NP null] -o] (=72e)
play -Acc

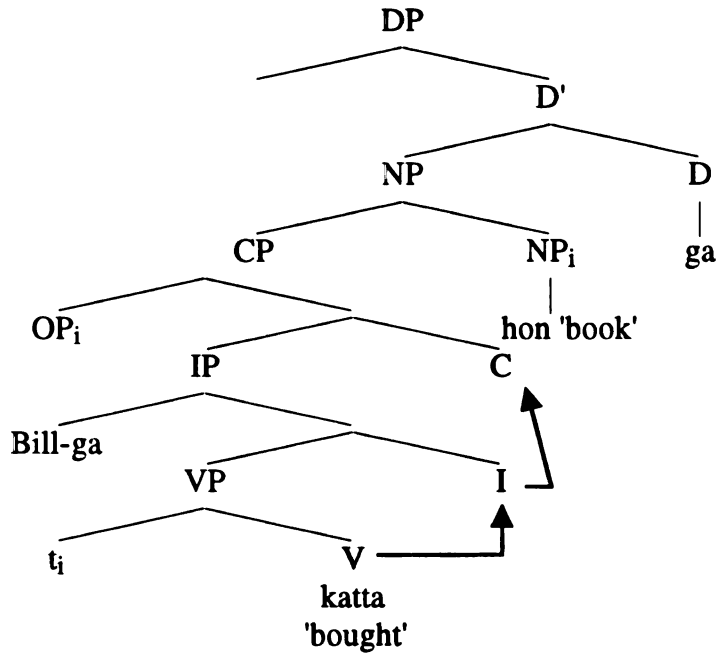
(ii) [DP [CP [IP ... dete-iru] [C no] [NP null] -o] (=72f)
exit-ing -Acc

(iii) [DP [CP [IP ... atta] [C no] [NP null] -wa] (=72g)
met -Top

b. [John-ga katta-**no**-ga] yasukatta.
J-Nom bought-NO-Nom was.cheap
'The one John bought was cheap.'

It has been convincingly argued that the modifiers in the relative clauses are CPs (Kayne 1994, Kaplan and Whitman 1995, Hiraiwa 2000). I assume that restrictive relatives clauses are adjoined to a phrase smaller than DP and that the modified noun phrase as a whole form a DP. Therefore, *Bill-ga katta hon-ga* in (73a) is analyzed as in (74) below.[24]

(74) Relative Clause with an overt relative head



According to Hiraiwa (2000), V raises to C and inflects for the adnominal form.[25] If this is correct, under the present analysis, *no* cannot appear in C in (74) since the C is already

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[24] See Kaplan and Whitman (1995) for the argument for CP analysis of Japanese relative clauses.

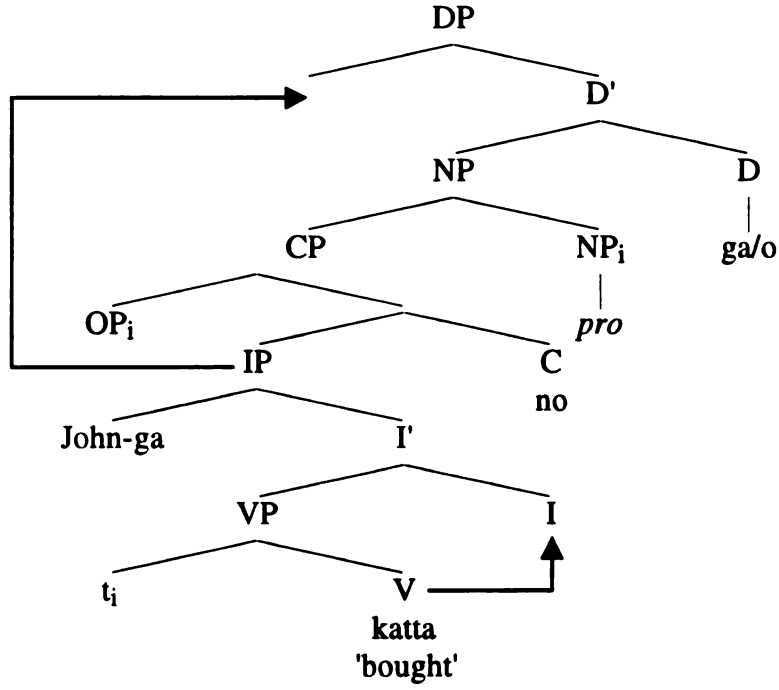
[25] In the present day Japanese, the adnominal form does not have an inflection distinct from the sentence final form. Historycally, however, they had different inflections. For example, the past tense morpheme was expressed with *-keri* in the sentence final form (*syuusikei*) while adnominal form (*rentaikei*) *-keru* was used in the modifying clause. The following example is taken from (Kaplan and Whitman 1995:32).

(i) wotoko-no ki-tari-ker-u kariginu
man-Gen wear-Perf-Past-Adnom hunting clothes

filled by the raised V. Therefore, *no* does not appear in (73a). As proposed in Chapter 2 and 3, Case particles are Ds in the present analysis, and hence, the subject noun phrase in (73a) is a DP, as shown in (74).

On the other hand, when the relative head is not overt as in (73b), I propose that the structure is analyzed as in (75) below.

(75) RC with an empty relative head



In this structure, the head of the relative clause is a null NP and this null NP needs to be licensed. As stated in (70), since the Spec DP needs to be filled in order for D to license the null NP, I propose that IP moves to Spec DP in order to aid the determiner head to license its null complement.[26] I assume that when IP moves to Spec DP, V cannot raise

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'the hunting clothes the man had been wearing' (*Ise Monogatari* 1)

[26] The fact that 'to' is required in the following English sentence is similar to the requirement for *no* in (75) in Japanese (Saito and Murasugi 1987:94 (iv)).

(i) a. Mary wants me to go to college, but I_i don't want $[_{CP}\ [_{IP}\ PRO_i\ [_I\ [_I$ to] $[_{VP}$ e]]]]

b. * Mary wants me to go to college, but I_i don't want $[_{CP}\ [_{IP}\ PRO_i\ [_I\ [_I\ ]\ [_{VP}$ e]]]]

In (ib), a covert I cannot license an empty VP complement even though the SpecIP is filled. It requires an overt I as in (ia).

to C. As a result, C is empty if *no* does not fill the position. Following Cheng's (1991) Clausal Typing Hypothesis, I propose that *no* is required in C in order to "type" the CP as a modifying clause.[27] I assume that the null operator in the Spec CP is not enough for the typing of clauses and the typing requires some overt element inside the CP projection in Japanese.[28]

4.3.3.2 NP and PP modifiers

In the literature, it is commonly assumed that *no* in (1), repeated here in (76) below, is a genitive Case particle that is inserted post-syntactically in a way that parallels *of*-insertion in English (Murasugi 1991) or licensed by D (Fukui and Nishigauchi 1992, Miyagawa 1993). On the other hand, Okutsu (1978) argues against treating those instances of *no* as a Case particle, and instead, proposes that those instances of *no* are an adnominal form of copula *da*. While his analysis may not be totally incompatible with the present analysis, I keep my analysis of *no* as simply C rather than a copula.[29] Therefore, I propose the structure of *Bill-no hon* 'Bill's book' in (76a) as in (77).

(76) a. Kore-wa Bill-**no** hon desu.
this-Top Bill-NO book Cop
'This is Bill's book.'

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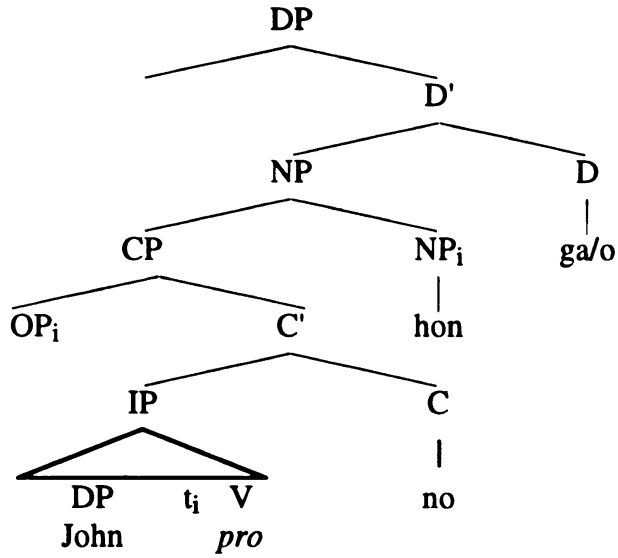
[27] Adjectival modifiers are argued to have the same structure as relative clauses in Japanese (Kuno 1972, Whitman 1981, Nishiyama 1999). Therefore, a phrase like *takai no* 'expensive one' is analyzed as in (i).
(i) $[_{NP}\,[_{CP}\,[_{IP}$ takai $]\,[_{C}$ no$]\,[_{NP}$ pro$]]$
The presence of *no* in (i) can be explained in the same way as in (75).

[28] I make this assumption because, if the null operator in Spec CP is enough to type a modifying clause, *no* is not necessary in C.

[29] If we follow Hiraiwa's proposal for the adnominal form formation, the adnominal form of copula is created by moving to C through various functional heads (or enter an AGREE relation with them). Then, Okutsu's analysis of *no* as an adnominal form of copula can be interpreted as that the copular *no* is in C. Therefore, it is partially compatible with my claim that *no* is in C. However, *no* also appears in modifiers that do not seem to involve copular verbs, like in relative clauses and the cleft construction. Therefore, we cannot achieve a greater uniformity if we treat the *no* in examples like (76) as an adnominal copula.

b. Are-wa John-**no** desu.
that-Top John-NO Cop
'That is John's.'

(77) With an overt NP



In this analysis, *Bill-no hon* 'Bill's book' has the structure that is like a relative clause, i.e., *the book that belongs to John* (or any other contextually relevant interpretations are possible, i.e., *the book John wrote, the book John stole,* etc). The point is that because V is covert, its content is interpreted according to convention or contexts.[30/31]

Furthermore, since there is no overt V element that can raise to C, *no* is required to fill C,

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[30] Japanese seems to allow a covert V that is contextually interpreted in the matrix clause asl well. For example, various interpretations are possible for (i).

(i) Watasi-wa unagi.
I-Top eel

If uttered at a restaurant by a customer to a waiter, (i) would mean "I want an eel dish." If uttered in a context where people are talking about what kind of fish they hate, (i) would mean "I hate eels." An important point is that, although (i) does not have an overt V, it feels like a complete sentence, not like a telegraphic speech. Therefore, it may be plausible to analyze it as having a *pro* verb, as shown in (ii).

(ii) [TopP watasi-wa [IP t [VP unagi [V pro]]]]

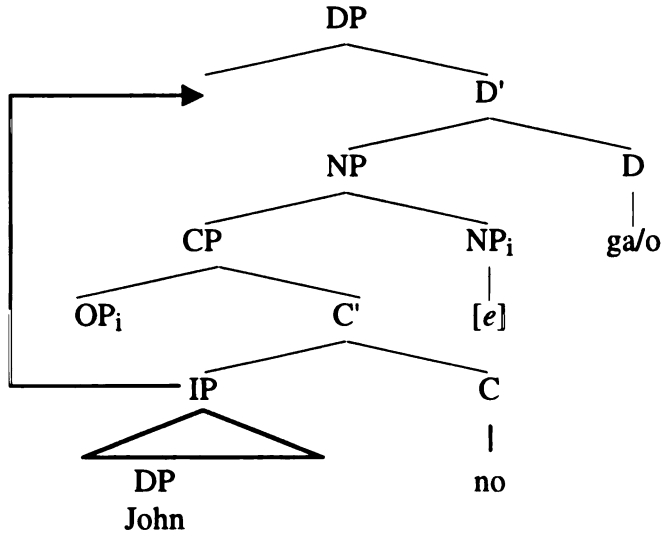
These kinds of sentences are first discussed in detail in Okutsu (1978). I assume that sentences like (i) involve *pro* V and it is interpreted contextually. The IP in (77) is interpreted in the same way.

[31] There is also the issue of how the DP like *John* gets Case in the structure like (77). If *John* is assigned Case in the IP here, we need to account for why *John* does not appear with a Case particle. Alternatively, we might be able to treat *John* as a predicate, in which case it does not need Case. I will not elaborate the exact analysis in this dissertation.

unlike the structure given in (74). This requirement follows from Cheng's (1991) Clausal Typing Hypothesis since a clause can be typed either by having an overt functional head or having its Spec filled. In (77) the operator movement creates a predicate that can adjoin to NP but the CP needs to be "typed" as a modifier by having C filled since Spec CP is not overt and there is no overt V that can move to C and fill the position.

On the other hand, when the head of the modified NP is null as in (76b), the structure is analyzed as shown in (78).

(78) With a null NP



The basic structure is the same as (77): *no* is required in C because nothing overt fills the CP projection otherwise. The only difference is that, since the modified NP is null, IP must move to Spec DP in order to help D license its null NP complement, according to the licensing condition of the null NP proposed in (70).

4.3.3.3 Supporting evidence

The structural analysis proposed in (74)-(78) makes a prediction about which phrase may or may not be modified by other modifiers. That is, in (75) and (78), Spec DP must be filled in order to license a null NP complement of D, and therefore, if a

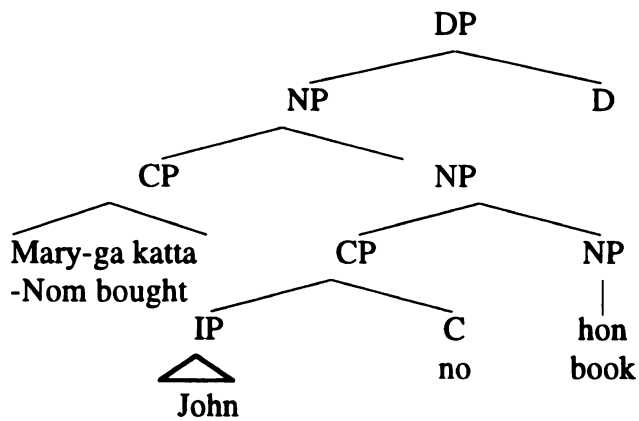
restrictive relative clause must adjoin to a projection smaller than DP, we predict that they cannot be further modified. This prediction is borne out as shown below.

(79) a. Watasi-ga katta John-no hon-wa yokatta kedo,
I-Nom bought J-Gen book-Top was.good but
Mary-ga katta John-no hon-wa yokunakatta.
M-Nom bought J-Gen book-Top was.not.good
'John's book that I bought was good, but John's book that Mary bought wasn't good.'

b. * Watasi-ga katta John-no hon-wa yokatta kedo,
I-Nom bought J-Gen book-Top was.good but
Mary-ga katta John-no [*e*]-wa yokunakatta.
M-Nom bought J-Gen [*e*]-Top was.not.good
Intended: 'John's book that I bought was good but John's that Mary bought was not good.'

In (79a), when the modified NP is overt, the sentence is well formed, as it can be analyzed as shown in (80).

(80)

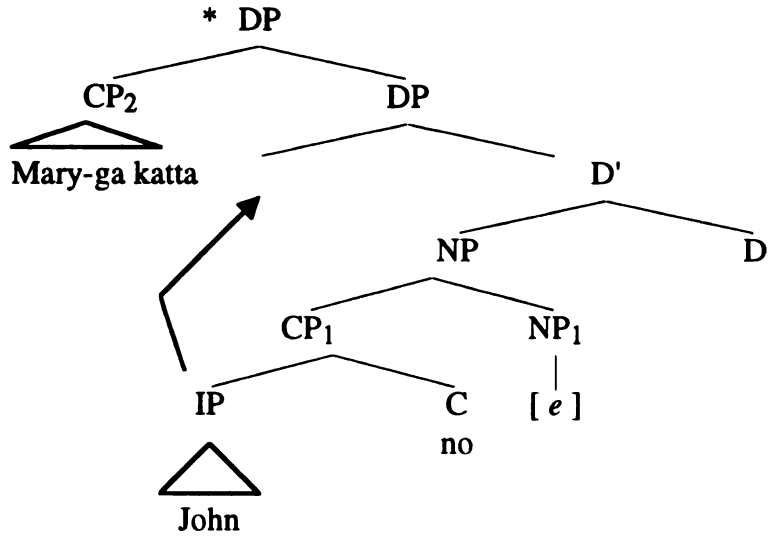


On the other hand, *John-no* in (79b) has the structure given in (78), in which IP must raise to Spec DP in order to license the null NP complement of D. Therefore, the relative clause has to adjoin to DP, as shown below in (81), and as a result (79b) is ill formed as a restrictive relative clause.[32]

---

[32] If we adjoin CP_2 to NP before IP moves to Spec DP, we get the structure in (i):

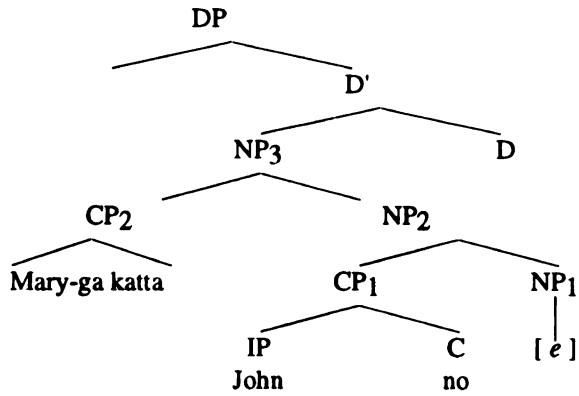
(81)



As discussed before, the null NP needs to be licensed by a D and an IP that moves to Spec DP. Therefore, CP_2 has to adjoin to DP and fails to form a restrictive relative clause in (81).

My proposal that the null NP needs to be licensed by a "close" functional head also receives support from the following paradigm (the data modified from McGloin 1985:8).

(i)



In order to rule out the structure in (i), I propose that the null NP in (i) is not properly licensed. I assume that [*e*] needs to be licensed as soon as CP_1 adjoin to NP_1. The only way for the null NP to be licensed is to be a complement of D with filled Spec DP. However, when CP_2 further adjoins to NP_2, the null NP cannot be licensed because it somehow becomes opaque to the licenser. As a result, the structure in (i) is not well-formed.

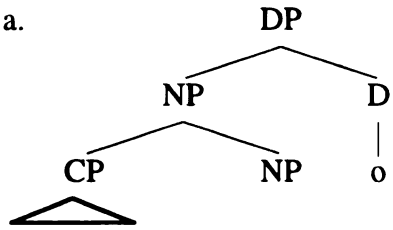
(82) a. Boku-wa Mariko-no uti$_i$-o mita. Taroo-wa [$_{DP}$ Jane-no [e_i] o] mita.
I-Top M-NO house-Acc saw. T-Top J-NO [*e*]-Acc saw
'I saw Mariko's house. Taro saw Jane's.'

b. * Boku-wa Mariko-no uti$_i$-e itta. Taroo-wa [$_{PP}$ Jane-no [e_i] e] itta.
I-Top M-NO house-to went. T-Top J-NO [*e*] to went
Intended: 'I went to Mariko's house and Taro went to Jane's.'

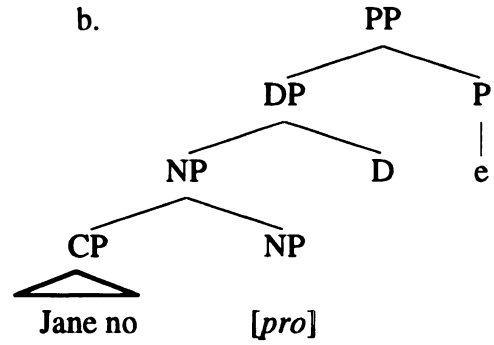
c. Boku-wa Taro-no pen$_i$ de kaita. Bill-wa [$_{PP}$ Jane no [e_i] de] kaita.
I-Top T-NO pen by wrote. B-Top J-NO [*e*] by wrote
'I wrote with Taro's pen. Bill wrote with Jane's.'

In both (82a) and (82b), the null NP refers to a concrete noun, *ie* 'house' but (82b) is not acceptable while (82a) is. The difference between (82a) and (82b) is that in (82a), a Case particle follows the empty NP, but in (82b), it is a postposition that follows the null NP. Under the analysis proposed in (78), the null NP needs to be licensed by an overt D and some element in the Spec of the DP. If the Case particle in (82a) is a D, as proposed in Chapter 2 and 3, it follows that the null NP in (82a) is licensed because it is a complement of an overt D but not so in (82b), as shown in (83).

(83) a.



b.



However, the matter is more complicated. Note that in (82c), it is also a postposition that follows the null NP, but the sentence is well-formed. Assuming that P takes a DP as its complement, in both (82b) and (82c), PPs do not appear with an overt D. Yet, the null NP is licensed in (82c). The difference between the postposition *e* and *de* is that the former is a locational P while the latter is a P that indicates means. McGloin (1985) notes that the inability to license pronominal *no* seems to be limited to the locational

postpositions.[33] Therefore, the question is how we can capture the difference between locational and non-locational Ps in terms of their ability to license a null NP. I assume that P can aid a null D to license the null NP if the null D is the head of DP that is a complement of P. Now we may be able to rule out (82b) while ruling in (82c) if we can show that the locational P is further away from the D that licenses the null NP than the non-locational P. According to Watanabe (1993), locational Ps consist of two parts; P, which is a pure relational element, and a Locational phrase, which is nominal. If Watanabe is correct, *Jane-no pro* in (82b) has the structure in (84) below, rather than (83b).

---

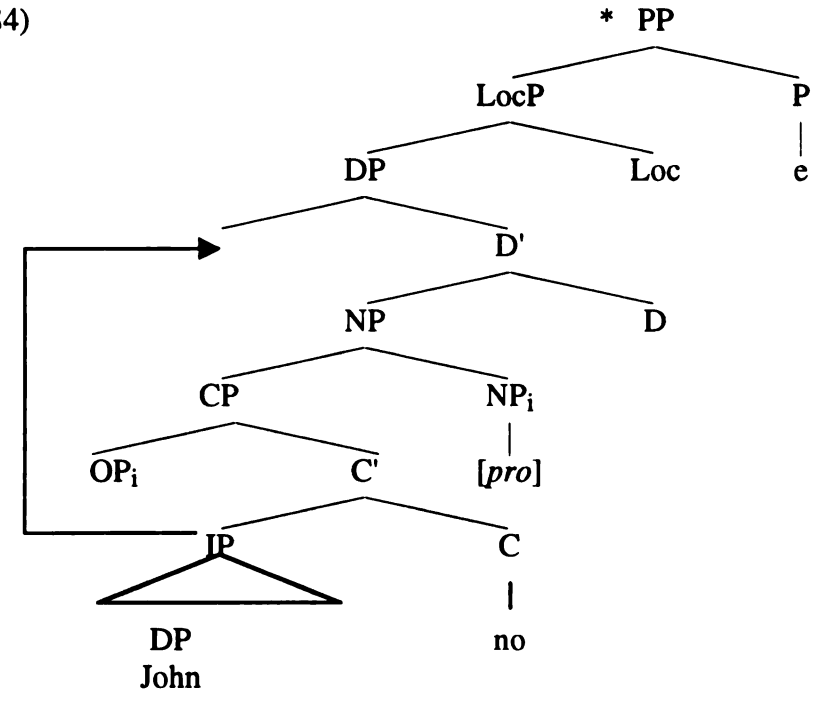
[33] I have provided examples with other locational postpositions, *de* 'at', *kara* 'from' and *made* 'to' below.

(i) Bill-wa daigaku-no tosyokan$_i$-de benkyoosuru. *Ed-wa kookoo-no [e_i] de benkyoosuru.
B-Top university-NO library-at study. E-Top high school-NO [e_i] at study.
Intended: 'Bill studies at the university's library. Ed studies at the high shool's.'

(ii) Joe-wa Bill-no apaato$_i$-kara kita. *Maya-wa Erica-no [e_i] -kara kita.
J-Top B-NO apartment-from came M-Top E-NO [e_i] from came
Intended: 'Joe came from Bill's apartment. Maya came from Erica's.'

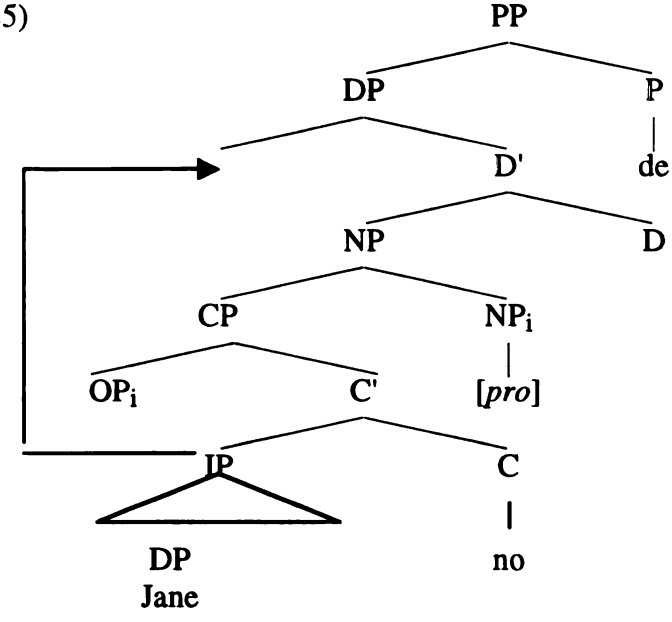
(iii) Boku-wa Dave-no kaisya$_i$-made aruita. *Nancy-wa John-no [e_i]-made aruita.
I-Top D-NO company-to walked N-Top J-NO [e_i]-to walked
Intended: 'I walked to Dave's company. Nancy walked to John's.'

(84)



On the other hand, non-locational Ps have less structure, lacking the locational phrase, so *Jane-no de* in (82c) may have the structure in (85).

(85)



Comparing (84) and (85), the difference is that there is one extra head between the null NP and P in (84) because of LocP. I propose an ad hoc constraint for the licensing of the null NP modifiee as follows: P can support the null D to license its null NP complement

only when the DP with the null D is P's complement.[34] If this is the case, it follows that *de* in (85) can license the null NP because the DP is a complement of P but *e* in (84) cannot, because the DP is not a complement of P. [35]

4.3.4 Analysis of PP no NP

Apart from being able to treat all instances of *no* as uniformly D, the present analysis has an advantage of being able to account for the requirment of *no* in PP modifiers. PP modifiers in Japanese behave differently from those in English. Consider the following set of examples:

(86) a. John went [PP to Rome].
b. John-ga [PP rooma-e] itta.
J-Nom Rome-to went
'John went to Rome'

(87) a. the way [PP to Rome]
b. * [PP rooma –e] michi
Rome-to way
c. [PP rooma-e]-no michi
Rome-to-Gen way
'the way to Rome'

---

[34] I am aware that we need to see if such a constraint is justifiable based on more data both language internally and crosslinguistically, and further, it needs to be investigated if this constraint may follow from more general principles.

[35] The following example does not follow from my analysis straightforwardly:

(i) Kinou-no Mary-ga tukutta hirugohan-wa oisikatta kedo,
yesterday-NO M-Nom made lunch-Top delicious.was but
kyou no **Mary-ga tukutta** **no**-wa mazukatta.
today-NO M-Nom made NO-Top bad
'Yesterday's lunch that Mary made was good but today's that Mary made was bad.'

Under the present analysis, *Mary-ga tukutta no* should have the structure shown in (75), in which case, the Spec DP is filled by the moved TP. Therefore, if *kyou-no* must adjoin to NP rather than DP, as proposed in this Chapter, this modification should not be acceptable. However, it seems better than (79b). One plausible way to approach the problem is that the NP-no NP has a different structures depending on the relationship holding between the two NP. In the case of *John-no hon* 'John's book', *John* may be an argument of the NP *hon*, while in *kyou-no hirugohan* 'today's lunch', *kyou* is an adjunct. The contrast between (79b) and (i) may be captured based on such difference, but I leave the examination for future research.

In both English and Japanese, a P can assign a goal theta role to its complement in a sentence as shown in (86). However, while the PP can be a complement of N in English as shown in (87a), Japanese PP cannot as in (87b). In addition, even when the PP is presumably an adjunct, it cannot directly adjoin to an NP as shown in (89b) while this is possible in English (89a).

(88) a. John ate lunch [PP at school].
b. John-ga [PP gakkou-de]hirugohan-o tabeta.
J-Nom [PP school-at] lunch-Acc ate
'John ate lunch at school.'

(89) a. lunch [PP at school]
b. * [PP gakkou-de] hirugohan ...
[PP school-at] lunch
c. [PP gakkou-de]-no hirugohan
school-at-Gen lunch
'lunch at school'

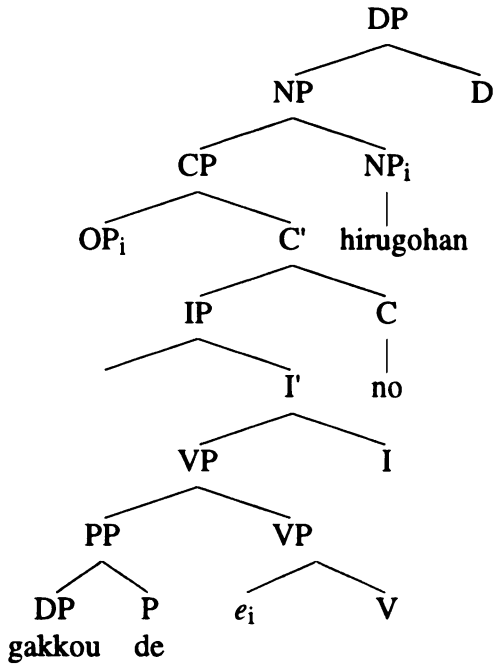
In (89a), the English PP seem to be able to adjoin to the NP, *lunch*, directly, but as (89b) shows, the Japanese PP cannot adjoin to *hirugohan* 'lunch'. In order for the PP to modify *hirugohan* 'lunch', it requires *no*, as shown in (89c).

The fact that the prenominal PP modifier requires *no* parallels the fact that prenominal NP modifiers require *no*, as shown in (90).

(90) [NP gakkou]-no kisoku
school-Gen rule
'school rule'

Under the analysis in which those instances of *no* are treated as a morphological genitive Case markers, it is not clear why PPs require Case. On the other hand, if *no* is a predicate forming complementizer, as it is under the present analysis, it is natural that the PP modifiers require *no* if PP is not a predicate. In my analysis, (89c) can be analyzed as in (91).

(91)



In (91), *gakkou-de no hirugohan* has the structure of a relative clause, 'lunch that (we eat) at school'. However, since an overt verbal element that can raise to C is not present, *no* is required in C in order to "type" the CP in Cheng's sense, as discussed in relation to the structures presented in (75) and (77).

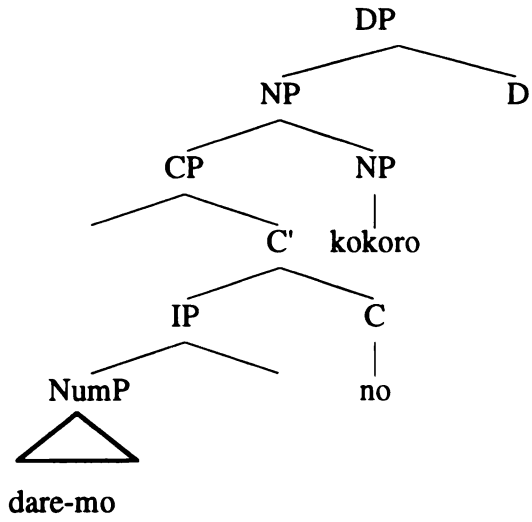
4.3.5 Analysis of *dare-mo-no* and NP-NCP-*no*

In section 4.2, we have noted that *dare-mo-no* has only the universal reading "everyone's" and not the NPI reading "anyone's" as shown in (11), repeated here in (92).

(92) Sono hanasi-wa **DAre-mo-no** kokoro-ni kibou-no hi-o tomosita.
that story-Top who-MO-gen heart-Dat hope-Gen fire-Acc lit
'The story lit a fire of hope in everyone's heart.'

Under the present analysis, the lack of the NPI reading can be explained if we analyze the structure of *dare-mo-no kokoro* as in (93).

(93)



In(93), *dare-mo no* is a CP. As discussed in Chapter 3, the NPI *dare-mo* needs Neg OP in the same clause in order to be licensed and receive an NPI reading. However, since there is no Neg OP in the CP in (93), it is natural that *dare-mo-no* in (93) cannot have an NPI reading under the present analysis.

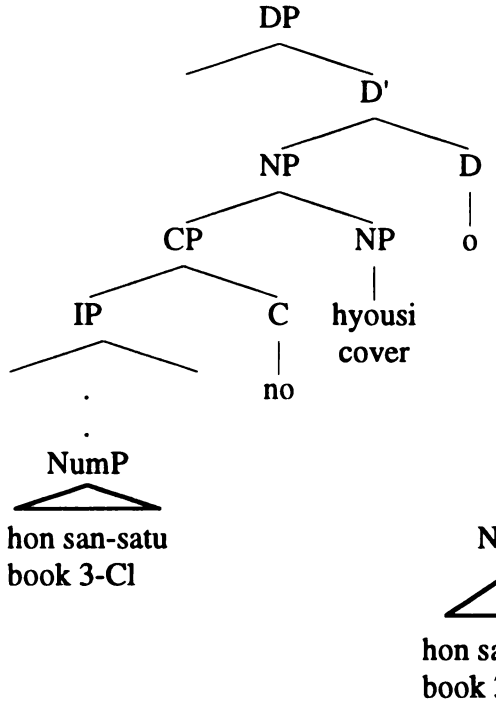
In the same way, the NP-NCP-no phrase in (10), repeated here in (94), is also analyzed as CP.

(94) John-wa hon san-satu-no hyousi-o yabutta.
J-Top book 3-Cl-Gen cover-Acc ripped
'John ripped covers of three books/the three books.'

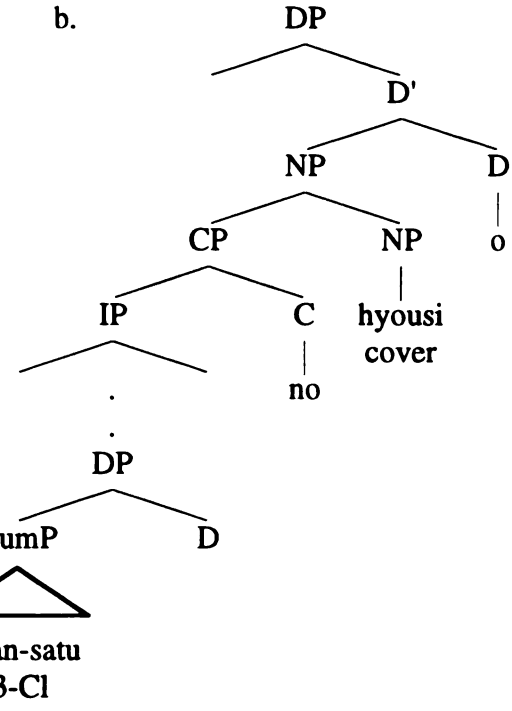
The issue here is that *hon san-satu-no* in (94) may be interpreted as definite or indefinite depending on the context. Under the analysis proposed in Chapter 2, when a numeral classifier phrase like *san-satu* '3-Cl' is followed by a Case particle, it receives a definite reading and has the structure for definite NPs. Therefore, the fact that *hon san-satu-no* in (94) can have an indefinite reading argues against *no*'s status as a Case particle (and hence a D) in such a phrase.

Under the present analysis, *hon san-satu-no hyousi-o* may have either of the structures shown in (95), and in either structure, *hon san-satu no* is a CP rather than a DP.

(95) a.



b.



I have proposed in Chapter 2 that the definiteness of the NCP comes from having the structure of an overt NumP plus an overt D (=Case particle). Without an overt D, NumP is interpreted as either a definite or an indefinite depending on the context. In the above structures *hon san-satu* is a NumP but does not have an overt D that takes the NumP as its complement. Therefore, according to the analysis proposed in Chapter 2, it follows that the phrase *hon san-satu-no* in (94) cannot be inherently definite.[36]

4.3.6 Analysis of NCP-*no* NP

In the literature, the semantics and the structure of NCP-*no* NP form has not been discussed in detail. McGloin (1989) notes that in some sentences, both NCP-*no*-NP and the Case-Medial form are acceptable as in (96) (p.112 (1)).[37]

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[36] See Chapter 2, section 2.3.2 for more detail.

[37] I think there is a semantic difference between (96a) and (96b). That is, (96b) is ok as a discourse initial sentence, but (96a) seems odd as a discourse initial utterance unless either the listener already knows that

(96) a. **San-nin-no** **kodomo**-ga iru node taihen desu.
3-Cl-Gen child-Nom exist so hard Cop
'I have three children, and so it's a lot of work.'
b. **Kodomo-ga** **san-nin** iru node taihen desu.
child-Nom 3-Cl exist so hard Cop
'I have three children, and so it's a lot of work.'

However, as McGloin points out, in certain cases, one form is preferred over the other as shown below (McGloin 1989:112 (2)):

(97) a. ? Paatii-de **go-hon-no** **biiru**-o nonda.
party-at 5-Cl-Gen beer-Acc drank
'I had five beers at the party.'
b. Paatii-de **biiru-o** **go-hon** nonda.
party-at beer-Acc 5-Cl drank
'I had five beers at the party.'

Their semantic differences are clear when a modifier is added (McGloin 1989:112 (3)):

(98) a. Kono **san-satsu-no** **hon**-o kudasai.
this/these 3-Cl-Gen book-Acc give me
'Give me these three books.'
b. Kono **hon-o** **san-satsu** kudasai.
this/these book-Acc 3-Cl give me
'Give me three copies of this book.'

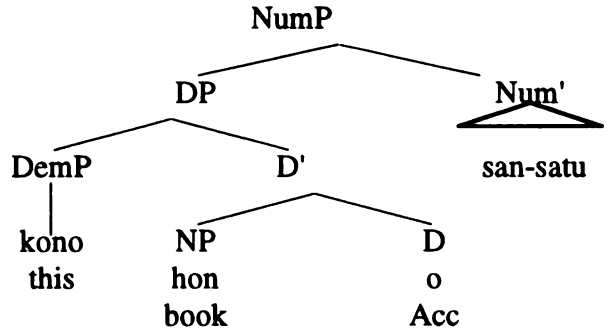
From the readings we get, in (98a), the demonstrative *kono* 'this' is modifying *san-satsu no hon* 'three books', but in (98b) the demonstrative is modifying *hon* 'book' alone and *san-satsu* quantifies over them. From the structure proposed in Chapter 2, section 2.3.1, the latter fact is accounted for. To repeat the analysis, assuming that demonstratives are in Spec DP (Bernstein 1996, Campbell 1996), the demonstrative *kono* 'this/these' in (98b) has to be in the Spec of DP *hon-o* 'book-Acc', and hence, it can only modify *hon*, as shown in (99).[38]

---

the speaker has children or the speaker is talking about his/her children as if the listener already knows about them. Downing (1996) suggests that NCP-*no* NP form is used when the speaker has specific individuals in mind.

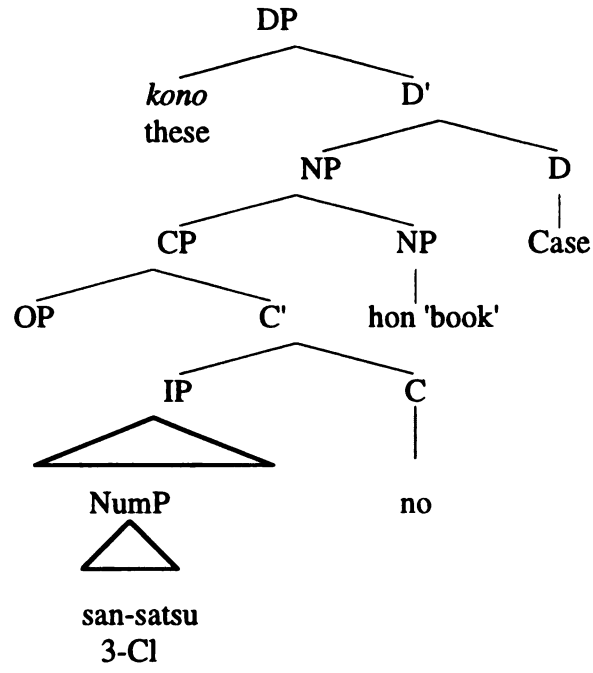
[38] Detailed structure below Num' projection is omitted here.

(99)



On the other hand, following the present analysis of *no*, the structure for NCP-*no* NP in (98a) is analyzed as in (100).

(100)



In (100), since the demonstrative is in the Spec DP, which specifies the NP *san-satu-no hon*, it can modify *san-satu no hon* 'three books' rather and *hon* 'book' alone. Therefore, the semantic contrast in (98) is accounted for structurally under the present analysis.[39]

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[39] For completeness, I assume that *hon* and *san-satsu* in (100) are associated as shown below.

Now let us return to the examination of the general semantics of the NCP-no NP phrases. As shown in (101), NCP-*no* NP form can appear in the existential construction with the integral part reading, like the Case-Medial form, and hence it seems to an indefinite.

(101) a. Herikoputaa-ni puropera-ga aru (koto)
helicopter-Dat propeller-Nom exist (fact)
'(the fact that) a helicopter has (a) propeller(s).'

b. Herikoputaa-ni **puropera-ga** **i-ppon** aru (koto)
helicopter-Dat propeller-Nom one-Cl exist (fact)
'(the fact that) a helicopter has one propeller.'

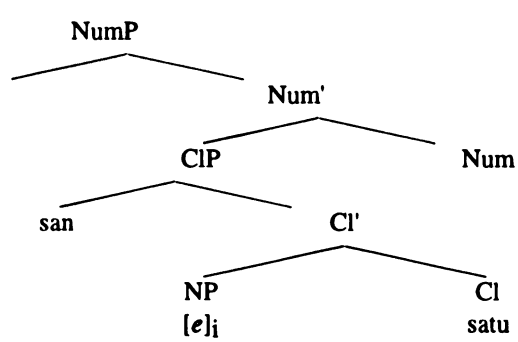
c. (?) Herikoputaa-ni **i-ppon-no** **puropera-ga** aru (koto)
helicopter-Dat one-Cl-Gen propeller-Nomexist (fact)
'(the fact that) a helicopter has one propeller.'

d. * Herikoputaa-ni **puropera i-ppon-ga** aru (koto)
helicopter-Dat propeller one-Cl-Nom exist (fact)
'*(the fact that) a helicopter has the one propeller.'

The acceptability of (101ab) is uncontroversial, but (101c) may be somewhat degraded although much better than (101d), and (101d) is not acceptable.[40]

However, in contexts where non-specific indefinites are required, the NCP-*no*-NP order is infelicitous as shown below:

(i)



The NP in (i) is a variable that is bound by the OP in (100), and the OP is coindexed with the NP *hon* 'book' in (100).

[40] The same is true with the animate existential construction with *iru* 'exist'.

(i) a. watashi-ni kodomo-ga san-nin iru (koto) NP-Case-NCP
I-Dat child-Nom 3-Clexist (fact)
'(fact that) I have three children.'

b. watashi-ni san-nin-no kodomo-ga iru (koto) NCP-*no* NP

c. ?* watashi-ni kodomo-san-nin-ga iru (koto) NP-NCP-Case

(102) (When ordering some tickets):

a. **Kippu-o ni-mai** kudasai.
ticket-Acc 2-Cl give-me
'Give me two tickets.'

b. # **Ni-mai-no kippu-o** kudasai.
2-Cl-Gen ticket-Acc give-me

In the given context, (102b) is totally unacceptable. Also when a question is seeking the number of items, the NCP-*no*-NP form cannot be used, as shown below:

(103) (When asking *how many books*)

a. **Hon-o** **nan-satsu** kaimashita-ka. NP-Case-NCP
book-Acc what-Cl bought-Q
'How many books did you buy?'

b. ? **Nan-satsu-no hon-o** kaimashita-ka. NCP-*no*-NP
what-Cl-Gen book-Acc bought-Q
Intended: 'How many books did you buy?'

In addition, as an answer to a question of the form (103a), the Case-Medial form can be used in the answer but not the NCP-*no*-NP phrase, as shown below:

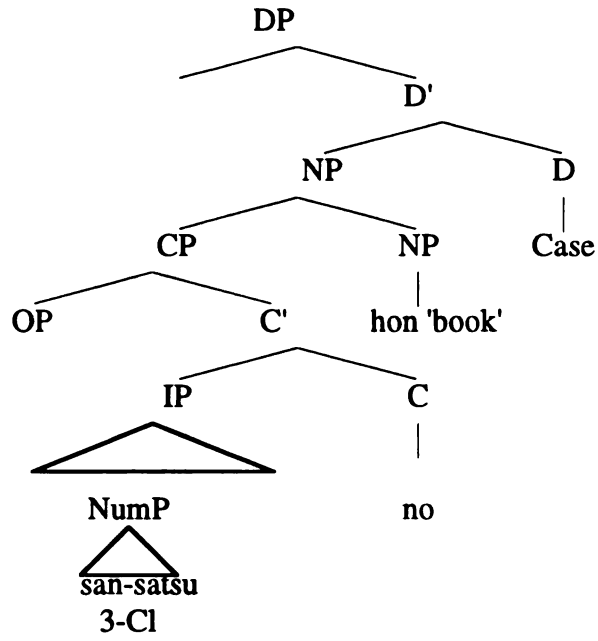
(104) a. Hon-o ni-satsu katta. NP-Case-NCP
book-Acc 2-Cl bought
'I bought two books.'

b. ? Ni-satsu-no hon-o katta. NCP-*no*-NP
2-Cl-no book-Acc bought

The data in (101-79) suggest that the NCP-*no* NP form is indefinite-specific.

The proposed structure of NCP-no NP seems to be compatible with its meaning as an indefinite-specific. Under the present analysis, NCP-*no* phrase is a restrictive relative clause, as shown in (105).

(105)



In the above structure, an NP is a complement of an overt D. Under the analysis proposed in Chapter 2, when an NP does not project an overt NumP projection, even when it has an overt D, the DP may be interpreted as indefinite. However, since restrictive relative clauses normally restrict the reference of the head noun, we may expect that the resulting DP cannot be non-specific. Therefore, the most plausible interpretation of the DP in (105) based on its structure is an indefinite-specific reading. Therefore, the meaning of (105) may be closer to 'books which there are three', rather than 'three books' with a non-specific interpretation.

4.4 Remaining problem: *no* in *Ga/No* conversion

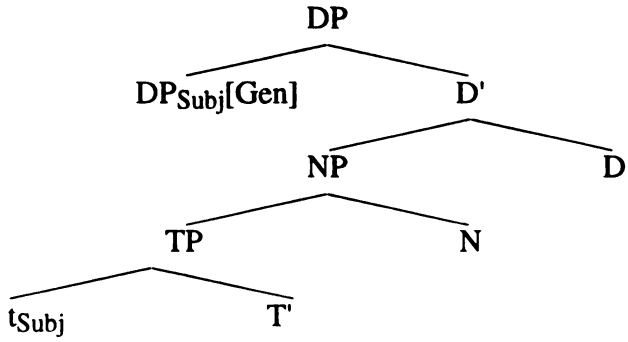
In treating *no* as uniformly a C, there is one kind of *no* that does not follow from the present analysis straightforwardly. It is the *no* in so-called "ga-no (or Nominative-

Genitive) conversion". Descriptively, a subject DP may be marked by *no* in a modifying clause of the relative clauses and complex NPs as shown below.[41]

(106) a. kyonen John-**ga** katta kuruma
last year J-Nom bought car
'the car John bought last year'
b. kyonen John-**no** katta kuruma
last year J-Gen bought car
'the car John bought last year'

According to Miyagawa (1993), the genitive subject is checked by the head of DP at LF in the following configuration (Hiraiwa 2000:69 (2)).[42]

(107)



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[41] Conversion to *no* is actually not limited to the nominative subject. As shown in (i), it is possible with a Dative subject as well.

(i) a. John-ni gaikokugo-ga wakaru.
J-Dat foreign language-Nom understand
'John understands foreign languages.'
b. John-**ni** wakaru gaikokugo
J-Dat understand foreign lg
'the foreign language John understand'
c. John-**no** wakaru gaikokugo
J-Gen understand foreign lg

It is not clear how this kind of conversion should be treated. We will leave the issue aside.

[42] Kitagawa and Ross (1982) take a restructuring rule, following Bedell (1972). Under their analysis, *ga-no* conversion is possible in the following configuration (Bedell's (44) and (45)).

(i) a. $[_{NP1}\ [_{S}$ tuki deru$]\ [_{NP}$ koro$]]$ → *tuki* takes *ga*.
moon appear time
'the time that the moon appears'
b. $[_{NP3}\ [_{NP2}$ tuki $[_{NP1}\ [_{S}$ deru$]\ [_{NP}$ koro$]$ → *tuki* takes *no*.

However, this analysis is not tenable considering that the genitive NP has properties of a subject rather than a modifier.

The subject of the modifier clause moves to Spec DP at LF in order to check the Case feature. He argues that in such a case, AgrSP is absent in the modifying clause and hence the Subject DP must move to Spec DP to satisfy the feature checking requirement.

Under Miyagawa's analysis, it is predicted that *ga-no* conversion may occur only when DP structures are involved. It is true that the *ga-no* conversion is never allowed in the matrix clause, as shown in (108).

(108) a. John-**ga** kuruma-o katta.
J-Nom car-Acc bought
'John bought a car.'
b. * John-**no** kuruma-o katta.
Intended: 'John bought a car.'

However, as discussed in Hiraiwa (2000) in detail, there are a number of examples that make us doubt the possibility of D's involvement in genitive Case licensing in *ga-no* conversion. The following data are taken from the many examples presented by Hiraiwa (2000:78-9).

(109) John-wa [Mary-**ga/no** yonda **yori**] takusan no hon-o yonda.
J-Top M-**Nom/Gen** read **than** many-Gen book-Acc read
'John read more books than Mary did.' (Watanabe 1996a:396)

(110) John-wa [ame-**ga/no** yamu **made**] office ni ita.
J-Top [rain-**Nom/Gen** stop **until**] office-at was
'John was at his office until the rain stopped.'

(111) [Boku-**ga/no** omou-**ni**] John-wa Mary-ga suki-ni-tigainai.
[I-**Nom/Gen** think-**DAT**] J-Top M-Nom like-must
'I think that John likes Mary.'

(112) [Sengetu ikkai denwa-**ga/no** atta **kiri**] John-kara nani-mo renraku-ga nai.
last month once call-**Nom/Gen** was **since** J-from any call-Nom be-not
'There has been no call from John since he called me up once last month.'

In the above examples, the clausal modifiers are headed by a P-like element. Hiraiwa states that, whatever the exact category of these element may be, they do not license a

genitive Case since a genitive demonstrative cannot co-occur with them as shown in (113) (Hiraiwa's (29)).

(113) a. *sono yori/ *sono made/ *sono ni/ *sono kiri
it(Gen) than/ it(Gen) until/ it(Gen) DAT/ it(Gen) since
b. sore yori/ sore made/ sore ni/ sore kiri
it-than/ ituntil/ it-DAT/ it-since

To summarize his basic analysis of *ga-no* conversion without getting into too much detail, his proposal is that the genitive Case in *ga-no* conversion is checked by the adnominal inflection of the predicate whose syntactic position is C. His analysis is motivated by the fact that all the clauses that allow *ga-no* conversion have their predicate in the adnominal form.[43/44] He proposes that the adnominal form is a result of C-T-V AGREE and that the amalgamate head checks the genitive Case in *ga-no* conversion.[45] This is illustrated in (114) (Hiraiwa's (42)).

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[43] As mentioned before, the modern Japanese lacks morphological distinction between the adnominal form and the sentence final form of regular verbs. The distinction here is motivated by the historical data.

[44] The relationship between the adnominal form of predicate and *ga-no* conversion is not completely clear in the following examples.

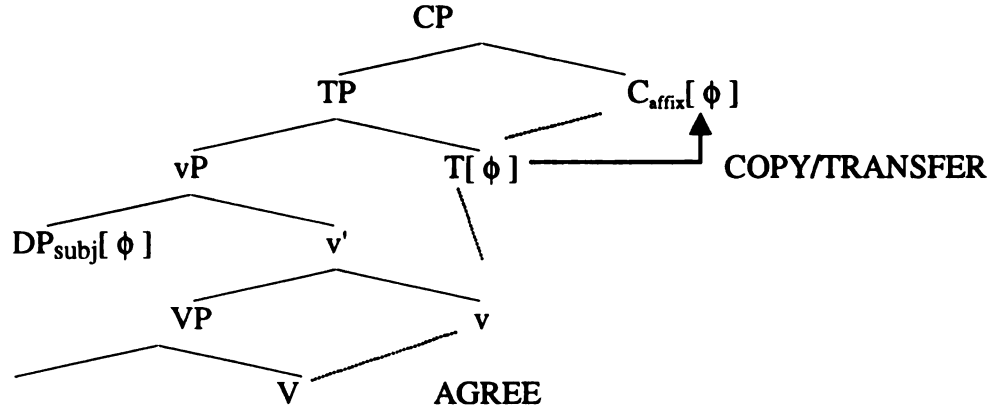
(i) ie-**no** too**kute** ouhuku-ni jikan-no kakaru hito (Matsushita 1961:260)
house-NO far-and round-trip-for time-NO take-Adnom person
'the person whose house is far and takes time for commuting'

(ii) a. John-ga dekaketa no? b. John-ga sukina no?
c. * John-**no** dekaketa no? d. *John-no sukina no?

In (i), the predicate of *ie* 'house' is in gerund form, but *no* is licensed for the subject *ie*. It may be that the sentence has a VP coordination structure and *no* is licensed by the higher C-T-V head. On the other hand, in (ii), pre-*no* predicates have the adnominal form, but do not license the genitive subject in (iicd). Something needs be said in order to exclude *no* which takes a function of Q marker from assigning genitive Case.

[45] According to Chomsky (1999, 2000), Case features like Nom, Acc, Gen, etc are not syntactic objects, and the Case-value of noun phrases is unspecified. Each functional head in a clause has some phai feature that is associated with a certain Case. For example, T has the phai feature that assigns nominative Case to DP when T and DP is in AGREE relation. Under this theory of Case, the structural Case is a property of clausal heads rather than the noun phrase.

(114)



In (114), v AGREEs with V, and when T merges with vP, it AGREEs with v-V. Then at the point when C_{affix} merges with TP, it AGREES with T-v-V and it is spelled out as the adnominal form of predicates. The consequence fo C-T-v-V AGREE is that the phi feature of T is transferred to C and this feature enables C to assign genitive Case to the appropriate DP.

Hiraiwa shows that when overt complementizer like *to* is present, C-T-V AGREE is blocked and *ga-no* conversion becomes unavailable (Hiraiwa's (78)).

(115) [[House of Blues-de John-ga/***no** ensou-suru to no] zyouhou]
-at J-Nom/Gen play-Pres-End C Gen information
'the information that John will play at the House of Blues'

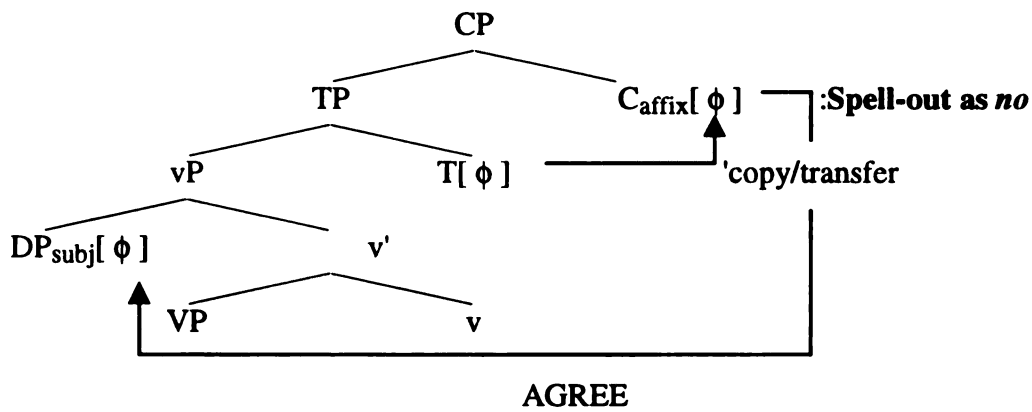
Under the present analysis, *no* is a complementizer in a sentence like (116).

(116) a. [$_{CP}$ [Kinou John-**ga** katta] [$_{C}$ no]] [$_{NP}$ *e*]-wa yasukatta.
[$_{CP}$ [yesterday J-Nom bought] [$_{C}$ no]] [$_{NP}$ *e*]-Top cheap.was
'The one John bought was cheap.'
b. [$_{CP}$ [Kinou John-**no** katta] [$_{C}$ no]] [$_{NP}$ *e*]-wa yasukatta.
[$_{CP}$ [yesterday J-Gen bought] [$_{C}$ no]] [$_{NP}$ *e*]-Top cheap.was

However, as you can see in (116b), *no* does not block *ga-no* conversion. I take this to mean that *no* has the same phi feature as the C-T-V amalgamate; that is, it has the ability to assign genitive Case. Therefore, in (116b), even if *no* blocks the C-T-v AGREE, *no* on the subject of the modifying clause is licensed.

Hiraiwa proposes that complementizer *no* is a spell-out of a genitive Case of DP on the probe's side. He argues that this explains why the genitive *no*, rather than any other Case particles, has been grammaticalized to be a complementizer. This process is illustrated in (117) (Hiraiwa's (89)).

(117)



However, Hiraiwa's analysis of *no* complementizer faces a few problems. First, it does not account for the fact that the complementizer *no* does not appear in HERC when the relative head is overt, but only shows up when the head is covert, as shown in (118).

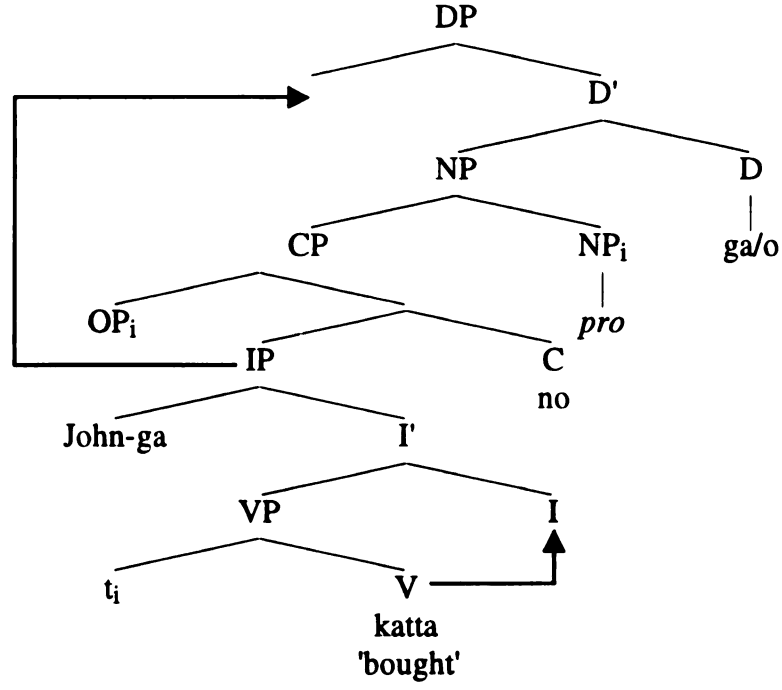
(118) a. [[CP [kyonen John-**no** katta] [C]] [NP kuruma]]
last year J-Gen bought car
'the car John bought last year'

b. [[CP [kyonen John-**no** katta] [C no]] [NP*pro*]]
last year J-Gen bought one
'the one John bought last year'

According to Hiraiwa's analysis, in both (118a) and (118b), the genitive subject is licensed by C-T-v amalgamate head, and the *no* that appears in C in (118b) is a spell-out of the genitive Case of the DP subject. However, considering that the genitive subject is also licensed in (118a), his analysis does not explain why *no* cannot be spelled-out in C in the case of (118a).

In the present analysis, however, the presence of overt *no* complementizer is indirectly related to the absence of the relative head, as shown in (75), repeated here in (119).

(119) RC with an empty relative head

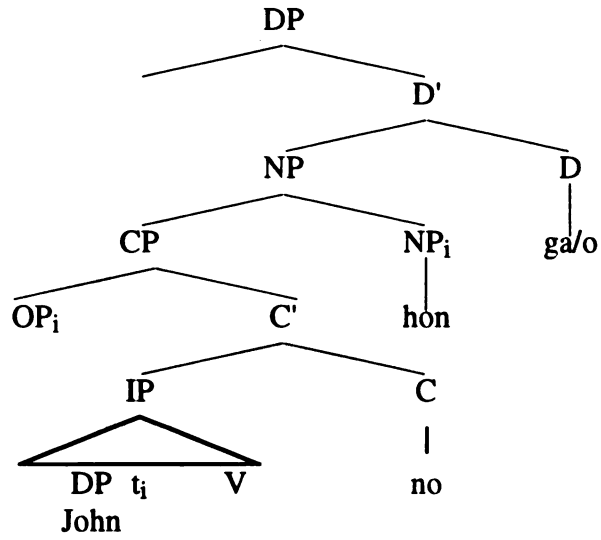


In the analysis proposed for (119), V cannot raise to C when the head of the relative cluase is null because IP must move to Spec DP to aid the head of DP to license its null complement. As a result, C is not filled with V in (119), and hence *no* is required in C to "type" the CP as a modifier.

A second problem with Hiraiwa's analysis is that it requires two independent mechanisms for genitive Case licensing. One is D, in cases of *no* in NP modifiers as in *John-no hon* 'John's book', and the other is C-T-v amalgamate head, in the case of the genitive *no* in the *ga-no* conversion. Under the present analysis, however, we do not have to assume D as a genitive Case licenser since NP modifiers do not involve a genitive

Case particle[46] and they have the CP structure as proposed in (77), repeated here in (120).

(120)



In (120), since *no* is not the genitive Case particle, it does not have to be licensed by D or any other functional head.

Now a problem that remains for my analysis is the syntactic status of *no* in *ga-no* conversion cases. For all other instances of *no*, I have proposed that they are Cs whose function is to "type" the clause as a modifier. However, such an account does not extend to the *no* in the *ga-no* conversion examples such as (118). If we would analyze *John-no* in (118a) as a modifier, we may give it the structure shown in (121).

(121) kyonen $[_{NP}\,[_{CP}$ John$_i$ $[_C$ no$]$ $]$ $[_{NP}\,[_{CP}$ pro$_i$ t_j katta$]$ $[_{NP}$ kuruma$_j$ $]$ $]$ $]$
last year bought car
'John's car that he bought last year'

In the above structure, *John-no* modifies the noun phrase *katta kuruma* 'car bought'. However, the structure given in (121) cannot be motivated as an analysis of (118a). If it

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[46] Okutsu (1978) also argues against treating possessive and other NP modifier *no* as Case particles and proposes that those *no* are adnominal form of copula.

were the correct analysis, we would need to explain how the temporal adverb *kyonen* 'last year' is associated with the clause that modifies *kuruma* 'car'. One possibility is if *kyonen* 'last year' was base-generated inside the relative clause modifying *kuruma* and scrambled to the position above the modifier *John-no*. However, such movement is not allowed, as shown in (122)-(123).

(122) a. watasi-no [$_{NP}$ [$_{CP}$ kyonen kekkonsita] [$_{NP}$ imooto]]
I-Gen last year married younger sister
'my younger sister who got married last year'

b. * kyonen$_i$ watasi-no [$_{NP}$ [$_{CP}$ t_i kekkonsita] [$_{NP}$ imooto]]
last year I-Gen married younger sister
Intended: 'my younger sister who got married last year'

(123) a. John-no [$_{NP}$ [$_{CP}$ watasi-ga kinoo aratta] [$_{NP}$ kuruma]]
J-Gen I-Nom yesterday washed car
'John's car that I washed yesterday'

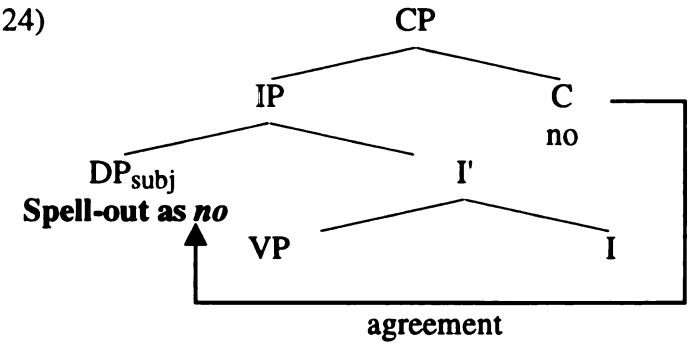
b. * kinoo$_i$ John-no [$_{NP}$ [$_{CP}$ watasi-ga t_i aratta] [$_{NP}$ kuruma]]
yesterday J-Gen I-Nom washed car
'John's car that I washed yesterday'

In (122a), the noun phrase modified by a relative clause which contains the temporal adverb is further modified by *watasi-no* 'my'. The phrase is well-formed when the temporal adverb is inside the relative clause whose predicate it is associated with. However, when the temporal adverb *kyonen* 'last year' is scrambled out of the relative clause, the phrase becomes unacceptable, as shown in (122b). In other words, *kyonen* cannot be interpreted as inside the relative clause when it has been scrambled. The same is true in the examples in (123). Therefore, the fact that the temporal adverb in (118a) can be associated with the relative clause that modifies *kuruma* 'car' suggests that the structure given in (121) is not the right analysis for (118a). That is, *John-no* in the *ga-no* conversion example cannot be analyzed as a modifier. Instead, it is the subject of the

modifying clause as shown in (118a). Therefore, it cannot be analyzed as a C under the present analysis.

Now, what I suggest instead is that, while most instances of *no* are Cs, *no* may appear in D, as a result of some kind of feature agreement between a DP and a C when the DP is in a certain relation with [$_C$ *no*] (C filled with *no*) or [$_C$ Adnm] (C filled with an adnominal form of a verb). Therefore, in a sense, *no* is a C across the board and "genitive" is a feature of C that may show up on DP in the *ga-no* conversion construction. In this analysis we are turning Hiraiwa's analysis on its head. Under Hiraiwa's analysis, the *no* complementizer is a Spell-out of the genitive Case of a DP subject on a C. Instead rather than taking the complementizer *no* to be a Spell-out of the genitive Case of DP on C, I suggest that the *no* in the *ga-no* conversion is a Spell-out of the feature of [$_C$ Adnm] or [$_C$ *no*] on the appropriate DP, as shown in (124).[47]

(124)



At the moment I have no formal mechanism in mind that establishes relation between a C and a DP.[48] I also do not know what kind of empirical data can support either Hiraiwa's or my analysis on this matter. One advantage of my approach may be uniformity. Under

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[47] For completeness, I assume this *no* shows up in D like *ga* and *o*.

[48] However, agreement between subject and a C is not uncommon.

the present analysis, there is no "genitive Case" that is not associated with C: *no* is either C or a Spell-out of the feature of C on a DP.

4.5 Conclusion

In this chapter I have argued that Japanese *no* is not a Case particle, D, but is a complementizer (C) whose function is to type the CP as a modifier. The present analysis allows *no* in several different constructions (HERC, Cleft, possessive, etc) to be analyzed as uniformly a C. I have shown that the arguments for the pronoun *no* are not strong enough because the same range of facts (e.g. inability to refer to humans or abstract nouns, dialect data, the cleft construction, etc) can be explained without positing the pronoun *no*. I have proposed that there is no real "genitive Case marker" in Japanese that is independent of C.

CHAPTER 5

CONCLUSION

In this dissertation, I have analyzed various kinds of Japanese noun phrases with the aim of identifying a syntactic status of Japanese Case particles: noun phrases containing numeral classifier phrases (NCPs), the NPI *dare-mo*, the generic *dare-mo*, the universal *dare-mo-ga/o* 'everyone-Nom/Acc', and noun phrases that involve modifiers with the particle *no*. My analyses have led me to conclude that the nominative Case particle *ga* and the accusative Case particle *o* should be treated as syntactic determiners (Ds), whereas the so-called genitive Case particle *no* is not a D but a complementizer (C). The syntactic status of the particle *ni*, which appears to be either D or a postposition (P), was not determined in the present analysis.

By analyzing Japanese Case particles *ga* and *o* as Ds, not only can we achieve a more uniform representation of Japanese noun phrases from a crosslinguistic perspective, but we can also explain several phenomena hitherto unaccounted for in ways that are consistent with crosslinguistic analyses.

Concerning the syntactic status of *no*, I have concluded that most instances of *no* are not Ds, but are complementizers (Cs). This was motivated by the facts that, unlike *ga* and *o*, when combined with a NumP, *no* allows an indefinite interpretation and also that *no* is required only when modification of a noun phrase is involved in the structure. However, I have offered only a cursory analysis for the *no* in the *ga-no* conversion phenomenon, as it was outside the scope of this dissertation.

To summarize, by treating *ga* and *o* as Ds, I have accomplished the following:

i) The indefinite and the definite distinctions regarding numerically quantified noun phrases are explained structurally. I have argued that noun phrases of the form NP-Case-NCP (the Case-medial form) have an indefinite reading because they form a NumP rather than a DP, whereas noun phrases of the form NP-NCP-Case (the Case-final form) are DPs with an overt NumP and a D filled with a Case particle and this combination gives rise to a definite reading. This analysis is consistent with crosslinguistic findings that the definiteness of DPs depends on functional projections contained inside of DPs, rather than the D itself (Szabolcsi 1994, Zamparelli 1995).

(ii) Distributional differences between the Case-medial form and the Case-final form, the modification facts, and various asymmetry phenomena associated with the Case-medial form, were also explained from the internal structures of these noun phrases.

(iii) The fact that the NPI *dare-mo* 'anyone' cannot take a Case particle and that it requires a negation, whereas the universal *dare-mo-ga/o* 'everyone-Nom/Acc' requires a Case particle and is not bound by negative operator or generic operator, was explained in a way compatible with the analysis of DPs in Romance languages. The NPI *dare-mo* is a DP with a null D head that is a variable bound by a Neg OP, but the universal *dare-mo* is a DP whose head is filled by a Case particle, and hence, not bound by a Neg OP.

(iv) Differences in modification facts with the NPI *dare-mo* 'anyone' and the universal *dare-mo-ga/o* 'everyone' are explained based on the internal structures of these phrases.

(v) The meanings of the NPI *dare-mo* 'anyone' and the universal *dare-mo-ga/o* 'everyone-Nom/Acc' were suggested to follow from the compositional meaning of *dare* 'an extensional property of being a human' and *mo* 'even' and the overt D's ability to block the binding by the negative operator.

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