

THE DP HYPOTHESIS THROUGH THE LENS OF JAPANESE NOMINAL COLLOCATION
CONSTRUCTIONS

by

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A dissertation submitted to the Graduate Faculty in Linguistics in partial fulfillment of the requirements for
the degree of Doctor of Philosophy, The City University of New York

2009

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This manuscript has been read and accepted for the
Graduate Faculty in Linguistics in satisfaction of the
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Abstract

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In Japanese, bare noun phrases can refer to the object that is introduced in a previous context, whereas in English, the definite article is required for a common noun phrase to refer. The research question of this discussion is whether Japanese syntactically projects a determiner phrases (DP) although it does not have an article such as *the* in English. If Japanese does not project DP unlike English, the definiteness of referential arguments needs to be parameterized in syntax and in semantics. On the other hand, if Japanese projects DP, it suggests that DP is part of Universal Grammar (UG) and thus that no parameterization is called for. This thesis presents three pieces of evidence to support the DP hypothesis for Japanese by examining nominal collocation constructions such as *watasitati 3-nin* ‘we three’ and *watasitati sensei* ‘we professors’

In Chapter 2, the first argument stems from specificity effects. In Japanese numeral classifiers (NCs) cannot float away from personal pronouns. Likewise, NCs cannot get raised outside the associated bare noun phrases when the noun phrases possess definite interpretations. This implies that Japanese projects DP and that the DP blocks NCs from moving outside.

In Chapter 3, examination of the internal structure of nominal collocation constructions is conducted. The grouping of personal pronouns and common noun phrases is ungrammatical when the common noun phrases have a plural marker and occur prenominally with the genitive marker. Moreover, NCs cannot appear prenominally with the genitive marker when the noun phrases involve personal pronouns unlike in the case of common noun phrases. Based on the argument of the nominal predication hypothesis due to the former property, the ungrammaticality of the second property is argued in terms of D feature on DP, in favor of the DP hypothesis.

In Chapter 4, the left periphery of nominal collocation constructions is investigated. The fact that not all noun phrases allow for adjunction is explained in terms of the ban on adjunction to DP.

If these arguments are correct, this suggests that DP is part of UG and that in Japanese the lack of a determiner is only due to morpho-phonological reasons.

Acknowledgements

I am standing close to the terminal station of this academic journey. This accomplishment is the product of inspiring, helping, understanding and enduring of many people including professors, colleagues and other linguists who have been next to me with gentleness. Without their helps and patience, this thesis would not have been finished. I am deeply grateful to all of them.

My special thanks go to the thesis committee members. I would like to express my deepest gratitude to my major adviser Marcel den Dikken for his helpful detailed discussions and encouragement. His insightful discussions and attentive, obliging support have been invaluable through my graduate career at CUNY. I sincerely thank William McClure for his helpful discussions and comments. I also wish to acknowledge my thanks to Christina Tortora for fundamental discussions and comments.

I cannot thank my family enough. My father and mother have provided me with enormous freedom and support to pursue my education. I would like to thank Agnes Brown for supporting me. I would also like to thank my twin sons, Tomoki and Yuuki, and my husband, Masahiro, who has been with me and tremendously supported me in every step of fulfilling my academic endeavor. I thank God and praise Him for this completion.

Abstract.....	iv
Acknowledgements	vi
Introduction	1
1.1 Japanese noun phrases and definiteness	1
1.2 An outline of the dissertation.....	11
2 Nominal collocation constructions	14
2.1 Comparison of Japanese common noun phrases and personal pronouns	15
2.1.1 Previous analyses: an NP hypothesis for Japanese.....	16
2.1.2 Re-examination of Japanese noun phrases as NPs	26
2.1.2.1 Differences between personal pronoun and common nouns.....	27
2.1.2.2 Japanese demonstratives.....	31
2.1.2.3 Multiple relative clause modifiers	37
2.2 Pronoun-noun constructions	40
2.2.1 Are so-called pronouns determiners?	40
2.2.2 Japanese Pronoun-noun constructions vs. English Pronoun-noun constructions	42
2.2.3 Demonstratives and the DP hypothesis	48
2.2.3.1 Demonstratives and their semantics	48
2.2.3.2 Cross-linguistic distribution of demonstratives.....	51
2.2.3.3 Demonstratives in the left periphery of a noun phrase.....	55
2.2.3.3.1 Demonstratives and referential noun phrases (Campbell 1996).....	55
2.2.3.3.2 Scandinavian demonstratives (Julien 2002)	60
2.2.3.3.3 Hungarian demonstratives (Szabolcsi 1994)	63
2.2.4 Interim conclusion	68
2.3 Pronoun-noun constructions and DPs.....	69
2.3.1 Vocatives and DPs.....	69
2.3.2 Size restriction 1: impossible DP within noun phrases	73
2.4 Floating Numeral Quantifiers (FNQs) and DPs.....	78
2.4.1 Basic behaviors of numeral quantifiers (NQs)	80
2.4.2 FNQs and pronominal collocation constructions	82
2.4.3 Adverbial analysis of FNQs	86
2.4.4 Movement analysis of FNQs	92
2.4.5 Specificity effects	94
2.4.5.1 FNQs and definite common noun phrases.....	100
2.4.5.2 NP-Case-NQ sequences and indefinite noun phrases.....	103

2.4.5.3 Nominal constituent analysis.....	105
2.4.5.4 Non-constituent analysis.....	107
2.4.5.5 Failed analysis: Non-movement analysis	111
2.4.5.6 Movement analysis of NQs	112
2.4.6 Interim conclusion	114
2.5 Conclusion	115
3 Internal structure of Pronoun-noun constructions	118
3.1 Observations of the genitive markers in the literature	121
3.1.1 NP-Gen-NP.....	122
3.1.2 The genitive marker as a pronominal element.....	125
3.1.3 The genitive marker as a complementizer-like element	127
3.1.4 Nominative-Genitive conversion.....	131
3.2 Analyses of the genitive marker <i>-no</i>	135
3.2.1 Phonological rules for the genitive marker <i>-no</i>	136
3.2.2 Is the genitive marker a <i>pro</i> -form?	143
3.2.3 Is the genitive marker a complementizer?.....	144
3.2.4 Is the genitive marker a realization of D?.....	146
3.2.5 Is the genitive marker the realization of a copula?.....	150
3.2.6 Movement analysis for Noun-Gen-pronoun constructions	152
3.2.7 Interim conclusion	161
3.3 Inversion and intervention within nominal predication constructions.....	162
3.3.1 Assumptions	172
3.3.2 Restriction on Num.....	174
3.3.3 *NQ-Gen-pronoun constructions	184
3.3.4 Proper nouns and nominal predication constructions.....	193
3.3.5 Definite bare noun phrases and DP	200
3.4 Conclusion	204
4 DP hypothesis and the left periphery of noun phrases	210
4.1 NQ-NP constructions	213
4.1.1 Previous analyses of NQ-NP constructions as non-constituents.....	214
4.1.2 Argument for NQs within the associated NPs.....	217
4.1.2.1 C-command relation and insertion of <i>yuuitu...dake</i> ‘only’	218
4.1.2.2 Insertion of adverb.....	221
4.1.2.3 Topicalization	222

4.2 Additional distinctive properties of NQ-NP constructions	225
4.3 The locus of the NQs in NQ-NP constructions.....	230
4.3.1 Watanabe (2006).....	231
4.3.2 Cheng and Sybesma (1999).....	232
4.3.2.1 Review of Cheng and Sybesma’s (1999) proposal.....	232
4.3.2.2 Application of CIP hypothesis to Japanese.....	235
4.3.3 Bennis, Corver and den Dikken (1998).....	241
4.3.3.1 Review of Bennis, Corver and den Dikken (1998)	241
4.3.3.2 Application of A-bar movement analysis to Japanese.....	247
4.3.4 Supporting evidence of the DP projection by NQ-NP constructions	250
4.3.4.1 A- and A-bar distinction: <i>otagai</i> ‘each other’	250
4.3.4.2 Size restriction 2	256
4.3.4.3 Impossible movement to DP.....	258
4.4 Conclusion	263
5 Conclusion.....	267
Appendix 1: Are Case markers D heads?.....	273
Appendix 2: Is the quantificational particle a head D?	281
2.1 Indeterminate constructions and the particle <i>-ka</i>	281
2.2 Is the quantificational particle <i>-ka</i> the D head?	285
Appendix 3: Abbreviations.....	291
Bibliography	292

Introduction

1.1 Japanese noun phrases and definiteness

Japanese does not possess either definite or indefinite articles, like English *the* or *a*. Bare noun phrases can appear at the subject or object positions and possess definite readings in a given context in (1).

(1) a. Hai, Tanaka sensei-wa [(sono) itinenseitai]-o totemo homemasita.

yes, professor-Top those/the freshmen-Acc very praised

‘Yes. Prof. Tanaka praised those/the freshmen very much.’

b. Iie, [(sono) roudousyatati]-wa kumiain desu.

no those/the workers-Top Union.member Cop

‘No, those/the workers are Union members.’

Japanese demonstratives like *sono*, which does not have a singular/plural difference in form and can be translated as *that*, *those* or *the*, appear prenominal. They refer back to the antecedents to identify the referents that noun phrases denote (see 2.1.2.2, 2.2.3.1 below) as in (1) or are also used deictically (deictic use), as further observed in 2.1.2.2 and 2.2.3. Interestingly, even when the common noun phrases in (1) do not possess demonstratives, they can still have the definite/anaphoric readings as well.¹ In English, on the other hand,

¹ This presence/absence of demonstratives is sociolinguistic. Demonstratives tend to be dropped more

the equivalent noun phrases need the definite article to refer back to the objects that are introduced in the previous contexts. When common noun phrases do not possess the definite article, the objects that they refer to cannot be identified as the same objects in the previous contexts. This suggests that the determiner is directly related to definite readings in English. The fundamental question is where the definiteness of Japanese noun phrases as in (1) comes from when no demonstratives precede noun phrases.

Some linguists (Fukui 1986, Chierchia 1988, Tomioka 2003) argue that Japanese does not project a Determiner Phrase (DP) unlike English and that definiteness stems from semantic operations. According to Fukui (1986 and his subsequent work), there is no positive evidence for DP and thus Japanese projects only NPs recursively, unlike English, —I call this analysis the NP hypothesis throughout this thesis. Tomioka (2003) independently proposes that Japanese noun phrases including *pro* should be treated as NPs not DPs. These proposals for Japanese noun phrases are based on the fact that Japanese does not possess overt determiners such as *the* and *a* and also that bare nouns with definite readings can (relatively) freely appear in argument positions. Since syntax allows for cross-linguistic parameterization in terms of nominal structure, semantic parametric operations play a role in determinerless languages such as Japanese (and Chinese) and assign definite readings (Chierchia 1988 for semantic operations). These claims against the

often between close friends and family members in informal speech.

presence of functional categories for Japanese also call for a revision of the minimalist program based on the principles and parameters theory proposed by Chomsky (1995 and the later work), because not only the presence of functional categories and the properties of features on phrases but also some syntactic operations should be parameterized if no functional categories are projected. That is, Japanese should lack checking and movement operations altogether, due to the lack of functional categories, if the claim were correct. However, the fact that no determiners have been found does not guarantee that no DP exists in syntax. The problem regarding functional categories in Japanese is empirical.

Other linguists maintain that Japanese projects DP. Some linguists argue that markers such as the nominative marker *-ga*, the accusative marker *-o* and/or the genitive marker *-no*, are Ds (Tateishi 1989, Koike 1999, Kakegawa 2003, cf. Watanabe 2006 for a different syntactic analysis of Japanese case markers). Alternatively, some other linguists propose categories other than NP or DP may be present in the highest layer of Japanese noun phrases. Fukui and Takano (1998) hypothesize that Case particles head their own projection KP on top of NP. KP is, however, rejected in Fukui and Takano (2000), in which NP is the top of noun phrases. These ideas come from the fact that nominal arguments are usually attached by Case particles in Japanese. But, unlike determiners *the* or *a*, the presence of the particles does not determine (in)definiteness of noun phrases. If

the accusative marker *-o* or the genitive marker *-no* is D, how would definite readings be able to be differentiated from indefinite readings? Look at the following example.

- (2) Tanaka sensei-wa [itinenseitati]-o totemo homemasita.
professor-Top freshmen-Acc very praised

‘Prof. Tanaka praised (the) freshmen very much.’

The noun phrase with the accusative marker can have both definite and indefinite readings.

In contrast, in English the presence/absence of the determiner fixes the meaning in terms of (in)definiteness. If the Case marker is D for Japanese, it looks very different from that of English. Moreover, in colloquial speech, Japanese can drop Case markers as in (3).

- (3) Tanaka sensei-wa [gakuseitati] hometa to kiita.
Professor-Top students praised Comp heard

‘I heard that Prof. Tanaka praised (the) students.’

The object noun phrase does not involve the accusative marker *-o* and yet can have both definite and indefinite readings. If the Case marker is D for Japanese, it is not clear why the absence/presence of the marker does not affect the readings. Thus, it is not clear whether this is considered as positive evidence for the DP hypothesis for Japanese.²

² I attempt to consider this possibility of the Case marker as D in Appendix 1, and show that behaviors of Case markers seem to be very different from those of English articles.

Saito and Murasugi (1990) present data on nominal deletion for Japanese assimilating to that of English, and propose that the uniform treatment indicates a higher phrase on top of NP, DP (cf. Saito et al. 2008 for a different argument). Look briefly at Saito and Murasugi's main argument.

(4) a. John-no hon

Gen book

'John's book'

b. John-no [e]

Gen

c. John's [e]

Like the English expression in (4c), the Japanese nominal expression in (4b) deletes *hon*, compared to that in (4a). Saito and Murasugi claim that the structure for the English noun phrase in (4c) is applicable to the Japanese noun phrases in (4b). According to Saito and Murasugi, the deletion of the head noun in English can be reanalyzed under the DP hypothesis.

Consider the structure of (4c) in (5):

(5) [DP John [D' 's [NP [e]]

John's sits in Spec of DP and that DP allows the omission of the noun phrase in the complement position.

Likewise, the Japanese counterpart in (4b) can be assigned the following structure in (6a):³

(6) a. [_{DP} John -no [_{NP} [e]]

(Saito and Murasugi 1990:296)

The structure in (6) projects DP, where the possessor is inserted and the noun phrase in the complement position is omitted. If that is the case, then Japanese projects DP.

However, a little further examination of Saito and Murasugi's example reveals that it faces Fukui's problem. That is, it is perfectly grammatical for adjective modifiers, quantifiers and demonstratives to precede the possessor noun *John-no* with/without the nominal deletion in (7):

(7)	a.	John-no	ooku-no	omoshiroi	hon
		Gen	many-Gen	interesting	book
		‘John’s many interesting books’			

³ According to Saito and Murasugi, if the element before the head noun is an adjunct, it cannot license the NP-deletion in (i):

(i) a. ame-no hi
rain-Gen day
‘a rainy day’
b. *ame-no [e]

b. (omosiroi) (ooku-no) John-no [e/book]

interesting many-Gen Gen book

‘(Literary (Lit.)) interesting, many John’s (book)’

c. (ooku-no) (omosiroi) John-no [e/book]

many-Gen interesting Gen book

‘(Lit.) many interesting John’s book.’

d. (sono) (omosiroi) (ooku-no) John-no [e/book]

those/the interesting many-Gen Gen book

‘(Lit.) those/the interesting many John’s book’

The examples in (5) show that the possessor noun cannot close off the noun phrases, whether the head nouns are omitted or not, even when the adjective, quantifier and/or demonstrative precede(s) the possessive. If the possessive is in DP, Japanese should allow for adjunction to DP.⁴ Alternatively if a deletion operation allows NP to be deleted, the rest of the undeleted parts can also be any other category than DP for Japanese (Cinque 2002). Fukui’s NP hypothesis (that Japanese projects only NPs and thus that recursion is permitted) also correctly capture the left property of the noun phrases: all of the prenominal elements adjoin to the head NP. The deletion data cannot be taken as strong evidence for the DP hypothesis for Japanese.

⁴ I will argue that DP does not allow for adjunction for Japanese in Chapter 4.

Among alternative analyses of the noun phrases in (7), if Fukui's NP hypothesis for Japanese is correct,⁵ Japanese noun phrases should be treated as NPs in syntax. This predicts that pronouns and proper nouns behave like common noun phrases. The following examples seem to support Fukui's claim.

(8) a. kono ookii gakusei/gakuseitati

 this big student/students

 'this big student/students'

 b. kono ookii Tanaka-san/Tanaka-san-tati

 this big Mr./ Mr.-Pl

 '(Lit.) this big Mr. Tanaka/ these big Mr. Tanakas'

 c. kono ookii watasi/anata/kare/watasitati/anatatati/karera

 '(Lit.) this/these big I/you(Sg)/he/we/you(Pl)/they'

Japanese proper nouns and pronouns allow for demonstratives and adjectives to precede them in (8b,c), like in the case of common noun in (8a). This appears to be strongly in favor of Fukui's argument of the NP hypothesis. Besides Fukui's (1986 and his subsequent work) argument of the NP hypothesis, Fukui and Sakai (2003) argue that Japanese functional categories are all inactive including formal mechanical computations in narrow syntax. The existence of a functional category has to be detected from overt evidence and

⁵ We will discuss Fukui's argument in Chapter 2.1 in more detail.

the functional category in question has to be non-existent in the language. However, in the Japanese linguistic literature the examination of noun phrases has been limited to only simple noun phrases.

Postal (1969) observes that English pronouns come before common nouns and proposes “so-called English pronouns” function as determiners.^{6,7}

- (9) a. [Us linguists] want to understand the riddle of language.
b [You troops] will embark but the other troops will remain.

(Pesetsky 1978)

- c. (*) [Them linguists] are subversive.

(Déchaine and Wiltschko 2002: 422)

Abney (1987:180) updates Postal’s argument under the DP hypothesis in (10).

- (10) [DP we/the [NP linguists]]

Japanese also allows the combination of personal pronouns and common noun phrases

(Noguchi 1998, Furuya 2004) in (11):⁸

⁶ Sommerstein (1972) argues that “so-called (definite) determiners” are pronouns.

⁷ Lyons (1999) also offers an argument in a similar vein.

⁸ Japanese personal pronouns in Pronoun-noun combinations do not carry Case morphology. The translation of Japanese pronouns into English is not quite accurate as in (11). However, I still translate *watasitati* into ‘we’ and *karera* into ‘they’ when they do not appear in a sentence.

(11) a. *watasitati sensei*

we professor

‘we professors’

b. *anatatati sensei*

you(Pl) professor

‘you patients’

c. *karera sensei*

they professor

‘they professors’

If the revised structure based on Postal’s argument is correct for English in (10), likewise Japanese is also predicted to have DP.

This dissertation challenges Fukui’s (1986) claim that Japanese, a determinerless language, does not have a determiner phrase (DP) in syntax by examining Japanese complex noun phrases, particularly, nominal collocation constructions like *watasitati gakusei* ‘us students’, whose constructions have not been shed much light on in the Japanese linguistic literature. I endeavor to defend the DP hypothesis proposed by Abney (1987) for Japanese. This work also supports the minimalist framework proposed by Chomsky (1995, Chapter 4 and later work).

1.2 An outline of the dissertation

In Chapter 2 I start to present differences in distribution between pronouns and common noun phrases by analyzing Japanese nominal collocation constructions. These differences cannot be captured by Fukui's NP hypothesis. Once having refuted Fukui's NP hypothesis, I show that Postal's DP hypothesis is not perfectly applicable to Japanese and entertain den Dikken's (1998) nominal predication hypothesis and Campbell's (1996) null determiner hypothesis for Japanese. Demonstrating that Japanese nominal collocation constructions are opaque for movement of numeral quantifiers (NQs), I argue that this opacity is the same as that of English wh-movement. That is, I take the fact that Japanese shows specificity effects like English as evidence to support the DP hypothesis for Japanese. I extend the argument to bare noun phrases with definite readings.

In Chapter 3, I examine the internal structure of nominal collocation constructions and attempt to find where definiteness comes from by comparing Pronoun-noun constructions and Noun-Gen-pronoun constructions. After attempting to unsuccessfully apply the previous analyses of the genitive marker to the marker in Noun-Gen-pronoun constructions, I slightly shift the analysis and investigate the status of the NP and the genitive marker in Noun-Gen-pronoun constructions at the same time. I demonstrate that the NP undergoes predicate-inversion and moves to Spec of Number Phrase (NumP), the

next higher phrase, and that the genitive marker is the realization of the head of NumP. I further extend the nominal predication analysis to other nominal collocation constructions and consider the restrictions on nominal predication relations. One of the restrictions involves the issue of feature checking operations. Under the assumption that the pronominal subjects (and *pro* subjects) in nominal predication constructions possess an uninterpretable D feature, they require the presence of D, which needs demonstratives or a null Operator with a D feature in Spec of DP to check against the feature on the subjects, due to EPP on D. When NQ predicates are inverted, however, the checking operation cannot be successfully conducted because NQs involve a [-D] feature, because of the Defective Intervention Constraint (Sigurðsson 2006), which leads to a crash of the derivation. This chapter attempts to show that D serves as the referential anchor of noun phrases in that it requires elements with interpretable features that create referentiality by filling its Spec with a demonstrative or a null Operator.

In Chapter 4, I focus on the examination of the left periphery⁹ of complex noun phrases and argue for the ban on adjunction to DP by examining NQ-NP constructions. Unlike the NQ in NQ-Gen-NP constructions that are examined in Chapter 3, the NQ in NQ-

⁹ Christina Tortora (personal communication) points out that the term “left periphery” has a very specific meaning in the context of the theory of the clause -- it refers to the so-called “CP-layer” and thus that the term “left-periphery” may or may not have the same use in the literature on the DP (i.e. it may or may not refer to a “DP-field” of projections.) In this thesis this term just literally refers to the left periphery of noun phrases.

NP constructions is shown to get directly raised to Spec of DP. This movement is blocked when an element exists in Spec of DP. Insertion of modifiers in the left periphery of NQ-NP constructions is also prohibited. I argue that this is because DP as the referential anchor of noun phrases enables noun phrases to refer deictically/referentially, and referentiality is not recursively specified. This chapter reinforces the assumption of Chapter 2 that adjunction to DP is banned, in favor of the DP hypothesis for Japanese.

In Chapter 5, I present a summary of the dissertation. The conclusion is followed by three appendices. In the first appendix, I consider the possibility of Case markers as Ds based on the current argument for the DP hypothesis for Japanese and suggest that Case-particles may not be Ds in Japanese (cf. Tateishi 1989). In the second appendix, I examine the status of the quantificational particle *-ka* in indefinite-noun constructions. If the examination of nominal collocation is on the right track, it implies that the marker is not D, either (cf. Watanabe 1992, Takahashi 2002). The third one is the list of abbreviations.

2 Nominal collocation constructions

Japanese is an articleless language. Personal pronouns behave like common noun phrases in terms of modification. Common noun phrases possess definite/anaphoric force like personal pronouns. Thus, some linguists argue that all Japanese noun phrases do not project functional categories such as Determiner Phrase (DP) (e.g. Fukui 1986, Noguchi 1997, Fukui and Takano 2000, Fukui and Sakai 2003, Chierchia 1988, Tomioka 2003). Some linguists argue that Case markers project functional categories such as Case Phrases (KP)s or DPs (e.g. Tateishi 1989, Löbel 1994, Fukui and Takano 1998, Kakegawa 2003).¹⁰ Some other linguists assume the presence of DP for Japanese under the implicit assumption that DP is part of Universal Grammar (Saito and Murasugi 1990, Murasugi 1991).

In this chapter, I provide evidence for the DP hypothesis for Japanese, in which a phonologically null element is present in DP. I demonstrate the tenability of the DP hypothesis for Japanese bare noun phrases that have definite/discourse anaphoric interpretations. I defend the universality of the relation between argumenthood and D, specifically, for (common) noun phrases with definite/anaphoric interpretations.

The organization of this chapter is as follows. In 2.1, after reviewing major arguments for Fukui's (1986) NP hypothesis for Japanese, I will show that the unified

¹⁰ I gave consideration to the possibility of case morphology as D in Appendix 1 and offer a negative view.

treatment of Japanese personal pronouns and common nouns is not appropriate, which empirically poses a problem for the NP hypothesis. In 2.2, I will focus on the examination of characteristics of Japanese Pronoun-noun constructions in detail and scrutinize the possibility that personal pronouns function as determiners (Postal 1969). Although this expectation will be shown to fail, I will show that there is still some evidence for the DP hypothesis in relation to demonstratives. In 2.3, I will particularly examine the distribution of Pronoun-noun constructions and offer arguments for the DP hypothesis for Japanese. In 2.4, I will examine pronominal constructions with numeral quantifiers (NQs) in terms of behaviors of NQs and the specificity effects by employing numeral quantifiers (NQs). This examination has not been conducted in the literature while a large amount of study on the behavior of NQs has been offered for Japanese as well as other languages. 2.5 is the conclusion. My ultimate goal in this chapter is to show that not only Japanese Pronoun-noun constructions but also some common noun phrases with definite interpretations project DPs.

2.1 Comparison of Japanese common noun phrases and personal pronouns

After reviewing major observations (including Fukui 1986) that lead some linguists to treat Japanese personal pronouns and common nouns equally in 2.1.1, I will reanalyze them and

argue against the equal treatment of Japanese noun phrases despite of their commonality in

2.1.2.

2.1.1 Previous analyses: an NP hypothesis for Japanese

There are some ‘seemingly’ common properties between personal pronouns and common noun phrases, some linguists treat them uniformly and argue that Japanese lacks DP (e.g. Fukui 1986, Fukui and Takano 2000, Fukui and Sakai 2003, Chierchia 1988, Tomioka 2003). In this section, I will review five properties of Japanese noun phrases including Fukui’s (1986) data.

As observed in Chapter 1, Japanese bare noun seem to be able to have definite/discourse anaphoric interpretations like personal pronouns in a given context.

Look at the following examples in (1):

(1) A. [Dansei(-ra)]_i-wa kusuri-o nomimasita ka.

man-Pl-Top medicine-Acc drank Q

‘Did the men take medicine?’

a. (Hai) [Dansei(-ra)]_i-wa (mina) kusuri-o nomimasita.

yes man-Pl-Top all medicine-Acc drank

‘(Yes.) The men took medicine.’

b. (Hai) [**Karera**]_i-wa (mina) kusuri-o nomimasita.
 yes they-Top all medicine-Acc drank

‘(Yes.) They are (all) patient.’

(2) A. Hannin-wa [kodom(-ra)]_i-o saratta to kiita.
 criminal-Top child-Pl-Acc kidnapped Comp heard

‘I heard that the criminal kidnapped a child/children.’

a. Sonogo keisatu-wa buji [**kodomo(-ra)**]_i-o hogosita.
 later police-Top safely child-Pl-Acc protected

‘Later, the police protected the child/children safely.’

b. Sonogo keisatu-wa buji [**kare/karera**]_i-o hogosita.
 later police-Top safely him/them-Acc protected

‘Later, the police protected him/them safely.’

Once individuals are introduced in the contexts of (1A) and (2A), the same bare common noun phrases in (1a) and (2a) refer back to the same referents regardless of their positions in the sentences as the personal pronouns in (1b) and (2b). The same distribution of common noun phrases and personal pronouns may suggest that they share the same categorial status in syntax.

Besides the shared distribution of bare common noun phrases and personal pronouns, both of them allow modification in the left periphery. Look at the following examples in (3) and (4):

(3) a. Watasi-wa [**tiisai** kodomo/kare]-o sikatta.

I-Top small child/him-Acc scolded

‘(Lit.) I scolded the small child/him.’

b. [**Isogasii** zyoseigata/anatagata]-wa mina sensei desu ka.

busy women/you(PI)-Top all professor are Q

‘(Lit.) Are the busy women/you all professors?’

(4) demo [**kinou-no** kodomo/kare-wa] yousu-ga hendat-ta

but yesterday-Gen child/he-Top state-Nom strange-Past

‘...(Lit.) but yesterday’s child/he was strange.’

(Fukui 1986: 233 with slight modifications)

Both personal pronouns and common nouns allow adjectival and nominal modification

(Noguchi 1997).¹¹

¹¹ Noguchi (1997) also observes that Japanese personal pronouns do not function as bound variables of universal quantifier *daremo* ‘everyone’. Déchaine and Wiltschko (2002) argue that Japanese third singular personal pronoun is an NP. If it is the definition of pronouns as NPs, the all Japanese pronouns should be NP, like common noun phrases. However, as is shown shortly in this section, Japanese personal pronouns do not always possess the same distribution and behaviors as common noun phrases.

Moreover, personal pronouns like common nouns can follow demonstratives, although Fukui (1986) does not observe examples as in (5):

- (5) a. Watasi-wa [**sono** (tiisai) kodomo/kare]-o sikatta.
 I-Top that/the small child/him-Acc scolded
 ‘(Lit.) I scolded that/the (small) child/him.’
- b. [**Kono** (isogasii) zyoseigata/anatagata]-wa mina sensei desu ka.
 these busy women/ you(Pl)-Top all professor are Q
 ‘(Lit.) Are these (busy) women/you all professors?’

The above data in (1)-(5) may suggest that personal pronouns and common noun phrases behave equally, because both can have definite/discourse anaphoric interpretations, adjectival and nominal modifications, and demonstratives in the left periphery of noun phrases in the same way.

Besides the modification availability in (4), Fukui observes behaviors of Japanese demonstratives and proper nouns and presents that they do not show distinctive properties in the left periphery as definite expressions. Consider the Japanese and English examples.

- (6) a. this book
 b. *John’s this book

(Fukui 1986:204)

c. *John's the book

(7) a. [kono/sono/ano] hon¹²

'this/that/that book'

b. ([John-no]) [kono/sono/ano] ([John-no]) hon

'(Lit.) (John's) this/that/that (John's) book'

(Fukui 1986:205 with some modifications)

According to Fukui, English demonstratives clearly pattern with determiners in that they have a property of closing off the projection as in (6b): the demonstrative *this* is in DP in (6a); and thus the proper noun *John's* cannot precede the demonstrative in (6b), like in the case of the determiner *the* in (6c). On the other hand, although the Japanese demonstratives look like the English ones in (7a), they allow elements like the proper noun to precede them in (7b). This property is of lexical heads like NPs in that lexical heads put no limit on iterating modifiers as long as the modifiers are appropriately interpreted and licensed. Because Japanese demonstratives cannot bear the properties of functional categories that project up to DP level, a structurally closed level unlike *this* and *that* in English, they function as modifiers (Fukui 1986:203-206). The treatment of Japanese demonstratives as modifiers, hence, leads Fukui to conclude that Japanese lacks any plausible candidates for

¹² In this thesis I do not morphologically decompose Japanese demonstratives unlike Fukui. See Koike (1999) and also Footnote 59 in Chapter 3.

the functional category D, because there is no syntactic evidence found for Japanese.¹³

Japanese noun phrases are projections of NP and thus ‘open’ in the sense that they always permit adjunction even when they have demonstratives in the left periphery of noun phrases or proper nouns as possessors. The next example appears to support this claim of Fukui’s NP hypothesis.

The following English and Japanese sets of Fukui’s examples involve so-called ‘stacked’ relative clauses. Look first at English examples in (8):

(8) a. People who go to MIT who like math will get jobs.

b. *John, who goes to MIT, who likes math, will get a job.

(Fukui 1986:234, citing from Chomsky 1977:66)

The appositive (non-restrictive) relative clauses cannot stack in (8b), unlike in the case of the multiple restrictive relative clauses in (8a). Fukui’s implicit assumption behind these examples is that a proper noun, a definite noun phrase, closes off the phrase and does not allow for a multiple modification in (8b). On the other hand, the indefinite noun phrase in (8a) *people* does not close off the phrase (due to the lack of a determiner) and thus permits multiple relative clause modification. He applies this test to Japanese and shows that Japanese lacks the difference. Consider Japanese examples in (9):

¹³ Tomioka (2003) independently proposes that Japanese noun phrases including *pro* should be treated as NPs not DP. I do not examine empty categories like *pro* here.

(9) a. [Osaka-(de)-no kokusai-kaigi-ni sanku-suru koto-ni-natte-iru
 Osaka-in-Gen international meeting-at attend is supposed to

Amerika-kara kaette-kita-bakari-no **gakusya-tati**]-wa ima Tokyo-no

from came-back-just-Gen scholar-PI-Top now Gen

hotel-ni tomatte-imasu.

hotel-at are-staying

‘(Lit.) Scholars who are supposed to attend the international conference in Osaka

who just returned from America are now staying at a hotel in Osaka.

b. [Osaka-(de)-no kokusai-kaigi-ni sanku-suru koto-ni-natte-iru

Osaka-in-Gen international meeting-at attend is supposed to

Amerika-kara kaette-kita-bakari-no **John**-wa] ima Tokyo-no

from came-back-just-Gen Top now Gen

hotel-ni tomatte-imasu.

hotel-at are-staying

‘(Lit.) John who is supposed to attend the international conference in Osaka who just

returned from America is now staying at a hotel in Osaka.

(Fukui 1986:234)

The only difference in (9a,b) is the type of the head nouns in that the clause in (9a) has a common noun with an indefinite interpretation while the one in (9b) has a proper noun, which is definite. Japanese lacks the contrast between the restrictive and nonrestrictive relative clauses, unlike the English examples in (8). Both Japanese examples can stack and thus they are grammatical. Fukui (1986:205-206 and his subsequent work) argue that the relative freedom of the left periphery of Japanese noun phrases stems from their categorial nature. That is, under the assumption that DPs close off noun phrases whereas NPs do not, the lack of asymmetry among noun phrases including definite noun phrases, pronouns, and proper nouns shows that Japanese noun phrases do not project functional categories such as DP, and thus only repeatedly project NPs. Since Japanese noun phrases only project NPs, they behave equally and thus adjunction to NPs is freely allowed. Moreover, Fukui (1986) and Fukui and Sakai (2003) argue that evidence for the presence of a determiner phrase has not been found, along with other functional categories such as CP and IP for Japanese. Thus, Japanese lacks DP for noun phrases, and thus the projection of DP (as well as other functional categories) should be parameterized.

Tomioka (2003) argues that these unpronounced elements (i.e. *pros*) share the same distribution with personal pronouns, which are all treated equally to common noun phrases as NPs in syntax, based on the fact that the pronouns and common noun phrases with

definite/discourse anaphoric interpretations are readily omissible in a given context. He concludes that Japanese *pros* are also NPs in syntax and that all nominal categories enter into semantic operations proposed by Chierchia (1998) for (in)definiteness (Fukui 2001).

Chierchia (1998) argues that languages vary in terms of what they allow NPs to denote. If a language involves the following facts, it allows bare NPs to denote kinds as well as properties, unlike the languages that need an overt determiner for noun phrases.

(10) Chierchia's criterion

(a) the absence of (in)definite determiners,

(b) the absence of plural morphology and

(c) the obligatory use of a classifier in the presence of a numeral

Once a language satisfies these properties, they employ semantic operations for (in)definiteness (see Chierchia 1998 for the detail).

According to Fukui (2001), Fukui and Sakai (2003), and Tomioka (2003), Japanese satisfies all three properties in (10) and thus Japanese noun phrases are all NPs in syntax. If they are right, Japanese noun phrases projects only NPs in syntax.

To summarize, I reviewed the shared properties by Japanese common noun phrases and personal pronouns (and proper nouns) that are mainly observed in the literature: (i) the common distribution of bare noun phrases with definite readings and personal pronouns; (ii)

the availability of adjectival and nominal modifications to personal pronouns like common noun phrases; and (iii) the availability of demonstratives preceding personal pronouns like common nouns; (iv) the embeddedness of demonstratives within noun phrases; (v) so-called ‘stacked’ relative clauses with proper nouns. These data suggest that common noun phrases behave like personal pronouns in distribution in terms of definiteness/discourse anaphoric interpretation. That is, there appears to be no differences among definite common noun phrases, personal pronouns (including *pro*) and proper nouns.

If Fukui’s NP hypothesis for Japanese is correct, the properties of Japanese noun phrases observed in this subsection are readily accounted for. The definite referential noun phrases can only project NPs and the referentiality with definiteness is attributed to its semantics (Chierchia 1998). That is, the parameterization of the structure for definite noun phrases along with that of semantic operations for (in)definiteness is required (cf. Longobardi 1994, Szabolcsi 1994, Cinque 2002, Watanabe 2006 for the universality of the relation between argumenthood and D). If Fukui’s analysis of his examples is not correct, on the other hand, the unified treatment of all noun phrases should be incorrect. That is, it may not be the case that Japanese lacks DP. If Japanese projects DP, there should be positive evidence for it.

In the next subsection, I will attempt to re-examine the properties of noun phrases that support Fukui's NP hypothesis. Further observations demonstrate that it is not always the case that personal pronouns and common noun phrases with definite readings share the same distribution. This opens up the possibility that the permission of modifiers in the left periphery for Japanese definite noun phrases does not show the lack of DP. It may be the case that DP is projected in syntax while its phonology is null and that personal pronouns are located in a lower positions. Thus, the fact that evidence for the presence of a determiner phrase has not been found so far in the literature does not guarantee that no determiners or DPs exist at all for Japanese.

2.1.2 Re-examination of Japanese noun phrases as NPs

In the previous subsection, we observed the five properties of Japanese nominal properties including personal pronouns and proper nouns. I will attempt to re-examine the four properties of (i) the common distribution of bare noun phrases and personal pronouns, (iv) the embeddedness of demonstratives within noun phrases, and (v) so-called 'stacked' relative clauses with proper nouns that are observed.¹⁴ In 2.1.2.1, careful observations of common noun phrases and personal pronouns show cases where personal pronouns do not

¹⁴ I will account for the property of (ii) the availability of adjectival modifications to personal pronouns like common noun phrases; and (iii) the availability of demonstratives preceding personal pronouns like common nouns; in the following section. I will argue that the position of Japanese personal pronouns is located in a lower position than in DP. If this argument is correct, the availability of adjectives and demonstratives in the left periphery does not support Fukui's NP hypothesis for Japanese.

share the distribution with common noun phrases by focusing on more complex noun phrases like nominal collocation constructions. This is problematic for Fukui's NP hypothesis. In 2.1.2.2, the issue of Japanese demonstratives embedded within noun phrases is also shown to not support Fukui's NP hypothesis. In 2.1.2.3, I will discuss a possibility of Japanese proper nouns not as NPs by looking at multiple relative clauses.

2.1.2.1 Differences between personal pronoun and common nouns.

Japanese personal pronouns do not always share the same distribution with common nouns. We will observe four pieces of evidence to this effect in this subsection. Consider nominal collocation constructions in the bracketed examples of (11a,b):

(11) A. [Dansei]_i-wa mina kusuri-o nomimasita ka.
 man-Top all medicine-Ac drank Q

'Did all the men take medicine?'

a. Hai. [Dansei kanzya]_i-wa (mina) kusuri-o nomimasita.
 yes man patient-Top all medicine-Acc drank

'Yes. The male patients all took medicine.'

b. Hai. [Karera kanzya]_i-wa (mina) kusuri-o nomimasita.
 yes they patient-Nom all medicine-Acc drank

'Yes. (*)Them patients all took medicine.'

In (11a,b), both sentences with the nominal collocation constructions are grammatical as answers to the question in (11A). However, careful observation shows that the combination of a personal pronoun and a common noun is different from that of two common nouns in three ways. The first difference is accentuation.

Consider the example in (11).

(11) a. $\overline{\text{dansei}} + \overline{\text{kanzya}} \rightarrow \overline{\text{dansei.kanzya}}$ (lexical compound)

man patient man.patient

b. $\overline{\text{karera}} + \overline{\text{kanzya}} \rightarrow \overline{\text{karera}} \overline{\text{kanzya}}$

they patient they patient

Each noun on the left-hand side of the arrow in (11a, b) has its own accent in isolation. On the right-hand side, the combination of the two common nouns in (11a) is pronounced with a single stretch of high-pitched accents, which is a typical accentuation pattern for lexical compounds. Japanese lexical compounds are always pronounced with one accentual peak. (See Shibatani and Kageyama 1988 for Japanese compounds in more detail.) On the other hand, in (11b) both the pronoun and the common noun keep their own peak on both right and left sides. The difference in accentuation demonstrates that personal pronouns cannot be part of lexical compounds. This is also true of English personal pronouns (e.g. **themfolk* vs. *kinsfolk*, but *she-goat*).

The second difference stems from the treatment of partial modification (Bresnan and Mchombo 1995).

- (12) a. dansei (*urusai) kanzya (lexical compound)
 man noisy patient
- b. karera (urusai) kanzya
 they noisy patient
 ‘(*) them noisy patients.’

The lexical compound does not allow partial modification in (12a) while the Pronoun-noun construction in (12b) allows the operation. The treatment of partial modification proves that the second common noun in (12b) projects a phrasal category whereas the one in (12a) does not. This property is also shared by English (e.g. *kins(*nice)folk* vs. *them noisy patients*).

Furthermore, the next examples also show the difference in distribution between personal pronouns and common nouns.

- (13) a. *Hai. [Dansei-**ra** (urusai) kanzya]-wa (mina) kusuri-o nomimasita ne.
 yes man-Pl noisy patient-Top all medicine-Acc drank Prt

b. Hai. [Karera (urusai) kanzya]-wa (mina) kusuri-o nomimasita ne.
 yes them noisy patient-Top all medicine-Acc drank Prt

‘Yes. Them (noisy) patients all took medicine.’

The combination of a pronoun and a common noun is grammatical in (13b), whereas the combination of a common noun phrase with the plural marker *-tati* and another common noun is ungrammatical. Pronouns are different from common noun phrases in syntax both in Japanese and in English.

The following is a summary of our observations besides the accent difference in (11).

(14) a. personal pronoun (adjective) common NP

b. *common NP(-Pl) (adjective) common NP (cf. N-N compounds)

These nominal collocation cases show that both the personal pronoun and the common noun in (14a) are phrasal categories, and thus the second common noun phrase can have its own modification. On the other hand, in (14b) the second noun is unable to possess its own modifier and the first noun cannot possess a plural morpheme, because they are not phrasal categories in syntax (see Kageyama 1993). Put differently, at the phrasal level the combination of a personal pronoun and a common noun phrase is grammatical while the combination of two common noun phrases is ungrammatical. Thus, personal pronouns are

different in distribution from common nouns. This difference in complex noun phrases cannot be accounted for by Fukui's NP hypothesis, because the hypothesis would predict the common distribution between personal pronouns and (definite) common noun phrases.

2.1.2.2 Japanese demonstratives

Demonstratives have two types of use (Wolter 2006): deictic and anaphoric.¹⁵ In deictic use, which have been treated as their distinguishing property (King 2001), the interpretations of demonstratives are relative to the (usually) extralinguistic context of the utterance. When there is more than one potential referent in the context of utterance, a deictic demonstrative description is acceptable with an appropriate gesture towards one potential referent by uttering *this book*, *that book* while pointing out the books. In anaphoric use, on the other hand, the referents of demonstratives depend on linguistic antecedents. That is, the antecedent provides the information necessary for the expression's interpretation and thus the expression refers back to the antecedent such as in the example of the relation of demonstrative (see 2.2.3.1 for semantics of demonstratives).

Japanese demonstratives also have two types of use: deictic uses and anaphoric uses, although Fukui only observes deictic use of demonstratives.¹⁶ As Fukui observes in (7b)

¹⁵ See also 2.2.3 for demonstratives.

¹⁶ Japanese have three demonstrative expressions: *kono* 'this', *sono* 'that/the, (to refer to the object close to the listener)' and *ano* 'that over there, (to refer to the object neither close to the speaker nor the listener)'. In anaphoric use, all demonstratives can be used as in the case of deictic uses (Kuno 1983).

above, demonstratives with deictic interpretations seem to allow adjectival modification in the left periphery. Consider the following example.

(15) a. Kono akai me-o mite.

this red eye-Acc look

‘Look at this red eye.’

b. Akai, **kono** me-o mite.

red this eye-Acc look

‘Look at THIS eye in red (and not other objects).’

In (15a,b), the demonstratives are used deictically. The same demonstrative in the examples has some differences, however. One primary difference is that the demonstrative in (15b) has a (contrastive) focus reading while the one in (15a) does not. Because of that reading, the demonstrative in (15b) needs emphasis on it; a pause is also required between the adjective and the demonstrative, indicated with a comma. Under Fukui’s NP hypothesis the combination of the demonstrative and the common noun phrase projects NP, and this NP allows adjectival modification in (15b).

Compared with the example in (15b), anaphoric demonstratives prohibit the modification in the left periphery in (16):

(16) A. Tentou-de mituketa [hon]-wa 450 datta. Takai to omottakedo...
 store-in found book-Top was expensive Comp thought

‘The book that I found in the book store was \$450. Although I thought that...’

a. Watasi-wa [sono totemo takai hon]-o katta.
 I-Top that/the very expensive book-Acc bought

‘I bought that/the very heavy book.’

b. *Watasi-wa [totemo takai [sono hon]]-o katta.¹⁷
 I-Top very expensive that/the book-Acc bought

‘I bought that/the very heavy book.’

Given the context (16A), *sono hon* ‘that/the book’ in (16a,b) anaphorically refers back to the same book that the noun in (16A) refers to. In (16a), the demonstrative in anaphoric use appears in the left periphery and the expression is grammatical, unlike the one that is not in the left periphery of the noun phrase in (16b). This property of demonstratives seems to be different from that of deictic demonstratives. If Fukui’s NP hypothesis were correct, it would predict that the expression in (16b) should be grammatical, contrary to fact. This suggests that Japanese demonstratives may occupy two different positions in syntax depending on their semantics.

¹⁷ Even when an emphasis is put on the demonstrative in anaphoric use, which functions as contrastive focus, the expression is still ungrammatical. The anaphoric use does not need a contrastive reading.

Interestingly, there is one property shared by the two types (i.e. anaphoric and deictic uses) of demonstratives. Look at the two sets of examples in (17) and (18).¹⁸

(17) a. Gakkou-wa [anatagata (***sono**) kyousi]-o suisensimasita.
 school-Top you(Pl) those/the professor-Acc recommended
 ‘(Lit.) The school recommended (*you) those/the professors.’

b. Kaisha-wa [karera (***sono**) syain]-o kaikosita.
 company-Top them those/the employee-Acc fired
 ‘(Lit.) The company fired them (*those/the) employees.’

(18) a. [anatagata (***kono**) kyousi]-o suisensimasita.
 you(Pl) these professor-Acc recommended
 ‘(Lit.) The school recommended you (*these) professors.’

b. Kaisha-wa [karera (***ano**) syain]-o kaikosita.
 company-Top them those employee-Acc fired
 ‘(Lit.) The company fired them (*those) employees.’

The demonstrative *sono* ‘that/the’ in (17) may be used in anaphoric use or in deictic use whereas the demonstratives *kono* ‘this’ and *ano* ‘that’ in (18) are often used in deictic use (Kuno 1973). The one shared property in these examples is that demonstratives cannot occur between a pronoun and a common noun phrase both in anaphoric and deictic use.

¹⁸ I will come back to these data in (17) and (18) and analyze them in 2.3.2 below.

This is schematized in (19):

(19) pronoun-(**anaphoric/deictic demonstrative*)-noun

This shows that demonstratives in both anaphoric use and deictic use cannot appear between pronouns and noun phrases.

Notice that the ungrammaticality of the embedded demonstratives within the noun phrases in (17) and (18) cannot be explained by the NP hypothesis, because demonstratives should be able to appear in lower positions of noun phrases, as in Fukui's example of (7b) above, contrary to fact. One might object that the impossibility of demonstratives results from semantic reasons rather than syntactic reasons. However, if the impossibility of deictic and anaphoric demonstratives' occurrence in (19) comes from semantic reasons, why is it the case that semantics prohibits it in (19) while demonstratives are not limited to the left periphery of noun phrases as in (15b) as well as in Fukui's example (7b) above in Japanese (and also in some languages as in 2.2.3.2).

Moreover, predication relations with demonstratives in clausal predicate position (which are equivalent of the nominal predications in (17) above) are acceptable within a clause. Consider the following Japanese examples in (20):

(20) a. They are **the** students at CUNY.

b. Karera-was **sono** CUNY-no gakusei desu.

they-Top those/the CUNY-Gen student Cop

The Japanese demonstrative *sono* in anaphoric use may function as the English definite article *the* in the sense of anaphoric use (Kuno 1973) and noun phrases with *sono* can appear in the predicate position of a clause as in English.

Moreover, demonstratives in deictic use can also appear in clause predicate position (which are equivalent of the nominal predications in (18) above), as in (21):

(21) a. Anatagata-wa **kono** kyoushi desu yo.

you(Pl)-Top these professor Cop Prt

‘(Lit.) You are these professors.’

b. karera-wa **ano** syain desu.

they-Top those employee Cop

‘(Lit.) They are those employees.’

At first these sentences sound awkward, because the noun phrases in predicate position possess demonstratives. However, once they are put into a context in which the reference of the professors and employees is previously introduced, they are perfectly grammatical. Thus, the ungrammaticality of (17) and (18) does not come from their semantics. If the ungrammaticality in (17) and (18) as well as that in (16b) comes from their syntax, Fukui’s

NP hypothesis cannot account for their ungrammaticality since it should permit demonstratives (like adjectival modifiers) to appear anywhere in the noun phrases as long as the head nouns are located at the very right periphery, contrary to fact.

2.1.2.3 Multiple relative clause modifiers

Fukui's examples of the NP hypothesis involve the application of English multiple relative clauses in (8), repeated below, to Japanese.

- (8) a. People who go to MIT who like math will get jobs
b. *John, who goes to MIT, who likes math, will get a job.

(Fukui 1986:234, citing from Chomsky 1977:66)

Although Fukui does not offer an analysis to these constructions, Fukui assumes that non-restrictive relatives attach to DP, unlike restrictive relatives. Under this assumption, the multiple non-restrictive relative clauses cannot modify the proper noun since the head noun in (8b) projects DP.

Against this background, let us go back to the Japanese non-restrictive relative clause in (9b), repeated below.

- (9) b. [Osaka-(de)-no kokusai-kaigi-ni sanku-suru koto-ni-natte-iru
in-Gen international meeting-at attend is supposed to
Amerika-kara kaette-kita-bakari-no **John**-wa] ima Tokyo-no
from came-back-just-Gen Top now Gen
hotel-ni tomatte-imasu.
hotel-at are-staying

‘(Lit.) John who is supposed to attend the international conference in Osaka who just returned from America is now staying at a hotel in Osaka.

(Fukui 1986:234)

The Japanese proper noun in (9b) allows the modification of multiple non-restrictive clauses. Fukui claims that Japanese proper nouns (as well as other noun) project only NPs and thus that the proper noun can have multiple non-restrictive clauses. If proper nouns like other nouns including personal pronouns are positioned in (a) lower position(s) within noun phrases as argued shortly, however, Japanese noun phrases may be able to have a variety of modifiers. If this is the case, then, this fact does not necessarily demonstrate that Japanese lacks DP.

To summarize this subsection, I showed that an identical treatment of personal pronouns and common nouns (with definite/discourse anaphoric interpretations) is

problematic for Fukui's NP hypothesis because they show the differences in behavior within nominal collocation constructions. Moreover, since the two types of demonstratives (anaphoric, deictic) may be different in syntax, the embeddedness of demonstratives in deictic use within noun phrases does not necessary show that Japanese definite expressions are not closed off in the left periphery. The common fact that both types of demonstratives cannot appear between personal pronouns and common noun phrases is not accountable for under Fukui's NP hypothesis, either. The lack of the difference between common noun phrases and proper nouns in terms of multiple non-restrictive relative clauses cannot also be used as crucial evidence for the NP hypothesis once one assumes that proper nouns are located in a lower position of noun phrases as will be argued in Chapter 4. If the current line of argument is correct, the examination of modifiers to noun phrases will not be able to help one investigate whether there are nominal phrases that close off the phrases.

Some linguists argue that personal pronouns in other languages function as determiners in nominal collocation constructions (Postal 1969, Hawkins 1974, Lyons 1977, Pesetsky 1978 for English, Longobardi 1994 for Italian, Lyons 1999 for Spanish and other languages, cf. Sommerstein 1972, Delorme and Dougherty 1972 for apposition analyses of the constructions). If this is the case for other languages, one may expect that Japanese personal pronouns in nominal collocation constructions function as determiners, too. In the

next section, I will focus on Pronoun-noun constructions and examine the constructions in detail.

2.2 Pronoun-noun constructions

In this section, I will examine Japanese Pronoun-noun constructions in detail, in comparison with English constructions. In 2.2.1, I will examine the constructions to see whether ‘so-called’ Japanese pronouns are determiners as Postal (1969) argues for English, and demonstrate that this expectation will fail because Japanese shows some properties that English lacks in 2.2.2. In 2.2.3, I will support the DP hypothesis for Japanese, despite the conclusion in 2.2.2.

2.2.1 Are so-called pronouns determiners?

Postal (1969) observes that English pronouns followed by noun phrases can function like the definite article *the* in (22) below (which is (9) of Chapter 1), and proposes that “so-called pronouns” are determiners (see Pesetsky 1978 for further arguments, cf. Delorme and Dougherty 1972 for an appositive adjunct analysis).

(22) a. [Us linguists] want to understand the riddle of language.

b [You troops] will embark but the other troops will remain.

(Pesetsky 1978)

c. (*) [Them linguists] are subversive. (Déchaine and Wiltschko 2002: 422)

Abney (1987:180) updates Postal's argument under the DP hypothesis in (21).

(23) [DP we/the [NP linguists]]

Japanese also allows the combinations of personal pronouns and common noun phrases.

Not only the third person pronoun observed in 2.1.2.1 above, but also the first and second person pronouns combine with common noun phrases (Noguchi 1998, Furuya 2004).

(24) a. watasitati kanzya

we patient

'we patients'

b. anatatati kanzya

you(Pl) patient

'you patients'

These nominal collocation data suggests that the combinations of Japanese personal pronouns and common noun phrases are similar to/the same as those of English. Moreover, microscopically, the constructions in both languages have a common restriction (Postal 1969, Furuya 2004). Consider example (25).

(25) a. *watasi kanzya

I/me patient

'*I/me patient'

b. *anata kanzya

you patient

‘*you patient’

c. *kare kanzya

he patient

‘*he/him patient’

The singular counterparts are ungrammatical, while plural counterparts are grammatical in both languages.¹⁹ If the revised structure based on Postal’s argument in (23) is correct for English, likewise Japanese is also predicted to have DP.

In the following subsection, I will further examine the constructions in question, and, ultimately, support the DP hypothesis for Japanese noun phrases.

2.2.2 Japanese Pronoun-noun constructions vs. English Pronoun-noun constructions

In the previous subsection, we observed that Japanese personal pronouns are like English personal pronouns in distribution and in number restrictions. However, there are two clear differences between Japanese and English.

The first difference is the (im)possibility of demonstratives in the left periphery of nominal complex constructions in (26):

¹⁹ This restriction is not applicable crosslinguistically (Lyons 1999).

(26) a. [**Sono** watasitati zyosei]-wa mina seisyasin desu.
 those/the we woman-Top all full.timer Cop

‘(Lit.) Those/the us women are all full-timers.’

b. Sensei-wa [**sono** anatatati gakusei]-o suisensimasita.
 professor-Top those/the you(Pl) student-Acc recommended

‘(Lit.) The professor recommended those/the you students.’

c. Kaisha-wa [**sono** karera **syain**]-o kaikosita.
 company-Top those/the them employee-Acc fired

‘The company fired those/the them employees.’

Japanese Pronoun-noun constructions allow demonstratives to appear in the left periphery, unlike their English counterparts in (26). Note that the presence of a demonstrative is unaffected by the presence/absence of adjectives that appear between demonstratives and common noun phrases in (27).

(27) a. [Sono (**isogasii**) watasitati zyosei]-wamina seisyasin desu.
 those/the busy we woman-Top all full.timer Cop

‘(Lit.) Those/the us (busy) women are all full-timers.’

b. Sensei-wa [sono (**yuunouna**) anatatati gakusei]-o suisensimasita.
 professor-Top those/the promising you(Pl) student-Acc recommended
 ‘(Lit.) Those/he professor recommended those/the (promising) you students.’

c. Kaisha-wa [**sono** (taidana) karera **syain**]-o kaikosita.
 company-Top those/the lazy them employee-Acc fired
 ‘The company fired those/the (lazy) them employees.’

Whether adjectives are present or not, the expressions with demonstratives are grammatical in (27).

The second difference between Japanese and English stems from the variation of word order. Unlike English, Japanese allows the switched order of pronouns and common noun phrases.²⁰

(28) a. [Watasitati **zyosei**]-wa mina seisyasin desu.
 we woman-Top all full.timer Cop
 ‘Us women are all full-timers.’

a'. [**Zyosei-no** watasitati]-wa mina seisyasin desu.
 woman-Gen we-Top all full.timer Cop
 ‘(Lit.) *Women’s us are all full-timers.’

²⁰ I will examine this Noun-Gen-Pronoun construction in detail in Chapter 3.

b. Gakkou-wa [anatagata **kyousi**]-o suisensimasita.
 school-Top you(Pl) professor-Acc recommended

‘The school recommended you professors.’

b'. Gakkou-wa [**kyousi-no** anatagata]-o suisensimasita.
 school-Top professor-Gen you(Pl)-Acc recommended

‘(Lit.) *The school recommended professor’s you.’

c. Kaisha-wa [karera **syain**]-o kaikosita.
 company-Top them employee-Acc fired

‘The company fired them employees.’

c'. Kaisha-wa [**syain-no** karera]-o kaikosita.
 company-Top employee-Gen them-Acc fired

‘(Lit.) The company fired employees’ them.’

The following summarizes our observations.

(29) a. (**demonstrative**) (**adjective**) pronoun NP

b. **NP-Gen** pronoun

The fact that demonstratives and common noun phrases with the genitive maker may precede personal pronouns indicates that Abney’s proposal in (23) is not applicable to Japanese. If Abney’s proposal in (23) were applicable to Japanese in that a personal

pronoun in D takes an NP as its complement, one may expect that the Japanese equivalent should have the following word order under the head-finality assumption for Japanese.

- (30) a. * NP-pronoun
- b. * [_{DP} [_{NP} NP] [_{D'} pronoun]]
- c. *gakusei(-tati) watasitati
- student-Pl we

The word order in (30) is not correct. These facts show that Postal's/Abney's argument for the DP hypothesis for English pronouns as determiners cannot be applied to Japanese complex nominal constructions. More specifically, Japanese personal pronouns are located in a lower phrasal position in the noun phrases (Fukui 1986, and Noguchi 1997) and thus they cannot function as determiners.

This finding that Japanese personal pronouns are located in a lower position in Pronoun-noun constructions does not necessarily eliminate the possibility of the presence of a higher level than NP for Japanese noun phrases. Remember that we observed that personal pronouns behave differently from common noun phrases in nominal collocation constructions in 2.1.2.1. Moreover, while demonstratives appear in the left periphery of Pronoun-noun constructions in (26) and (27), they cannot be embedded within noun phrases as observed in (15), (17), and (18) in 2.1.2.2. That is, Japanese has some

restrictions on word order within noun phrases. This is not accountable for under Fukui's NP hypothesis. According to Fukui's NP hypothesis, the occurrence of pronouns preceding the demonstratives should be predicted to be grammatical above because Japanese noun phrases including ones with demonstratives are NPs and do not close off nominal phrases.

The following summarizes our observations of Japanese Pronoun-noun constructions:

(31) [(demonstratives) [(modifier) pronoun [(**demonstratives*) [NP]]]]

The scheme in (31) shows that not all phrases can be treated as NPs in Japanese Pronoun-noun constructions. Otherwise, there should be no restrictions on word order within noun phrases as Fukui wrongly assumes.

In the next subsection, I will examine the locus of demonstratives in Pronoun-noun constructions as a clue for the size of the constructions. Semantic definiteness of demonstratives appears to be universal and all human languages have demonstrative expressions (Lyons 1999), although demonstratives do not share these properties cross-linguistically. To find out the categorial status of noun phrases with demonstratives, we will look at the semantics of demonstratives and their behavior cross-linguistically, under the assumption that languages share some universal aspects in syntax and semantics along with some aspects particular to demonstratives within noun phrases.

2.2.3 Demonstratives and the DP hypothesis

In the previous subsection we observed that Japanese Pronoun-noun constructions allow the presence of demonstratives in the left periphery. In this subsection, I will focus on Japanese demonstratives and examine their syntactic status. In 2.2.3.1, I will consider semantic properties of demonstratives and their semantic composition that may be translated into syntax, and in 2.2.3.2, I will offer cross-linguistic data of demonstratives. Although demonstratives do not always appear in the left periphery of noun phrases, it is shown that they are related to DP. In 2.2.3.3, focusing on demonstratives in the left periphery, I will analyze the structure of demonstratives.

2.2.3.1 Demonstratives and their semantics

In contrast with common noun phrases (without demonstratives), demonstrative descriptions have been analyzed as involving more direct connections to actual entities. They have been argued to refer in virtue of either speaker's demonstration (Kaplan 1977, Reimer 1991) or a speaker's intention to refer (Kaplan 1989, Bach 1991). Roberts (2002) and Wolter (2004, 2006), however, challenge this prevailing view of demonstratives and argue that demonstratives can be semantically classified into two categories: deictic use and anaphoric use. In deictic use, the interpretation of demonstratives is relative to the (usually) extralinguistic context of the utterance and points to the time, place, or situation in which

the speaker is speaking. When there is more than one potential referent in the context of utterance, a deictic demonstrative description is acceptable with an appropriate gesture towards one potential referent. In anaphoric use, on the other hand, the referent depends on a linguistic antecedent. That is, the antecedent provides the information necessary for the expression's interpretation and thus the expression refers back to the antecedent. Consider the following example.

(32) a. This book is mine; and that book is yours.

b. I bought a book. That book is very interesting.

For example, *this book* and *that book* in (32a) are likely to be interpreted deictically as the books the speaker is pointing out at the time the utterance takes place. In (32b), the use of *that book* refers to the book that the speaker bought.

According to Wolter (2006), anaphoric use of demonstratives is semantically different from deictic use of demonstratives in that the former has the scopes of its antecedents while the latter has widest scope only. Thus, demonstratives in anaphoric use interact with compositional semantics like definite articles while demonstratives in deictic use do not. The analysis of anaphoric demonstrative descriptions needs to capture the factor that identifies the referent because demonstrative descriptions refer uniquely in a given context. Demonstrative determiners in anaphoric use have two arguments: the NP

complement, which contributes a domain (as it does with all noun phrases), and a second argument, which identifies the unique referent within the domain (King 2001, Roberts 2002). Wolter's semantic compositional analysis of anaphoric demonstratives is very similar to that of Enç (1991).

Enç argues that every DP bears two indices, the first of which is the standard referential index, and the second of which identifies a set of possible referents of which the first index is an element or a subset. Following Heim (1982), Enç says that a nominal is semantically definite just in case it has a referential index that is familiar, that is, previously established in the discourse. She defines specificity in relation to definiteness (i.e. familiarity) of the second index. This second index is related to discourse referents.

A number of languages (though not all languages) possess definite articles and differentiate between definiteness and indefiniteness in syntax, which is directly reflected in semantics. In contrast with definite articles, all human languages possess demonstratives (Lyons 1999). If a semantic theory treats demonstrative descriptions (in anaphoric use) and definite descriptions equally or similarly, one can expect that a semantic analysis of demonstratives should also be fed by their syntactic structure. That is, even when a language does not possess a definite article, the language is expected to have a DP due to the presence of demonstratives once it is assumed that D serves as the referential anchor of

noun phrases. This does not mean that demonstratives are cross-linguistically located in DP as observed shortly. Yet, the presence of demonstratives is syntactically related to DP even when demonstratives are not positioned at the Spec of DP. This is the working hypothesis in this work.

In the following two subsections, I will investigate the distribution of demonstratives, particularly, its loci within noun phrases.

2.2.3.2 Cross-linguistic distribution of demonstratives

Demonstratives do not always occur prenominally cross-linguistically. They appear postnominally as well as prenominally in various languages (Szabolcsi 1994, Giusti 1992; 1997, Brugè 1996, Lyons 1999 among others). In Greek and Romanian, for example, demonstratives appear in the following positions within noun phrases.

(33) a. **afto** to oreo to vivlio

this the good the book

b. to oreo **afto** to vivlio

the good this the book

c. to oreo to vivlio **afto**

the good the book this

(34) a. băiatul **acesta** (frumos)²¹

boy-the this nice

b. **acest** (frumos) băiat (frumos)

this nice boy nice

Giusti (1992:109)

Giusti (1992) claims that the Romanian demonstrative is base-generated in a lower position and optionally gets moved to Spec of DP. Look at the example in (35).

(35) a. băiatul acestă (frumos)

boy-the this nice

b. frumosul (*acesta) băiat

nice-the this boy

Giusti argues that Romanian demonstratives and articles do not have the same positions in DP. In (35a), the noun moves across the demonstrative to D where the enclitic article appears. In (35b), on the other hand, the presence of the demonstrative blocks the movement of the adjective to the enclitic article. The fact that the demonstrative blocks the movement of the adjective but not of the head noun suggests that the Romanian demonstrative can be conceived neither as a D nor as an intermediate functional head.

²¹ Giusti (1992, Footnote10) assumes that the morpheme *-a* is the specification for gender, number and case.

Brugè (1996) also argues that Spanish demonstratives are merged in a lower position of a noun phrase and may move to Spec of DP. In these languages, the demonstratives seem to be phrasal. If this is the case, demonstratives are phrase-structurally different from definite articles in these languages.

Interestingly, when demonstratives remain postnominally, the presence of a definite article is required to satisfy a feature uniquely related to D in Spanish. Look at the following examples, cited from Brugè (1996:6-7).

- (36) a. *(el) cuatro libros estos/esos
the four books these/those
- b. *(el) libro este
the book this
- c. *un libro este
a book this

The obligatoriness of the definite article shows that D needs to be lexically overt because a relevant feature in D requires overt checking in the presence of a postnominal demonstrative, according to Brugè. Likewise, the following Irish and Greek examples show the same fact in (37):

(37) a. *(to) oreo **afto** to vivlio (Greek) (Giusti 1992:109)

the good this the book

b. *(an) fear eso (Irish) (Giusti 1992, 110)

the man this

The languages that we observed in this subsection possess both definite articles and demonstratives. Although the phrase-structural status of demonstratives is different from that of definite articles and demonstratives appear not only in the left periphery of noun phrases but also in lower positions within noun phrases (unlike definite articles), they are cross-linguistically related to definite DPs in that when they are in a lower position of the noun phrases their presence requires definite determiners²² (and when they are in the left periphery they may or may not require definite determiners). I hypothesize that demonstratives are cross-linguistically related to definite DP.

In the next subsections, I will show noun phrases where demonstratives appear in the left periphery and compare three analyses for their loci in order to choose the analysis to apply to Japanese demonstratives in analyzing (demonstrative) Pronoun-noun constructions in the current work.

²² This is true of Hungarian, as observed in (50a) and (51a) in 2.2.3.3.3 below.

2.2.3.3 Demonstratives in the left periphery of a noun phrase

There are (at least) extant three different analyses of the position of demonstratives at the left peripheries of noun phrases in the recent literature. I will compare them and claim that one analysis is better than the other two in the following subsections.

2.2.3.3.1 Demonstratives and referential noun phrases (Campbell 1996)

In 2.2.3.1, I briefly reviewed Enç's (1991) theory for referential noun phrases (among others). According to this theory, referential/specific noun phrases possess two indices for referentiality. Campbell (1996, 1998) propose that the two indices occupy different positions in syntax. He argues that a common noun phrase DP contains a predicate phrase (PredP) (Holmberg 1993, den Dikken 1998 and his subsequent work, and Furuya 2004) and that the subject corresponds to one index in Enç's theory. This subject is A-bar bound by a referential/specificity Operator or a demonstrative in Spec of DP, which corresponds to the other index.

Let us look at following English definite expressions with their structures proposed by Campbell in (38):

(38) a. the boy

b. [_{DP} null Operator [_D the [_{PredP} pro boy]]]

(Campbell 1996:165)

(39) a. those boys

b. [_{DP} those [_{D'} (null head D) [_{PredP} pro boys]]

(Campbell 1996:167)

(38b) and (39b) are the structures of the nominal expressions in (38a) and (39a) respectively, where the common noun phrases are predicated of the *pros* (Holmberg 1993).

According to Campbell, the fact that the definite expressions contain a small clause may be deduced from the existence of adjectives such as *likely* and *alleged*.

(40) the likely/alleged thief

The adjectives semantically denote properties of propositions, but syntactically appear to modify nonpropositional common nouns. In the expression in (40), the adjectives occur attributively with the common noun *thief*. As the next expressions show, however, such adjectives cannot head predicates with the common noun phrase as the subject in (41a). They may occur as predicates, however, if the subject denotes a proposition in (41b). In (41c) the adjective is predicated of a proposition-denoting expression that is extraposed.

(41) a. *The thief was likely.

b. That John was a thief is likely.

c. It is likely that John is a thief.

In both attributive and predicative uses, propositional adjectives have the same semantics and enter into the same entailment relations (Campbell 1998:156-7). If this is the case, this indicates that propositional adjectives denote properties of propositions and that they must be predicated of proposition-denoting expressions. The fact that propositional adjectives can also occur attributively implies that common noun phrases, even those headed by nonpropositional nouns such as *thief*, contain proposition-denoting expressions and that common nouns are uniformly treated as predicative within noun phrases (Holmberg 1993, Szabolcsi 1987, 1994, Longobardi 1994 among others).

As for DP, a null Operator appears in Spec of DP and the determiner occurs in D in (38b). In (39b), on the other hand, the demonstrative appears in the Spec of DP and D is null. In particular, the element in Spec of DP corresponds to the second index argued for by Enç for referentiality/specificity. Thus, the structures in (38b) and (39b) form the syntactic basis of an account for Enç's semantic analysis of referential noun phrases. According to Campbell, English demonstratives have a morphosyntactic feature [+Th] that heads the definite article in D and thus occurs only in DP, on the analogy with *wh*-phrases that have the feature [+Wh] in CP (see 3.3.1). These structures readily accounts for specificity effects, as discussed in 2.4.5 below.

Notice that the co-occurrence of a demonstrative and a ‘determiner’ is possible in some languages.²³

(42) a. ez a ház (Hungarian)

this the house

b. ika ñ anak (Javanese)

this the boy

c. afto to oreo to vivlio (Greek)

this the good the book

(Giusti 1992)

d. desse dei to eld-st-e hus-a i by-en (Norwegian)

these the(Pl) two old-Super-W house-Def in town-Def

‘these two oldest houses in town’

(Julien 2002)

If demonstratives occupy the Spec of DP in these languages as Giusti (1992, 1997 for various languages) and Brugè (1996 for Spanish) argue, this supports Campbell’s structure in (39b).

²³ English does not allow for the presence of both demonstratives and the definite article *the* at the same time. Déchaine and Wiltschko (2002:421) argue that English demonstratives are decomposed into two morphemes (i.e. *th-is*, *th-ese*, etc.) and that the first common part *th-* sits in D while the rest is in the head of \emptyset Phrase (\emptyset P). If this is the case, it readily explains why the co-occurrence of a demonstrative and the determiner is prohibited in English. Campbell (1996:197), on the other hand, argues that once demonstratives are assumed to be overt specificity operators in Spec of DP, the constraint that D and Spec DP and the constraint that C and Spec CP with wh-words cannot both be overt is common.

Importantly, Campbell's nominal predicate structures in (38b) and (39b), repeated below, are a viable hypothesis for Japanese Pronoun-noun constructions because they are readily able to capture without modifications two properties of Japanese Pronoun-noun constructions in (29a), which is also repeated below.

(38) b. [_{DP} null Operator [_{D'} the [_{PredP} pro boy]]] (Campbell 1996:165)

(39) b. [_{DP} those [_{D'} (null head D) [_{PredP} pro boys]] (Campbell 1996:167)

(29) a. (**demonstrative**) (**adjective**) pronoun NP

First, Campbell's structures correctly capture the word order of demonstratives, pronouns and common noun phrases in (29a) once *pros* are replaced with personal pronouns.

Secondly, Campbell's structures can also account for the "optionality" of demonstratives in (29a). Once the presence of a null Operator (along with demonstratives) is assumed to be in Spec of DP in (38b), likewise, Japanese Pronoun-noun constructions may have a null Operator as well as demonstratives. If this is correct, the structures for Japanese Pronoun-noun constructions are as follows in (43):

(43) a. [_{DP} **null Operator** [_{D'} (null head D) [_{PredP} pronoun NP]]

b. [_{DP} **demonstrative** [_{D'} (null head D) [_{PredP} pronoun NP]]

If this analysis based on Campbell (1996, 1998) is correct for Japanese Pronoun-noun constructions, it supports the presence of DP.

Before adopting Campbell's structure for Japanese Pronoun-noun constructions, however, I will examine the other two analyses of demonstratives to see whether there are more appropriate theories for Japanese demonstratives within noun phrases.

2.2.3.3.2 Scandinavian demonstratives (Julien 2002)

Julien (2002) deals with the distribution of determiners including demonstratives within Scandinavian DPs and proposes a Demonstrative Phrase (DemP) on top of DP, which phrase can be occupied uniquely by demonstratives. Unlike other variety of Scandinavian languages, Northern Swedish allows not only bare common nouns alone but also common nouns that involve adjectival modifiers to carry a definiteness suffix, as in (44).

(44) gamm-svart-katt-a

old-black-cat-Def.Sg.

'the old cat'

(Northern Swedish) (Julien 2002:288)

Once a noun phrase contains a numeral, however, the numeral must precede the common noun in Northern Swedish as in the other varieties of Scandinavian languages even when the noun phrases are definite as in (45) below (which Julien uses as evidence for movement of common nouns to a higher position when numerals do not appear in (44) above).

(45) dem-derna trei grann-hest-a (ibid. 288)

they-there three fine-horses-Def.PI

‘the three fine horses.’

The example in (45) is the motivation for the proposal of DemP, according to Julien. The Northern Swedish demonstrative *derna* corresponds to the English adverbial ‘there’. In order for the adverb to function as a determiner, the pronominal definite article *dem* in DP needs to adjoin to the head of DemP for the categorial change of the Dem head. The following is an illustration of Julien’s proposal in (46).

(46) a. [_{DemP} [_{Dem'} derna [_{DP} [_{D'} dem]]]] (insertion of *derna* and its projection)

b. [_{DemP} [_{Dem'} dem_i-derna [_{DP} [_{D'} t_i]]]] (adjunction of D to Dem)

In (46), *dem* is base-generated in D and gets moved to Dem via head-adjunction for the categorial change of *derna* in Dem.

Given the assumption of DemP, Julien assigns the structure in (47b) to the definite expression in (47a).

(47) a. grann-hest-n derna (ibid. 289)

fine-horse-Def there

‘That fine horse.’

b. [_{DemP} grann-hest-n_i [_{Dem'} derna [_{DP} t'_i [... t_i]]]] (ibid. 290)

In (47b), the common noun phrase (with an adjective) is generated in a lower position of the noun phrase and gets moved through the Spec of DP to Spec of DemP, where the Dem head *derma* is base-generated. If this is on the right track, one needs to assume DemP. However, this analysis is empirically not unproblematic.

One empirical question regarding DemP is why the demonstrative *derna* in (47b) does not host the pronominal determiner, unlike the one in (46) in which it is assumed to be obligatory (cf. Brugè 1996 for Spanish) because the adjunction of the determiner to the Dem head is necessary for the categorial change in (46). If this is correct, it should also be true for the example in (47b), where the demonstrative does not have the pronominal determiner. One might say that the inflected noun phrase in Spec of DemP also allows the Dem head to change the adverbial status like the pronominal determiner. That would be ad hoc, however. Thus, Julien's motivation for DemP is empirically problematic.

If a demonstrative sits in Spec of DemP instead as in (48), then this is consistent with Giusti (1992, 1997) and Brugè's (1996) arguments.

(48) [_{DemP} demonstrative [_{Dem'} [_{DP} [_{D'} determiner ...]]]

In (48), the Spec of the top phrase is filled by a demonstrative. Is there any evidence to support the structure in which DemP is independently projected on top of DP, for instance, in which Spec of DemP, its head, and Spec of DP, and its head are all occupied by lexical

elements? Since that is unlikely to be the case, the DemP structure proposed by Julien is not adopted in the current work.

Alternatively, one may assume that DemP appears below within noun phrases, as Szabolcsi (1994) argues (Brugè 1996). This is a workable structure. If this is the case, Japanese has DemP unique to demonstratives and may or may not project DP. In the next subsection, I examine this possibility.

2.2.3.3.3 Hungarian demonstratives (Szabolcsi 1994)

Szabolcsi observes that Hungarian's basic word order of elements within a noun phrase is Det-Num-Adj-N(-Pl)-Case and that demonstratives appear in the left periphery of noun phrases.

(49) a. ez-ek-ről a part-ok-ról (Szabolcsi 1994: 185)

this-Pl-from the shore-Pl-from

'from these shores'

b. ez a ház (Giusti 1992)

this the house

the/this/that claim

Hungarian demonstratives are, however, allowed to appear in a lower position of a noun phrase as well (Brugè 1996 for Spanish).

(50) a. a vel-ed való ezen alálkozás

the with-you(Sg) being this meeting

‘this meeting with you’

b. ezen találkozás

this meeting

‘this meeting’

(Szabolcsi 1994: 219)

In (50a), demonstrative *ezen* ‘this’ appears in a lower position of the noun phrase unlike the ones in (49) and (50b). Szabolcsi assumes that DP is parallel to CP and also that the complement of DP corresponds to TP/IP in a clause, called N+I phrase, where the demonstrative *ezen* gets raised to and appears (Brugè 1996 assumes a similar structure for Spanish). Besides these assumptions, the element in N+I (below DP) has (a) [+/-definite] and/or [+/-specific] feature(s) and controls the presence of the element in DP.

Consider the following structure of a definite noun phrase with the definite article and a demonstrative, citing from Szabolcsi (1994:220).

(51) [DP a(z) [N+IP [N+I' [[DetP ezen (+def)] [N+I találkozás]]]]]

- (52) a. [DP ezen_i [N+IP [N+I' [t_i [N+I talákozás]]]]
 b. [N+IP [N+I' [ezen (-def) [N+I talákozás]]]]

Between the two structures, if the latter were the case, however, the following expression would be predicted to be grammatical, contrary to fact:

- (53) * vel-ed való ezen talákozás
 with-2Sg being this meeting

In (53), a PP phrase cannot precede the demonstrative. If the demonstrative optionally does not possess [+def], the expression should be grammatical. That is, the ungrammaticality implies that *ezen* obligatorily possesses a [+def] feature and that the presence of demonstratives project DP that needs to be checked by a proper element. *Vel-ed való* ‘with-2Sg being’ lacks the feature even if this moves to DP and cannot satisfy the requirement, which leads to the ungrammaticality. Or, the demonstrative moves to DP and the PP cannot adjoin to it (see Chapter 4). If this is correct, the structure in (52b) is not correct. That is, demonstratives move to Spec of DP (Brugè 1996 for Spanish) at least in the case of lacking the determiner in D in (50b).

If this argument is on the right track, one can say that the presence of a demonstrative assures the presence of DP if a language has a definite determiner as in Greek and Hungarian or a definite affix/marker as in the case of the Northern Swedish noun

If she is right, the ungrammaticality in (i) is not a case for ill-formedness of the structure.

phrase: the presence of a demonstrative in a lower position requires the presence of a relevant element in DP in Hungarian; and otherwise, demonstratives appear in DP whether the determiner co-occurs or not (when they are in the left periphery of noun phrases).

How about a language with demonstrative descriptions that lack a definite article? If Japanese demonstratives were projected in a lower position of a noun, would a non-overt determiner appear in D like other languages such as Spanish or Hungarian? This might be likely the case. But it is very difficult to prove it if not possible. Rather, one can go back to the fact that Japanese demonstratives in anaphoric use do not allow for any element to appear in the left periphery as in (15b) above suggests that they are not located in a lower position of noun phrases (under the assumption that elements can appear between D and demonstratives when demonstratives are located in a lower position as in the Hungarian case of (50a)). Japanese demonstratives seem to be in the highest position of a noun phrase.

Does the presence of a demonstrative in Japanese, articleless language, promise the presence of DP? Under the current arguments of demonstratives, I assume that the answer to the questions is positive as a null hypothesis. Thus, the current work will not adopt Szabolcsi's analysis of DetP for Japanese demonstratives.

Among the three extant analyses of demonstratives, Campbell's analysis is shown to be most applicable to Japanese (demonstrative) Pronoun-noun constructions.

2.2.4 Interim conclusion

In this section I examined the possibility that Japanese pronouns function like English personal pronouns as ‘determiners’ (Postal 1969) in Pronoun-noun constructions by listing the similarities between the two languages in 2.2.1, and in 2.2.2, I showed that that is not the case, because of the two differences between Japanese and English constructions. One is that Japanese constructions allow the presence of demonstratives in the left periphery. The second is that they are also allowed to switch the order of the personal pronouns and common noun phrases in the constructions. In 2.2.3, I reviewed the semantic analyses and syntactic analyses of demonstratives. Based on (i) the semantic composition of demonstratives and the fact that all languages possess demonstratives,²⁷ (ii) the cross-linguistic facts of the co-occurrence of a demonstrative and a article, and (iii) the argument that demonstratives are in Spec of DP like a referential Operator and the argument that the demonstratives gets moved to DP when no other elements are inserted, I attempted to open up the possibility that Japanese demonstratives in the left periphery appear in DP and thus that the lack of a definite determiner in Japanese does not mean that Japanese lacks DP. Following Campbell’s (1996) structures for English definite noun phrases, I assume the DP

²⁷ While Lyons (1999) observes the universality of demonstratives cross-linguistically besides the universality of their definiteness, he argues that some languages such as Japanese and Chinese do not possess definite articles and thus that they do not project DP. Partee’s (2006) argument for Chinese noun phrase is against Lyons’ claim.

structure as the working hypothesis in (43) for Japanese Pronoun-noun constructions, and examine the structure in the rest of this Chapter.

- (43) a. [_{DP} **null Operator** [_{D'} (null head D) [_{PredP} pronoun NP]]
b. [_{DP} **demonstrative** [_{D'} (null head D) [_{PredP} pronoun NP]]

2.3 Pronoun-noun constructions and DPs

I will provide two examples to show that Japanese Pronoun-noun constructions project DP, independently of the presence/absence of demonstratives. In 2.3.1, the first examples are in vocative use, where DPs are banned due to an issue related to a person feature. In 2.3.2, I will argue that DP is prohibited within another larger DP due to a size restriction.

2.3.1 Vocatives and DPs

The first example involves the vocative use. Szabolcsi (1987:182) observes that definite determiners before proper nouns or nouns with possessors are not permitted in vocative use, although they are grammatical when the nouns with them appear in argument positions in Hungarian. Look at the following examples in (54):

- (54) a. A Péter beszél.
the P speaks
'Peter speaks.'

b. (*A) Péter ! (Beszélj!) (vocative)

the P Speak

‘Peter! (Speak!)’

(55) a. Az én testvérem beszél.

the my brother speaks

‘My brother speaks.’

b. (*Az) én testvérem! (Beszélj!) (vocative)

the my brother speak

‘My brother! (Speak!)’

In (54a) and (55a) the nominal expressions in the subject position have the definite article whereas in (54b) and (55b) they cannot have the determiner in vocative use. This suggests that a full DPs cannot occur in vocative use.

Japanese Pronoun-noun constructions share the same distribution.

(56) a. Anatatati/kodomotati! (hanasinasai!)

you (Pl)/children speak

‘(Lit.) You/Children! (Speak!)’

b.*Anatatati gakusei! hanasinasai!

You (Pl) student speak

‘(Lit.) You students! (Speak!)’

In (56a), the plural second person pronoun and plural common noun can occur in vocative use when they are not in nominal collocation constructions, whereas in (56b), the Pronoun-noun combination cannot appear in the same position. This parallel in distribution between Hungarian and Japanese suggests that Japanese Pronoun-noun constructions in argument position project higher projections, probably DPs, like the Hungarian examples in (54a) and (55a), and thus that the ungrammaticality of (56b) comes from the size restriction on vocative expressions as in the Hungarian cases of (54b) and (55b). Note that I assume that the grammaticality of the English equivalent in (56b) stems from a different construction (i.e. an appositive), because the singular construction is also grammatical in English unlike that of Pronoun-noun constructions.

One may object that the Hungarian data is irrelevant to the argument for the DP hypothesis because the context bears the second person reading and thus the interpretation of vocative expressions prevents the definite article from appearing in vocative use in (54a) and (55a). Similarly, the following English example suggests that the indefinite personal pronoun may be related to the second person feature as Ljiljana Progováč (email

communication) points out, though the categorial status (particularly, its person feature in vocative use) of *everyone* itself is certainly unclear.

(57) a. Everyone, Behave yourselves.

b. *Everyone, Behave themselves.

In (57), the indefinite pronoun is equivalent to expressions such as 'every one of you' or 'you all' may be involved. These data imply that vocatives in imperative contexts are related to the second person feature and thus that expressions which conflict with the second person feature such as definite articles cannot appear in vocative use. However, this fact is still relevant to the DP hypothesis if one assumes that a person feature is relevant to D (Campos 2005). That is, one can still claim that the ungrammaticality of the Hungarian examples still shows that DPs are projected and that they cannot appear in vocative use because they conflict in person feature. This claim of the ban on DP in vocative use is also compatible with the impossible occurrence of the Pronoun-noun construction with the second person pronoun in vocative use in (56b) above while the second person pronoun alone can be present in vocative use: the latter projects DP with some kind of elements that conflict with the second person feature, while the former does not. If this is the case, Japanese Pronoun-noun constructions project DP.

Moreover, in non-imperative contexts unlike the imperative examples above, the first and third person pronouns can appear in vocative use, whereas their vocatives in Pronoun-noun constructions are still ungrammatical in (58):

- (58) (Ah! Damedana!) Aitura/Watasitati/Zyousitati (*taidana namakemono)!
- Oh no.good them/us/bosses lazy idlers

‘(Oh! No good!) *Them/*Us/Bosses (lazy idlers)!’

These data show that the first and third person pronouns as well as common nouns alone appear in vocative use in a non-imperative context while Pronoun-noun constructions are still impossible here. Thus, these data support the claim that Japanese Pronoun-noun constructions project DP, and, thus, cannot appear in vocative use.²⁸

2.3.2 Size restriction 1: impossible DP within noun phrases

The second piece of evidence for the DP hypothesis comes from the size restriction on noun phrases immediately embedded in complex DPs. Kayne (1994) and den Dikken (1998) observe that a DP cannot immediately embed a full-DP in English.

- (59) *that idiot of the doctor

²⁸ The fact that personal pronouns can appear in vocative use in (56a) and (58) below while Pronoun-noun combinations are not allowed in the use suggests that personal pronouns themselves do not necessarily project DPs, though they are semantically related to persons. Once they are in subject position within nominal predications, the entire noun phrases project DP and thus cannot appear in vocative use.

Den Dikken (1998) argues that the two noun phrases in (59) form a nominal predication relation, in which the subject noun phrase that appears within another DP cannot be as large as DP.

(60) *_{[DP that [_{[DP the doctor] idiot] (= underlying structure of (59))}}

Note that that (61) doesn't involve predication ("destruction" isn't predicated of "the city").²⁹

(61) that destruction of the city

I assume that there is a ban on embedding a DP as the *subject* of a predication immediately embedded within a DP, then (61) is excluded from the scope of this size generalization.³⁰

In Japanese, a similar fact is observable in (62), which does not possess a demonstrative.

(62) * [Watasitati syain dansei]-wa (mina) isogasii.

we employee man-Top all busy

‘(Lit.) Us employees men are all busy.’

The one possible structure of the nominal expression in the bracketed constituent of (62) is the following.

²⁹ Marcel den Dikken (personal communication) points out to me that the essential difference between (59) and (61) is probably *ultimately* related to what's the *head* of the complex noun phrase: in (59) the head is *doctor*, in (61) it's *destruction*; the *head* of a complex DP cannot itself project a DP within that complex DP.

³⁰ I will modify this ban later in that there is a ban on embedding a DP as the subject and also the predicate of a predication immediately embedded within a DP shortly.

(63) * [[watasitati syain] dansei]

In (63), the Pronoun-noun construction appears in the subject position and form another predication relation. Unlike the ungrammatical expression in (63), the clausal predicate counterpart is grammatical in (64):

(64) [Watasitati syain]-wa (mina) [dansei] desu.

we employee-Top all man Cop

‘We employees are (all) male.’

Because the clausal expression is grammatical, the ungrammaticality of (63) does not stem from its semantics. I propose that the ungrammaticality of the nominal predication construction in (63) follows from the size restriction in (65), like the one on the English example in (60) above.

(65) *_{[DP [DP pronoun NP] NP]}

If this is correct, Pronoun-noun constructions projects DPs even when demonstratives do not appear in their left periphery.

In addition to the size restriction on the subjects in nominal predicate constructions, the same size restriction is applicable to the predicates in nominal predication constructions, as previously observed in (17) and (18). The examples in (17) are repeated below.

(17) a. Gakkou-wa [anatagata (*sono) kyousi]-o suisensimasa.
 school-Top you(PI) those/the professor-Acc recommended

‘(Lit.) The school recommended (*you) those/the professors.’

b. Kaisha-wa [karera (*sono) syain]-o kaikosita.
 company-Top them those/the employee-Acc fired

‘(Lit.) The company fired them (*those/the) employees.’

Because the clausal predication relation is grammatical in (20), repeated below, the ungrammaticality of (17) does not result from semantic reasons.

(20) a. They are **the** students at CUNY.

b. karera-was **sono** CUNY-no gakusei desu.
 they-Top those/the Gen student Cop

This is also true of the following English example in the case of non-appositive use.

(66) a. *them the/those students

b. *we the students of CUNY

I propose the following structure for the ungrammatical examples in (17) (and the English example in (66)):

(67) *[DP [PredP pronoun [DP ...NP]]

In (67), the structure involves a definite expression in the predicate position in the nominal predication construction, which is banned due to the size restriction on constituents of nominal predication constructions. The structure in (67) also gets support from den Dikken's (2006) arguments for the size of the subject and the predicate in nominal predicate constructions in various languages, although he does not discuss Pronoun-noun constructions. He argues that both subject and predicate in nominal predication constructions project structures as large as but no larger than NumP for various languages. The following is a summary of the size restrictions on nominal predication constructions.³¹

(68) a. *[DP [PredP [DP] ...]]

b. * [DP [PredP [...] [DP]]

The size restrictions show that constituents of nominal predication constructions (i.e. the subject and the predicate) in nominal predication constructions cannot be larger than DP.

This restriction stems from the properties of referential nominal expressions. D serves as the referential anchor of noun phrases in that it requires elements with interpretable features

³¹ In Chapter 4, I will argue that prenominal NQs without the genitive marker are present in DP (i.e. NQ-NP constructions) unlike the ones with the marker (NQ-Gen-NP constructions). If this argument is correct, the following expression is readily captured as well.

- (i) a. *[watasitati 3-nin gizyutusya]-ga sono mondai-ni torikunda
 us CI technician-Nom that/the problem-to tried
 b. [watasitati 3-nin-no gizyutusha]-ga sono mondai-ni torikunda
 us CI-Gen technician-Nom that/the problem-to tried
 'Us three technicians tried that/the problem.'

In (i), the nominal predicate involves the NQ-NP sequence. If it projects DP as will be argued in Chapter 4, the construction involves another DP within it, which is a violation of a size restriction on nominal predications: * [DP [] [DP]]. On the other hand, in (ib), the combination of a NQ and a common noun phrase does not project a DP and does not violate the size restriction. This consideration supports the structure in (68).

that create referentiality. They enable noun phrases to refer deictically/referentially. Referentiality itself is not recursively or multiply specified within a noun phrase that denotes one single referent. This is why the ban on embedding a DP within nominal predication constructions is required.

In this section, I showed the distribution of Japanese Pronoun-noun constructions. They are not able to occur where DPs are prohibited (regardless of absence of the demonstratives): in vocative use and in nominal predication constructions. This supports for the current working hypothesis in (43a), repeated below.

(43) a. [_{DP} **null Operator** [_{D'} (null head D) [_{PredP} pronoun NP]]

The structure shows that the presence of a null Operator lies in DP even when a demonstrative is not in Spec of DP. If this is the case, then, a null Operator is predicted to behave like demonstratives in DP.

In next section, I will show that this is the case by examining nominal collocation constructions with numeral quantifiers (NQs) and further support the DP hypothesis for Japanese.

2.4 Floating Numeral Quantifiers (FNQs) and DPs

In this section, I will demonstrate that this predication is borne out with two pieces of evidence from behaviors of numeral quantifiers (NQs). Behaviors of NQs have been

extensively studied in the linguistic literature (Inoue 1976, Kamio 1983, Miyagawa 1989, Tang 1990, Kitahara 1993, Cheng and Sybesma 1999, Watanabe 2006 to name a few). NQs have been observed to appear in various positions in relation to the associated common noun phrases. The distribution of Japanese NQs is not limited to that of universal quantifiers in Indo-European-languages such as *all*, *both*, and *each*, but includes any kind of quantifiers (Kobuchi-Phillip 2004). However, No study of NQs in association with pronouns and common noun phrases with definite interpretations has been offered in the Japanese linguistic literature to my knowledge. I will show that the distribution of NQs is restricted once their host noun phrases involve personal pronouns or common noun phrases with definite interpretations than it is with common noun phrases with indefinite interpretations. I will account for that restriction in relation to the DP hypothesis for Japanese.

This section is organized as follows. In 2.4.1, I will briefly review the basic behavior of NQs. It will be shown that many Japanese quantificational expressions share the same distributional property, unlike English quantifiers. In 2.4.2, I will offer new observations focused on floating numeral quantifiers (FNQs) in association with collocation constructions. Note that I will use FNQs for NQs that are outside the associated noun phrases. In 2.4.3 and 2.4.4, respectively, I will apply two possible analyses in the literature

to the noble FNQ constructions and choose one over the other as a preparation for the argument in 2.4.5, where I will offer strong evidence for the DP hypothesis. In 2.4.6, I will offer an interim conclusion of 2.4.

2.4.1 Basic behaviors of numeral quantifiers (NQs)

In this subsection, I will review the basic behavior of numeral quantifiers (NQs) including other quantifiers in relation to common noun phrases. NQs and some other quantifiers such as *suumei* ‘some’ and *oozei* ‘many’ float around the associated noun phrases in (69) and (70).

(69) a. Suzuki sensei-wa [gakusei **3-nin**]-o sikatta.
 professor-Top student Cl-Acc scolded

‘Prof. Suzuki scolded three students.’

b. Suzuki sensei-wa [gakusei]-o **3-nin** sikatta.
 professor-Top student-Acc Cl scolded

c. Suzuki sensei-wa [**3-nin-no** gakusei]-o sikatta.
 professor-Top Cl-Gen student-Acc scolded

d. Suzuki sensei-wa [**3-nin** gakusei]-o sikatta.
 professor-Top Cl student-Acc scolded

e. **3-nin** Suzuki sensei-wa [gakusei]-o sikatta.

Cl professor-Top student-Acc scolded

(70) a. Suzuki sensei-wa [gakusei **suumei/oozei**]-o sikatta.

professor-Top student some/many-Acc scolded

‘Prof. Suzuki scolded some/many students.’

b. Suzuki sensei-wa [gakusei]-o **suumei/oozei** sikatta.

professor-Top student-Acc some/many scolded

c. Suzuki sensei-wa [**suumei/oozei**-no gakusei]-o sikatta.

professor-Top some/many-Gen student-Acc scolded

d. Suzuki sensei-wa [**suumei/oozei** gakusei]-o sikatta.

professor-Top some/many student-Acc scolded

e. **Suumei/oozei** Suzuki sensei-wa [gakusei]-o sikatta.

some/many professor-Top student-Acc scolded

In (69) and (70), NQs and other quantifiers appear before, after and outside the associated noun phrases. The linear orders relative to the associated noun phrases are as follows.

(71) a. NP-(N)Q-Case

b. NP-Case (N)Q

c. (N)Q-Gen-NP

d. (N)Q-NP

e. (N)Q ... NP

The linear orders in (71a,c) show that quantifiers are undoubtedly within the associated noun phrases. The orders in (71b) and (71d) are controversial in terms of the loci of quantifiers, i.e., whether NQs are within the associated noun phrases or not. The string in (71e) illustrates that the NQs can be outside the associated noun phrase.

In the rest of this section, I will limit myself to observations of NQs in (71a), (71b), and (71e) and offer analyses on these constructions. In Chapter 3, the position of NQs in (71c) will be examined in relation to Pronoun-noun constructions, and in Chapter 4, I will focus on the structure in (71d). My ultimate goal in examining NQs relating to nominal collocation constructions is to support the DP hypothesis for Japanese.

2.4.2 FNQs and pronominal collocation constructions

As observed in the previous subsection, while NQs can occur within its host noun phrases, they appear away from their host NP in (69e), which is repeated below.

(69) e. **3-nin** Suzuki sensei-wa [gakusei]-o sikatta.

Cl professor-Top student-Acc scolded

Along with the expression in (69e), NQ can follow the host noun phrases.

(72) Suzuki sensei-wa [gakusei]-o hidoku **3-nin** sikatta.

professor-Top student-Acc harshly Cl scolded

‘Prof. Suzuki harshly scolded three students.’

The NQs in (72) as well as the one in (69e) are clearly outside the associated noun phrases.

The derivation of the NQ in (69e) and (72) is controversial in the literature. One view

holds that the NQs float away out of the associated noun phrase. (Okutsu 1969, Harada

1976, Kamio 1977, 1983, Shibatani 1977, Kuno 1978, Haig 1980, Kuroda 1980,

Kawashima 1998, Ishii 1999, Fujita 1994, Kakegawa 2003, Watanabe 2006 for Japanese,

Sportiche 1988 for English and French, McCloskey 2000 for Irish English, among others).

Main arguments for movement analyses of NQs come from locality constraints on the

dependency between floating numeral quantifiers (FNQs) and their associated NPs.

Another view holds that the NQs are base-generated as distributive adverbial adjuncts to

verbal projections (Fujita 1994, Sakai Alan 1999, Kobuchi-Philip 2003, 2007, Nakanishi

2004, in preparation, among others). Under the second view, NQs outside the host noun

phrases do not ‘float away’, but they are base-generated in-situ. The objections to FQN

analyses stem from their semantic restrictions in terms of distributivity interpretations.

Sentences with FNQs are allowed to have only distributive readings whereas sentences

without FNQs can have both distributive and collective readings.

Setting analyses of FNQs aside until the following subsections, we will further observe the distribution of FNQs in relation with personal pronouns for the rest of this subsection. As they can follow common noun phrases in (69a), repeated below, NQs can follow personal pronouns (Longobardi 1994 for relevant Italian data, Schütze 2001 for English data), whether the demonstrative appears or not in (73):

(69) a. Suzuki sensei-wa [gakusei **3-nin**]-o sikatta.
 professor-Top student CI-Acc scolded

‘Prof. Suzuki scolded three students.’

(73) a. Suzuki sensei-wa [(sono) watasitati **3-nin**]-o sikatta.
 professor-Top those/the us CI-Acc scolded

‘(Lit.) Prof. Suzuki scolded (*those/the) us three.’

b. Suzuki sensei-wa [(sono) anatatati **3-nin**]-o sikatta no?
 professor-Top those/the you(pl) CI-Acc scolded Q

‘(Lit.) Did Prof. Suzuki scold (*those/the) you three?’

c. Suzuki sensei-wa [(sono) karera **3-nin**]-o sikatta.
 professor-Top those/the them CI-Acc scolded

‘(Lit.) Prof. Suzuki scolded (*those/the) them three.’

Once NQs are outside their host noun phrases with personal pronouns, the expressions become ungrammatical for most speakers,³² as shown in (74) below, unlike the nominal expressions with common nouns in (69e) and (72), repeated below.

- (74) a. (***3-nin**) Suzuki sensei-wa [(sono) watasitati]-o hidoku (***3-nin**) sikatta.
 Cl professor-Top those/the us-Acc harshly Cl scolded
- b. (***3-nin**) Suzuki sensei-wa [(sono) anatatati]-o hidoku (***3-nin**) sikatta?
 Cl professor-Top those/the you-Acc harshly Cl scolded
- c. (***3-nin**) Suzuki sensei-wa [(sono) karera]-o hidoku (***3-nin**) sikatta.
 Cl professor-Top those/the them-Acc harshly Cl scolded
- (69) e. **3-nin** Suzuki sensei-wa [gakusei]-o sikatta.
 Cl professor-Top student-Acc scolded

³²Some native speakers of Japanese appear to accept the expressions in (74). Kiyoko Ito (personal communication) suggested to me that the acceptability of (74) may result from pragmatic reasons such as the Gricean Cooperative Principle. In the previous context, the referents are already introduced and thus one can readily get a sense of the individuals that all pronouns in (74) refer to, whether the quantifiers float out or not. Because it is possible for the pronouns to successfully refer to the individuals, the informants accept the sentences in (74). Alternatively, some informants appear to treat floating quantifiers as adverbs, as Kobuchi-Philip (2003) argues. Another potential analysis for the acceptability of (74) to some speakers stems from the equal treatment of numeral classifiers as numeral classifiers with the adverbial suffixial *-tomo* 'all together' (e.g. *3-nin* vs. *3-nin-tomo*). Once the NQs are replaced with the adverbial ones, the expressions in (74) are grammatical. However, NQs with the adverbial suffix cannot appear within the associated noun phrases. If there is no movement involved, it is predicted that no definiteness effects should be observed, contrary to fact as will be analyzed of (74), and also of (77) and (89) shortly. Moreover, the obligatory indefinite interpretation of the associate noun phrase in NP-Case-Q order cannot be accounted for by an adverbial analysis of NQs as will be also discussed below.

(72) Suzuki sensei-wa [gakusei]-o hidoku 3-nin sikatta.
professor-Top student-Acc harshly Cl scolded

‘Prof. Suzuki harshly scolded three students.’

As Kakegawa (2003) notes, the associated noun phrase as in (69e) and (72) can only have indefinite readings (Kim 2002, Kang 2002 for Korean, and Simpson 2005 for East Asian languages). In (74), the expressions obligatorily have definite interpretations due to the presence of personal pronouns within the noun phrases, and they are all ungrammatical regardless of the presence/absence of the demonstrative. These data show the same fact: definite expressions (i.e. pronominal noun phrases and noun phrases with definite interpretations) do not allow FNQs while indefinite common noun phrases do not prohibit it. Why does this contrast exist between indefinite common nouns and personal pronouns?

In the following subsections, I will offer arguments to defend a movement analysis of FNQ with new data as opposed to a(n) adverbial/non-movement analysis, which will strengthen the DP hypothesis for Japanese.

2.4.3 Adverbial analysis of FNQs

In the previous subsection, we saw the difference in grammaticality between indefinite noun phrases and definite noun phrases in terms of floating numeral quantifiers (FNQs). I will consider one possible semantic account for the difference. One may claim that the

ungrammaticality of the FNQs in (74) results from semantic restrictions on its distributive interpretation (which is based on adverbial/non-movement analyses of so-called FNQs) (Kobuchi-Philip 2003, 2007, Nakanishi 2004, to appear). As Nakanishi (2003) observes, FNQs and non-FNQs behave differently in terms of distributivity interpretations. More particularly, the former are incompatible with verbal predicates denoting events that can occur only once because of their distributive adverbial status of FNQs, whereas NQs within a nominal projection do not have such a restriction because NQs are not adverbial.

Consider the example in (75):

(75) a. [Kodomo]-ga kinou **3-nin** omotya-no bouto-o tukutta.

child-Nom yesterday CI toy-Gen boat-Acc made

‘Three boys each made a toy boat.’

b. [**3-nin-no** kodomo]-ga kinou omotya-no bouto-o tukutta.

CI-Gen child-Nom yesterday toy-Gen boat-Acc made

‘Three boys made a (single) toy boat.’

‘Three boys each made a toy boat.’

According to Nakanishi, the nominal expression with the FNQ can only allow a distributive reading and thus cannot have a collective reading as the English translation indicates in (75a). Since NQs outside their host noun phrases function as distributive adverbs rather

than actually float away from the associated noun phrases they do not allow collective readings in (75a).³³ On the other hand, in (75b) the noun phrase that has the NQ within the associated noun phrase can have both a distributive and a collective reading, due to its difference in categorial status.

Against this background, one may say that the ungrammaticality of the pronouns with FNQs in (74), where the host pronominal noun phrases are associated with the NQs outside them, is caused by restrictions on adverbial status of FNQs. That is, sentences with the host pronominal noun phrases should only have collective readings for some unknown reasons (unlike in the case of common noun phrases) but these readings are prohibited because FNQs only bear distributive readings as adverbs. This conflict of these two restrictions leads to the ungrammaticality in (74).

However, not all activity/event verbs with FNQs behave like the verb *tukuru* ‘to make’ in (74) in terms of interpretation. Consider the following examples.

- (76) a. Kodomo-ga kinou 3-nin (isshoni) 1-tu-no **onaji** keiki-o tabeta.
 child-Nom yesterday Cl (together) Cl-Gen same cake-Acc ate
 ‘Three children ate one same cake (together).’

³³ I wonder why FNQs should function as distributive adverbs and not as collective adverbs. One might treat NQs as adverbs in the same way as NQs-*de* ‘in NQs’ like *3-nin-de* ‘in a group of three’, though the latter clearly creates a collective reading in (1).

(i) Kodomo-ga kinou **3-nin-de** (kyouryokusite) hitotu-no omotya-no bouto-o tukutta.
 child-Nom yesterday Cl-by cooperation one-Gen toy-Gen boat-Acc made
 ‘Three boys made one (single) toy boat (in cooperation).’

See Footnote 34.

b. Kodomo-ga kinou 3-nin (**doujini**) 1-tu-no **onaji** uta-o utatta.

child-Nom yesterday CI simultaneously CI-Gen same song-Acc sang

‘Three children sang one same song (simultaneously).’

c. Kodomo-ga kinou 3-nin (**doujini**) 1-tu-no **onaji** eiga-o mita.

child-Nom yesterday CI simultaneously CI-Gen same movie-Acc watched

‘Three children watched one same movie (simultaneously).’

‘Three children watched one same movie (simultaneously).’

d. Gakusei-ga tossani 3-nin (sokoni mukatte) (**doujini**) hasitta.

student-Nom suddenly CI there.to toward simultaneously ran

‘Three students suddenly (simultaneously) ran (toward that direction).’

These sentences with the NQs outside the associated noun phrases are forced to have collective readings by insertion of the adverbs *isshoni* ‘together’, *doujini* ‘simultaneously’ and the nominal modifier *onaji* ‘same’ before the object noun phrase, and they are still perfectly grammatical. That is, they can have collective reading despite of the FNQs. Thus, NQs outside their host noun phrases do not always function as distributive adverbs (at least) in some cases.

Furthermore, the sentences with *sikaru* ‘to scold’ I employ in (69e) and (72) readily also allow both collective readings and distributive readings in (69’e) and (72’):

(69') e. **3-nin** Suzuki sensei-wa [gakusei]-o (**doujini/kokoni**) sikatta.

CI professor-Top student-Acc simultaneously/individually scolded

'Prof. Suzuki scolded three students together (simultaneously/individually).'

(72') Suzuki sensei-wa [gakusei]-o hidoku **3-nin** (**doujini/kokoni**) sikatta.

professor-Top student-Acc harshly CI (simultaneously/individually) scolded

'Prof. Suzuki harshly scolded three students (simultaneously/individually).'

Even when these sentences are forced to have collective readings because of the adverb *doujini* 'simultaneously', they are still grammatical. This shows that the NQs outside their host noun phrases need not be distributive adverbs in every case as in the case with the verb *sikaru* 'scold'.³⁴

More importantly, insertion of adverbs forcing distributive or collective readings still does not save the ungrammaticality of the expression with the personal pronoun as the NQ's host noun in (77):

³⁴ When the sentence in (75a) is forced to have a collective reading, it is also still grammatical in (i).
 (i) (kyouryokusite) [Kodomo]-ga kinou **3-nin** hitotu-no omotya-no bouto-o
 tukutta.
 cooperation child-Nom yesterday CI one-gen toy-Gen boat-Acc
 tukutta
 made

'Three boys (in cooperation) made one single toy boat.'

If the sentence with the FNQ were allowed to have a distributive reading, it should be ungrammatical, contrary to fact.

(77) (***3-nin**) Suzuki sensei-wa [(sono) watasitati]-o

CI professor-Top those/the us-Acc

(**doujini/kokoni**) (***3-nin**) sikatta.

(simultaneously/individually) CI scolded

When the associated noun phrase involves the personal pronoun, the FNQ makes the expression ungrammatical, regardless of the forced distributive or collective interpretations.

Thus, an analysis of FNQ as adverbs fails to account the ungrammaticality of (77) as well as that of (74) above. Note that personal pronouns themselves allow both distributive and collective readings in (78) below, and thus the presence of personal pronouns themselves are not related to distributive/corrective readings.

(78) a. Watasitati-wa (sorezore) fune-o tukurimasita.

we-Top each ship-Acc made

‘We (each) build a ship.’

b. Watasitati-wa (isshoni) fune-o tukurimasita.

we-Top together ship-Acc made

‘We build a ship together.’

In the following subsection, I will present a movement analysis of FNQs to account for the ungrammatical expressions in (74).³⁵

2.4.4 Movement analysis of FNQs

In the previous subsection, it was shown that a(n) adverbial/non-movement analysis of FNQs cannot account for the fact that NQs outside the host noun phrases cannot be associated with the noun phrases when they involve personal pronouns. In this subsection, I will present a movement analysis for the ungrammaticality of FNQs in (74) as a preparation of the argument in 2.4.5.

In the linguistic literature, there are two distinctive ways to pursue derivational approaches to FNQs (Fujita 1994 for review). One approach is that a quantifier (Q) gets moved away from its host noun phrase (Kayne 1975 for French, Kamio 1977, Haig 1980 for Japanese, McCawley 1988 for English, among others). Another approach is that an NP floats outside the associated noun phrase leaving a quantifier inside (Sportiche 1988 for English and French, Shlonsky 1991 for Hebrew, Kitahara 1993 for Japanese, among others).

Between the two approaches, I choose the former approach in this work, based on two assumptions: (i) a noun phrase forms a predication relation with a NQ in (79) (McClure

³⁵ In the following, I will examine the examples in (74) but not the one in (77) in terms of specificity effects. Yet, the same analysis is applied to the example in (77).

1999, Watanabe 2006, Park 2008);³⁶ and (ii) the subject in nominal predication constructions does not move (den Dikken 2006) as illustrated in (79).³⁷

(79) [_{Pred P} NP [_{Pred'} NQ]]

In this structure, the NP is the subject and the NQ is the predicate. Note that I treat numerals and classifiers as forming a basic constituent and thus that I do not assume separate functional structures for numerals and classifiers such as Classifier Phrase, Numeral Phrase, or FP within noun phrases (Tang 1990, Corver 1998, Muromatsu 1998, Li 1999, Cheng and Sybesma 1999, Borer 2005, among others), because no numeral-classifier languages allow numerals to appear (at least linearly) separately from classifiers within or

³⁶ This first assumption of NQs as predicates comes from the arguments by McClure (1999) and Watanabe (2006) that the associated noun phrases and NQs form constituents as assumed in (i).

(i) a. [_{NCP} hon [_{NC'} san satu]]
 book 3 Cl

(McClure 1999:273)

b. [_{NumP} hon_i [san t_i satu]]

(Watanabe 2006:254)

The one common property of the underlying structures of the noun phrases with NQs in (ia,b) illustrates that the combination of the NQ and the numeral form a constituent. Although I do not assume that classifiers or numerals are the head of phrases, I adopt McClure's and Watanabe's structure in that common nouns form constituents with the combination of numeral classifiers under the nominal predication hypothesis. See Park (2008) for classifiers as the heads of a phrase whose Spec has numerals under nominal predication constructions.

³⁷ The second assumption stems from den Dikken's (2006: Chapter 4.4) argument. Consider the following examples.

(i) a. The biggest problem is/*are the children.
 b. The best candidate is me/her/him.

(den Dikken 2006: 117)

In (ia), the subject *children* cannot enter into an agreement relation with the auxiliary verb in terms of number. Instead, the inverted predicate establishes an agreement relation with the verb. Similarly, in (ib) the pronominal subject cannot be assigned/checked nominative Case, and as a result, they surface with default accusative case. According to den Dikken, the subject noun phrase of a predicate-inversion construction is 'frozen' and thus the subject becomes unable to establish an Agree relationships with predicates.

outside the associated noun phrases (Cinque 2005). They always form constituents in syntax.

Given the structure of (79) along with the two assumptions on the constructions, I assume that only predicative NQs are able to get moved in FNQ constructions of (80):³⁸

(80) $NQ_i \dots [XP \dots [_{Pred P} NP [_{Pred'} t_i]]]$ ³⁹

Against this background, I will provide evidence for a derivational account to the ungrammaticality of pronominal constructions with the account of the ungrammatical examples in (74) in the following subsections and ultimately support the DP hypothesis for Japanese.

2.4.5 Specificity effects

In English, extractability from noun phrases is graded according to nominal type (Fiengo and Higginbotham 1981, Stowell 1989, Enç 1991, Schütze 1995, Campbell 1996, Kennan 2003, Bošković 2005); the full paradigm was originally noted in Chomsky (1973):

- (81) a. Who_i did you see [a picture of t_i]? (Enç 1991)
b. Who_i did you see [three pictures of t_i]? (Campbell 1996)
c. ? Who_i did you [Bill's picture of t_i]? (Campbell 1996)
d. * Who_i did you see [the picture of t_i]? (Enç 1991)

³⁸ I will examine two different types of movement of NQs within the associated noun phrases in Chapter 3 and Chapter 4.

³⁹ I will argue the categorial status of XP of (80) in 4.4.3????.

e. *Who did Mary steal [that picture of [e]]? (Fiengo and Higginbotham 1981)

f. *Who did Fred read [the story about [e]]? (Fiengo and Higginbotham 1981)

g. *Who did Mary steal [that picture of t_i]? (Enç 1991)

Wh-words cannot get moved outside the definite noun phrases. Under the DP hypothesis, the structure of the ungrammatical nominal expressions in (81) is as follows:

(82) * wh_i [_{DP} demonstrative/definite article [... t_i ...]]

Based on the analogy with wh-phrases that have the feature [+Wh] in CP (see in 3.3.1), Campbell (1996) analyzes English demonstratives as having a morphosyntactic feature [+Th] that heads the definite article in D and thus occurs only in DP (Szabolcsi 1994, Longobardi 1994, Brugè 1996, Campos 2005 among others for a D-feature analysis). Campbell argues that demonstratives and a null Operator in Spec of DP function like referential/specificity ‘operators’ and proposes the structures in (38) and (39), repeated below, under a nominal predicate hypothesis in which a referential NP involves a Predicate Phrase (PredP) (Holmberg 1993, den Dikken 1998, Furuya 2004).

(38) a. the boy

b. [_{DP} null Operator [_D the [_{PredP} pro boy]]]

(Campbell 1996:165)

(39) a. those boys

b. [_{DP} those [_{D'} (null head D) [_{PredP} pro boys]]

(Campbell 1996:167)

(38b) and (39b) are the structures of the definite nominal expressions, where the common noun phrases are predicated of the *pros*. As for DP, a null Operator appears in Spec of DP and the determiner occurs in D in (38b), whereas in (39b) a demonstrative is located in Spec of DP, which head involves a null D.

Against this background of these structures for specific/definite noun phrases, according to Campbell, Spec of DP is needed as an escape hatch for movement out of DP, and definite DPs are well documented as islands (Stowell 1989, Giorgi and Longobardi 1991, Szabolcsi 1994, Campbell 1996, Gavruseva 2000, Simpson 2005, Bošković 2005).⁴⁰ The analysis of definite NPs as having a(n) operator/demonstrative in Spec of DP predicts that DPs should be islands for A-bar movement, (Kayne 1994 for DP as a A-bar position).⁴¹

The following is Campbell's analysis for specificity effects.

(83) a. *[WH_i ... [_{DP} null Operator [_{D'} the [... t_i]]] (81d,f)

b. *[WH_i ... [_{DP} demonstrative [_{D'} D [... t_i]]] (81e,h)

⁴⁰ Den Dikken points to me that not all definite expressions show the definiteness effect in English, as shown below.

(i) a. What_i did he witness [the destruction of t_i]?
b. *What_i did he take [the picture of t_i]?

Thus, the argument of the specificity effects here supports the presence of DP to the extent that a definite DP is an island for movement.

⁴¹ I will argue A-bar movement in Section 3 of Chapter 4 in detail.

In these structures, a null Operator in (83a) and a demonstrative in (83b) in Specs of DP block a wh-phrase from moving away from the host noun phrases. The ungrammaticality of these specificity effects results from a violation of the Minimal Link Condition (MLC) argued for by Chomsky (1995).

I will replicate Campbell's argument of the specificity effects for English by using the movement analysis of FNQs for Japanese in order to account for the ungrammaticality in (74), repeated below.

- (74) a. (***3-nin**) Suzuki sensei-wa [(sono) watasitati]-o hidoku (***3-nin**) sikatta.
 Cl professor-Top those/the us-Acc harshly Cl scolded
- b. (***3-nin**) Suzuki sensei-wa [(sono) anatatati]-o hidoku (***3-nin**) sikatta?
 Cl professor-Top those/the you-Acc harshly Cl scolded
- c. (***3-nin**) Suzuki sensei-wa [(sono) karera]-o hidoku (***3-nin**) sikatta.
 Cl professor-Top those/the them-Acc harshly Cl scolded

I claim that the ungrammaticality with the FNQs in (74) stems from specificity effects and propose the structures in (84) below.

- (84) a. *[NQ_i ... [DP null Operator [D [PreP watasitati t_i]]]...]
- b. *[NQ_i ... [DP sono [D [PredP watasitati t_i]]] ...]

Given the original position of NQs as predicates as in (79), the NQs cannot float outside the associated noun phrases across the presence of a null Operator in (84a) and a demonstrative in (84b). The movement of the FNQs violates the MLC and thus is ungrammatical, as in the case of the English examples in (83).

As for the structure of the expressions with the FNQs following the associated nouns in (74), I assume that the associated noun phrases are scrambled across the FNQ after the NQs float away from them in (85).

- (85) a. * [_{DP} sono [_D [_{PreP} watasitati t_i]]_j ... [NQ_i ... t_j ...]
- b. * [_{DP} null Operator [_D [_{PreP} watasitati t_i]]_j ... [NQ_i ... t_j ...]

While I do not go into a more detailed structure of the scrambling mechanism in (85) in this work, the cause of the ungrammaticality of these expressions should not be the scrambling operation(s), because the noun phrases with common nouns in place of personal pronouns in (72), (75), and (76) above are grammatical regardless of the various positions of the FNQs in relation to the host noun phrases. In contrast, in (74), the variation of the loci of the FNQs does not save the ungrammaticality, because the cause of the ungrammatical FNQs is a violation of A-bar movement of the FNQs by skipping Spec of DP due to the presence of a null Operator or a demonstrative in that Spec, again, as in the case of the English wh-phrases in (83).

To summarize this subsection, I examined one variation of FNQs with personal pronouns in the associated noun phrases and accounted for specificity effects of the FNQs in terms of illegitimate A-bar movement, in parallel to that of wh-phrases out of specific noun phrases. If this argument is on the right track, one can make some predictions. Remember I proposed the structures for Japanese Pronoun-noun constructions in (43), repeated below:

- (43) a. $[_{DP} \text{ null Operator } [_{D'} (\text{null head D}) [_{\text{PredP}} \text{ pronoun NP}]]$
 b. $[_{DP} \text{ demonstrative } [_{D'} (\text{null head D}) [_{\text{PredP}} \text{ pronoun NP}]]$

Given the structures in (43), Japanese definite common noun phrases with a null Operator or demonstratives (that have *pros* in subject position in place of personal pronouns) are also expected to project the DP structures and to yield specificity effects in (86).

- (86) a. $*NQ_i \dots [_{DP} \text{ null Operator } [_{\text{PredP}} \text{ pro } [_{NP} t_i]]]^{42}$
 b. $*NQ_i \dots [_{DP} \text{ demonstrative } [_{\text{PredP}} \text{ pro } [_{NP} t_i]]]$

The FNQs float away from the DPs that are filled by a null Operator or a demonstrative and observe specificity effects. Interestingly, as for the structure in (86a) its linear order is in

⁴² I assume that the NP and the NQ form a predication relation where a common noun phrase is the subject and the NQ the predicate. This predication is syntactically possible, although this predication itself cannot appear in argument position because common noun phrases (and NQs) are always predicative by definition (see 2.2.3.3.1 for the condition of referential nominals). I will consider the structure of the combination of a common noun phrase and a NQ in ??? below.

(87) below, because Japanese does not have articles (including a definite article) unlike English

(87) *NQ_i ... NP (definite)

This prediction will be shown to be borne out in the following subsection.

2.4.5.1 FNQs and definite common noun phrases

I will demonstrate that Japanese common noun phrases that involve definite/discourse anaphoric interpretations (with/without a demonstrative) show specificity effects, due to the presence of a null Operator (or a demonstrative) in Spec of DP.

First, let us look at the following common noun phrases with NQs within them.

(88) A: Watasi-wa [[hannin 3-nin]_i-ga nigeta] to kiita.

I-Top criminal Cl -Nom ran.away Comp heard

‘I heard that (the) three criminals ran away.’

a. Sonogo keisatu-wa [(sono) hannin 3-nin]_i-o tukamaeta.

Later police-Top those/the criminal Cl-Acc caught

‘Later, the police caught those/the three criminals.’

Given the context in (88A), the noun phrase in the brackets in (88a) refers to the same individuals as previously introduced in (88A), regardless of the presence/absence of the

demonstrative *sono* in (88a) (cf. Tomioka 2003 for anaphoricity of Japanese bare noun phrases).

In comparison with the example in (88a), the following examples are ungrammatical.⁴³

(89) a. *3-nin_i sonogo keisatu-wa [hannin t_i] -o tukamaeta.

Cl later police-Top criminal-Acc caught

‘(Intended) Later, the police caught those/the three criminals.’

b. *3-nin_i sonogo keisatu-wa [sono hannin t_i]-o tukamaeta.

Cl later police-Top those/the criminal-Acc caught

‘(Intended) Later, the police caught those/the three criminals.’

Given the same context in (88A), the noun phrases in the brackets of (89) have definite/discourse anaphoric interpretations and refer back to the individuals previously introduced as the English translations show in (88A). Those noun phrases with definite interpretations do not allow quantifiers to float outside them. I claim that the prediction of (86), repeated below, is correct.

(86) a. *NQ_i ... [_{DP} null Operator [_{PredP} *pro* [_{NP} t_i]]] (89a)

b. *NQ_i ... [_{DP} demonstrative [_{PredP} *pro* [_{NP} t_i]]] (89b)

⁴³ Like the examples in (74), some native speakers of Japanese appear to accept the sentences in (89). See Footnote 32 for a possible account.

In (86), the presence of a null Operator or a demonstrative in Spec of DP blocks a NQ from moving away from its host noun phrase; and otherwise the movement violates the MLC. If this is correct, the impossible definite/discourse anaphoric readings of the bracketed noun phrases in (89) comes from specificity effects, like in the cases of a pronominal subject in (84).

In this subsection, we have observed that NQs cannot move outside definite associated noun phrases because the movement of NQs outside them violates the Minimal Link Condition, due to the skipping of Spec of DP occupied by a null Operator or a demonstrative. The argument based on specificity effects supports the DP hypothesis for Japanese as long as Spec of DP is the only the escape hatch for movement for definite noun phrases as is assumed in the current hypothesis. This issue is treated in Chapter 4.

I will extend the current argument of specificity effects to another NQ construction in (71b), repeated below in the following subsection.

(71) b. NP-Case (N)Q

This construction shows one common property as in the case of NQ constructions (71e) in that that it possesses an obligatory indefinite reading. I will examine this construction, in favor of the DP hypothesis in the following subsection.

2.4.5.2 NP-Case-NQ sequences and indefinite noun phrases

Kamio (1977) observes that NP-Case-NQ sequences force (non-specific) indefinite interpretations. (See Tateishi 1989, Ishii 1991, Fujita 1994, Watanabe 2006 for Japanese relevant data, Kang 2002, Kim 2002 for Korean, Simpson 2005 for some East Asian languages.)

Consider the following examples, citing from Watanabe (2006:298):

(90) a. John-wa [piano 2-dai]-o kai-tagatta.

Top piano Cl-Acc buy-wanted

‘John wanted to buy (the) two pianos.’

b. John-wa [2-dai-no piano]-o kai-tagatta.

Top Cl-Gen-piano-Acc buy-wanted

‘John wanted to buy (the) two pianos.’

c. John-wa [piano-o 2-dai] kai-tagatta.

Top piano-Acc Cl buy-wanted

‘John wanted to buy (*the) two pianos.’

In (90), the obligatoriness of the *de dicto* (non-specific) indefinite reading can be seen in the intentional context. The noun phrases in the brackets in (90a,b) are ambiguous between

de dicto (non-specific) and *de re* (specific) readings: the *de dicto* reading says that John would be happy with any two pianos as long as the instruments are pianos; and the *de re* reading says that there are two specific pianos that John wants to buy. Unlike the ones in (90a,b), the noun phrase in the bracket in (90c) must be interpreted as the *de dicto* reading, as the English translation shows.

Kakegawa (2003:38) further offers the observation that the quantifiers in the NP-Case-NQ order cannot quantify the associated noun phrases once the noun phrases carry demonstratives (Simpson 2005).

(91) John-ga [sono hon-o 3-satu] katta.

Nom those/the book-Acc Cl bought

‘John bought three copies of that/the book.’

‘*John bought those three books.’

In (91), once the object noun phrase involves a demonstrative, the definite noun phrase itself cannot be the host of the FNQ, as the English translations show. Instead, it seems that a null element with an indefinite interpretation appears to function as the host of FNQ as the English translation suggests. This obligatory indefiniteness of the host of NQs in association with NQs in this construction is the same as the interpretation of the host noun

phrase in (90c). That is, these two sorts of data show that the associated noun phrase in the NP-Case-NQ order must be indefinite.

In the literature of NQ studies, there are two analyses of the NP-Case-NQ orders. One analysis is that this sequence forms a constituent and thus that NQ is within the noun phrase (Watanabe 2006). The other analysis is that NQ is not part of its host noun phrase in this construction (Vermeulen 2006).

In the following subsection, after reviewing these previous analyses of this construction, I will account for the relation of this sequence to obligatory indefiniteness under a non-constituent approach and support the DP hypothesis.

2.4.5.3 Nominal constituent analysis

Watanabe (2006) assumes that a NP-Case-NQ sequence form a nominal constituent based on its linearity. Watanabe also assumes that a Case feature, which is implicitly assumed to be realized as case morphology in Japanese, projects its own functional structure for Japanese (Tateishi 1989, Löber 1994), called CaseP under DP.

Once Case projects its own phrase (CaseP) that contains a NQ and its host noun phrase in (92a), the NQ moves to Spec of Quantifier Phrase (QP) in (92b) and the QP becomes a complement of D with case morphology such as the nominative Case marker *-ga* or the accusative Case marker *-o* as its head (92c).

- (92) a. [_{CaseP} NP NQ Case] --projection of Case
 b. [_{QP} NQ_i [_{CaseP} NP t_i Case]] --movement of NQ to QP
 c. [_{DP} [_{CaseP} NP t_i -ga/o]_j [_{QP} NQ_i t_j]] --movement of CaseP to DP

According to Watanabe (2006:295-299), a Case-D agreement relation is established once CaseP (or QP that includes CaseP within it) moves to DP, which agreement is responsible for non-specificity/indefiniteness.⁴⁴ The information about specificity is associated with the Case head as well as with D. Watanabe claims that this analysis makes it possible to treat specificity in Japanese and Turkish in a uniform fashion, citing Enç's (1991) observation in (93).

- (93) a. Ali bir piyano-**yu** kiralamak istiyor

Ali one piano-Acc rent wants

'Ali wants to rent a (specific) certain piano.'

- b. Ali bir piyano kiralamak istiyor

⁴⁴ The CaseP analysis of case morphology as its head is not unproblematic as Watanabe (2006) notices. In the same paper Watanabe argues that the quantificational markers *-ka* and *-mo* are the D head (See Appendix 2). If this is the case, examples as in (i), observed in Nishigauchi (1990) among others, cannot be readily accounted for under Watanabe's assumption that CaseP is projected within DP or more generally under the assumption that DP is the highest phrase of a noun phrase for Japanese.

- (i) a. dare-mo-ga kita
 who-MO-Case came
 'Everyone came.'
 b. dare-ka-ga kita
 who-KA-Case came
 'Someone came.'
 c. [?? [_{DP} [dare]-mo/ka]-ga

The structure based on the linear order of the nominal expressions in (ia,b) should be in (ic), where the case morphology is attached to DP and CaseP with the case morphology as its head is projected outside the DP. In other cases as in (90c), however, CaseP is within DP.

Ali one piano rent wants

‘Ali wants to rent a (nonspecific) certain piano.’

Watanabe (2006:299) says that this data shows that the information about specificity is carried by the Case head. It is, however, not clear how the indefiniteness of the Turkish noun phrase that lacks a Case marker in (93b) is related to the Case head/CaseP under the consideration of Watanabe’s argument for indefiniteness in the case in (92c). Beside the problem mentioned in Footnote 44, the constituency assumption for the NP-Case-NQ sequence itself is questionable, as will be shown in the following subsection.

In the following subsection, I will give an alternative non-constituency analysis to NP-Case-NQ sequences.

2.4.5.4 Non-constituent analysis

Vermeulen (2006) argues that the NQ in the NP-Case-NQ order is outside the associated noun phrase and does not stay within the noun phrase, based on the insertion of adverbs (Fujita 1994 among others) and the treatment of coordination constructions. The first piece of evidence involves the insertion of an adverb in the examples in (94) (taken from Vermeulen 2006:243, with some modifications).

(94) a. Mary-ga Bob-ni [banana (*kyou) 3-bon]-o ageta.
 Nom to banana today Cl-Acc gave

‘Mary gave three bananas to Bob (*today).’

b. Mary-ga Bob-ni [banana-o (kyou) 3-bon] ageta.
 Nom to banana-Acc today Cl gave

‘Mary gave three bananas to Bob (today).’

In (94a), an adverb cannot be inserted between the associated noun phrase that does not carry a Case marker and the quantifier. On the other hand, in (94b), an adverb can appear between the associated noun bearing a Case marker and the quantifier. The possibility of adverbial insertion shows that the associated noun phrase and the quantifier in the NP-Case-NQ order do not constitute a constituent in (94b), unlike the combination in (94a).

Vermeulen’s second argument for the non-constituency analysis of NP-Case-NQ sequences involves coordination constructions. Consider the following two pairs of examples in (95).

(95) a. Mary-ga [[**ringo 2-tu**]-to [banana 3-bon]]-o katta.
 Nom apple Cl-and banana Cl-Acc bought

‘Mary bought two apples and three bananas.’

b. Mary-ga [[**ringo-o** 2-tu]-to [banana 3-bon]]-o katta.

Nom apple-Acc Cl-and banana Cl-Acc bought

In (95a,b), there is one difference in the presence of the object marker *-o*: The first conjunct at the object position in (95a) does not possess the accusative Case marker *-o* whereas the one in (95b) carries the marker like the second conjunct. The noun phrases in both examples appear to be alike due to their similar linearity and their shared meanings.

However, the next scrambling data, which are simplified examples from Vermeulen (2006:424), show that the constituency idea is not correct.

(96) a. [[Ringo 2-tu]-to [banana 3-bon]]-o Mary-ga katta.

apple Cl-and banana Cl-Acc Nom bought

‘Mary bought two apples and three bananas.’

b. *[[Ringo-o 2-tu]-to [banana 3-bon]]-o Mary-ga katta.

apple-Acc Cl-and banana Cl-Acc Nom bought

The following derivation in (97) is the illustrations of the scrambled parts in (96).

(97) a. [NP-NQ-and NP-NQ]-Case]_i [... t_i ...]

b. *[NP-Case NQ-and NP-NQ]-Case]_i [... t_i ...]

The nominal coordination of the combinations of the associated noun phrase and the quantifier can be scrambled to the left periphery of the sentence in (97a), whereas in (97b),

the ostensible nominal coordination cannot be scrambled although the non-scrambling counterpart is grammatical in (95b). Vermeulen (2006: 419) attributes the ungrammaticality of (96b) to the difference in the syntactic category of each conjunct in (98):

(98) a. [NP NQ]-Case

b. [NP]-Case...NQ

In (98a), the NQ and its host noun phrase attached by a Case marker form a constituent and thus the conjunction consisting of the nominal expressions with this structure is grammatical in (97a). On the other hand, in (98b), the host noun phrase does not form a nominal constituent with the NQ and thus the conjunction in (97b), which consists of the expression with the non-constituent structure in (98b) and the one with the nominal constituent structure in (98a), is ungrammatical. (I refer the reader to Vermeulen (2006) for a more detailed structure of (98b).) If Vermeulen is correct, the NP-Case-QP sequence does not form a nominal constituent. Following Vermeulen, I assume that the non-constituent structure in (98b) is correct for NP-Case-NQ sequences. That is, the NQ is outside the associated NP-Case nominal constituent in the sequences.

Against this background of non-constituency for NP-Case-NQ sequences, I will attempt to give movement and non-movement accounts for the NQs of the sequences, and

also syntactic accounts for their obligatory indefinite interpretations, which will provide support for the DP hypothesis for Japanese.

2.4.5.5 Failed analysis: Non-movement analysis

I will attempt to give an adverbial/non-movement analysis to NP-Case-NQ sequences to see whether it is workable to account for their obligatory indefinite readings.

Under an adverbial/non-movement analysis of FNQs, a collective reading of NP-Case-NQ sequences should not be observable because the NQs as distributive adverbs are located outside the associated noun phrases, as the adverbial analysis was reviewed in 4.3.

Consider the example in (99):

(99) John-wa piano-o 2-dai katta.
 Top piano-Acc Cl bought

‘John bought two pianos.’

If the NQ functions as an adverb, this sentence may only have a distributive reading as in 2.4.3 above. In order to examine this point, I will employ adverbs to force a collective reading in (100):

(100) John-wa piano-o (itidoni) 2-dai (itidoni) katta.
 Top piano-Acc one.time Cl one.time bought

‘John bought two pianos (at once/at the same time).’

Insertion of the adverb forces the sentence to have a collective reading/one single event reading, and yet does not make it ungrammatical. This examination does not prove the adverbial status of the NQ in the NP-Case-NQ sequence in (100). More importantly, even if the FNQ in (100) functions as an adverb somehow, the adverbial analysis of a FNQ seems to be unable to provide reasons for why the host noun should be indefinite.

In the next section, I will account for the obligatory indefiniteness of NP-Case-NQ orders in terms of a movement analysis. This argument, if correct, will also support the DP hypothesis for Japanese.

2.4.5.6 Movement analysis of NQs

In 2.4.5.1, I analyzed the Japanese specificity effects with FNQs of (71e): NQs originate within the associated noun phrases and are unable to float away from the host noun phrases when the noun phrases have a demonstrative or a null Operator in Spec of DP. Definite/Discourse anaphoric readings come from a demonstrative or a null Operator. Put differently, NQs can float away out of their host noun phrases only when the noun phrases do not possess either element in Spec of DP. Putting these two together, noun phrases that allow FNQs must be indefinite under the working hypothesis.

Let us go back to the example with an obligatorily indefinite interpretation in (90c), which is repeated below:

(90) c. John-wa [piano-o 2-dai] kai-tagatta.

Top piano-Acc Cl buy-wanted

‘John wanted to buy (*the) two pianos.’

(Watanabe 2006:298)

The associated noun phrase in the NP-Case-NQ order cannot have a definite interpretation in (90c). As previously argued, the NQ *2-dai* is located outside the associated noun phrase *piano-o*. I argue that the obligatory indefinite interpretation of the object noun phrase in (90c) comes from the impossibility of having a demonstrative or a null Operator in DP, due to the movement of the FNQ in the sequence. The following is part of the derivation in (101).

(101) a. [NQ_i ... [DP t_i [D' D ... [NP NP t_i]]]...]-Case ---floating of NQ

b. [... [DP t_i [D' D ... [NP NP t_i]]]_j-Case [NQ_i ... t_j ...]

---scrambling of the host DP

In (101a), an empty Spec of DP allows the NQ to move through away the host noun phrase under the assumption that Spec of DP is the only the escape hatch for movement for definite noun phrases.⁴⁵ In the next step of (101b), the host NP scrambles across the NQ.⁴⁶

⁴⁵ I will examine this assumption in Chapter 4.

⁴⁶ Alternatively, an indefinite noun phrase may not project DP (Danon 2006 argues for Hebrew, Bošković 2005 for Serbo-Croatian). I disagree to non-DP arguments for Japanese indefinites. In Chapter 4, NQ-NP constructions in (71d), which also observe obligatory indefinite readings, are examined in terms of the DP hypothesis and shown that the constructions project DPs. If this is correct, Japanese indefinites project DPs.

Spec of DP available as a landing site so that NQs can float out through it to the outside.

This presence/absence of materials in Spec of DP creates (in)definiteness and (non-)opacity.

2.5 Conclusion

In this Chapter, I refuted Fukui's NP hypothesis and argued for the DP hypothesis for Japanese. In 2.1, we observed the five properties of Japanese noun phrases that show that personal pronouns and common noun phrases with definite/anaphoric readings are alike in terms of definiteness, positions of modifications and demonstratives, and reviewed Fukui's NP hypothesis. I refuted the hypothesis by demonstrating that Japanese personal pronouns do not always show the same distribution as common noun phrases in nominal collocation constructions. In particular, the combination of personal pronouns and common noun offered the three new findings (that the combination of common nouns cannot observe): (i) the accent unchanged; (ii) the possibility of the phrasal combination; (iii) the possibility of partial modification, which cannot be accounted for by Fukui's NP hypothesis for Japanese that treats all nouns equally. These new findings through the examination of the complex noun phrases could not have been offered in the literature because linguists have only investigated simple noun phrases by comparing their distribution and (un)availability of (in)definiteness, and/or adding modifiers. This is the motivation that I focus on nominal collocation constructions and examine them in this thesis.

In 2.2, at first, I showed that Japanese Pronoun-noun constructions appear to behave like their English equivalents. However, further examination demonstrated that the personal pronouns in the Japanese constructions do not function as ‘determiners’ unlike in the case of English (Postal 1969). The Japanese pronouns in these constructions are located in a lower position within the constructions and thus are allowed to appear in the left periphery and switch the order with common noun phrases within the constructions. (The latter is examined in Chapter 3.) Yet, the two restrictions particularly on the distribution of demonstratives were observed, which cannot be accounted for under an NP hypothesis: the obligatorily left periphery occurrence of demonstratives in anaphoric use; and (ii) the impossibility of embedded demonstratives (both in anaphoric and deictic use) within nominal predication constructions. Once I reviewed semantically identical treatments of demonstrative (anaphoric) descriptions and definite descriptions and also observed the various cross-linguistic distributions of demonstratives in relation to DP, I assumed that Japanese Pronoun-noun constructions might project DPs. In particular, I compared the extant analyses of definite noun phrases and adopted Campbell’s (1998) analysis of the DP hypothesis (based on the semantic analysis of referential noun phrases) for Japanese Pronoun-noun constructions as a working hypothesis.

Once the possibility of the DP hypothesis was opened up in 2.2, in 2.3, I argued that the DP hypothesis is supported for Japanese Pronoun-noun constructions by showing that they are prohibited from being present where (full) DPs are cross-linguistically prohibited: in vocative use and within nominal predication constructions.

In 2.4, I supported the DP hypothesis in terms of specificity effects, based on the observations that NQs cannot float away from their host noun phrases when the associated noun phrases involve pronouns or when the noun phrases are definite, under the assumption that the Spec of DP is the only escape hatch for NQ movement out of the associated noun phrase. If the arguments in this section are correct, not only Pronoun-noun constructions but also definite noun phrases project DPs for Japanese, because a demonstrative or a null Operator is projected in the Spec of DP for referentiality of noun phrases.

In the next Chapter, I will examine the internal structure of nominal collocation constructions, and discuss when/how noun phrases (obligatorily) possess demonstratives or a null Operator in Spec of DP.

3 Internal structure of Pronoun-noun constructions

In the previous chapter, I examined Japanese Pronoun-noun constructions and showed that personal pronouns behave differently from combinations of two common nouns in that they form predication relations with common noun phrases within noun phrases like *us linguists* in English. Japanese personal pronouns in the constructions are, however, located in a lower position than DP, unlike their English equivalents. This allows demonstratives to appear in the left periphery of the constructions. Their presence in DP blocks numeral quantifiers (NQs) from floating away from the host noun phrases (i.e. specificity effects). Interestingly, Pronoun-noun constructions without demonstratives systematically prevent NQ predicates from floating outside their host noun phrases as well, because a null Operator in DP is present even when there is no overt demonstrative. This blocking of NQs is also shared with (bare) common noun phrases with definite/discourse anaphoric interpretations. That is, definite common noun phrases show specificity effects, unlike indefinite common noun phrases, due to the presence of a null Operator (or a demonstrative) in Spec of DP. This element in Spec of DP (i.e. a demonstrative or a null referential operator) is to be directly related to definiteness that enables noun phrases to refer because it is related to discourse referents.

In this Chapter, I will further argue that definiteness is wired in syntactic structures for Japanese, and that this argues in favor of the presence of DP for Japanese. That is, I offer more supporting evidence for the DP hypothesis by examining the internal structures of Pronoun-noun constructions in detail. In particular, I will focus on the following (near) minimal pair of the nominal expressions in the brackets in (1) and (2).

(1) a. [Watasitati sensei]-ga sekinin-o motimasu.

we professor-Nom responsibility-Acc have

‘We professors have the responsibility’

b. [Anatagata sense]-ni situmonsimasu.

you(Pl) professor-to ask

‘I have a question to ask you professors’

c. [Karera sensei]-ga kaigi-ni sankasita.

they professor-Nom meeting-to attended

‘(*) Them professors attended the meeting.’

(2) a. [Sensei *(-no) watasitati]-ga sekinin-o motimasu.

professor- Gen we-Nom responsibility-Acc have

‘(Lit.) *Professors’ us/we have the responsibility’

b. [Sensei*(-no) anatagata]-ni situmonsimasu.

professor-Gen you(PI)-to ask

‘(Lit.) *(I) have a question to ask professors’ you’

c. [Sensei*(-no) karera]-ga kaigi-ni sankasita.

professor-Gen they-Nom meeting-to attended

‘*Professors’ they/them attended the meeting.’

Japanese constructions seem to allow pronouns to switch the order with common noun phrases in (2) as observed in 2.2.2. Note that the meanings of the ‘switched’ constructions preserve the meanings of the ‘non-switched’ constructions.

Besides the word order change, there is one more clear difference between the two constructions. That is, while the ‘non-switched’ constructions cannot have the genitive marker (or any other morpheme) (Furuya 2004), the ‘switched’ constructions obligatorily call for its presence. Some questions arise about these constructions. What is the relation between the members of the (near) minimal pairs of nominal expressions? Are the examples syntactically related to each other? Why do ‘switched’ constructions require the genitive marker, unlike ‘non-switched’ constructions? Why do the ‘non-switched’ examples forbid the genitive marker? I will attempt to give answers to these questions in the first half of this chapter. In the second half, I will extend the analysis to further nominal collocation constructions to support the DP hypothesis.

The content of the current chapter is this. After reviewing the distribution of *-no* observed in the Japanese linguistic literature in 3.1, I will attempt to apply previous analyses of the genitive marker to Noun-Gen-pronoun constructions in 3.2. I will conclude that the previous analyses of the genitive marker in the Japanese linguistic literature cannot give accounts to the questions and propose an alternative analysis for the status of the NP and the genitive marker. In 3.3, I will extend the analysis to other nominal collocation constructions and show, with novel data, that some restrictions on the constructions are related to DP, particularly, a D feature, in favor of the DP hypothesis for Japanese. The conclusion of this Chapter is in 3.4.

3.1 Observations of the genitive markers in the literature

Genitive markers cross-linguistically appear at various positions within noun phrases (den Dikken and Singhapreecha 2004). The Japanese suffixal genitive marker *-no* also shows considerable variations, typically functional variation. Partly because of its syntactic richness and complexity, the syntax of Japanese *-no* has been extensively studied in the literature (Makino 1969, Okutsu 1974, Josephs 1976, Kamio 1983, Kitagawa and Ross 1982, Murasugi 1991, Watanabe 1996, Koike 1999, Ochi 2001, Wrona 2005 among others). Not only attributive nominals but also many other nouns that appear to have theta roles or other types of semantic roles related to the head nouns and some other categories are

attached by the genitive marker within noun phrases (Kitagawa and Ross 1982, Martin 1975, Murasugi 1991, Koike 1999 among others).

In the following subsection, I will review the distribution of *-no* in the literature and show six distinct environments where it appears in Japanese 3.1.1-3.1.4. The purpose of this review is to compare the marker in various environments with the one in Noun-Gen-pronoun constructions to find out the status of the marker in constructions, besides the examination of the constructions themselves in terms of the DP hypothesis.

3.1.1 NP-Gen-NP

In the following nominal examples, the subject and the object of the head noun are related by the genitive marker *-no* in (3a) and (3b) respectively.

- (3) a. *yabanjin-no* (*tosi-no*) *hakai*
barbarian-Gen town-Gen destruction
‘the barbarian’s destruction of the city’
- b. *tosi-no* *hakai*
city-Gen destruction
‘the city’s destruction’

The left NPs in (3) correspond to arguments in that they function as the subject and the object in a clause, though, unlike in the case of the sentence, the argument-like NPs need

not be obligatory present and the NPs lack nominative and accusative Case markers within noun phrases (Murasugi 1991:22).

Time- and Place-NPs or adverbial NPs can modify the head noun in the sense of Anderson's (1983) extended possessive (Murasugi 1991).

- (4) a. asita-no paatii
 tomorrow-Gen party
 'tomorrow's party'
- b. Toyo-no mati
 Gen town
 'a town in Tokyo'

Besides these expressions, Japanese *-no* has a wider distribution than English 's. Attributive nominals and any other nouns that appear to have theta-roles or other types of semantic roles related to the head nouns are attached by the genitive marker in the following examples (Kitagawa and Ross 1982, Martin 1975, Murasugi 1991, Koike 1999 among others).⁴⁷

⁴⁷ Besides nominals, PP can precede the head nouns via attachment of the genitive marker in (i):
 (i) Tokyo-kara/made/e-no densya
 from/until/to/Gen train
 'a train from/up to/to Tokyo.'

(5) a. men-no syatu

cotton-Gen shirt

‘a cotton shirt’

b. matu-no ki

pine.tree-Gen tree

‘a pine tree.’

(6) a. nihongo-no gakusei

Japanese.language-Gen student

‘a student who studies Japanese’

‘a student who majors in Japanese.’

‘a student in Japanese language class’

b. nihonjin-no gakusei

Japanese-Gen student

‘(a) Japanese student(s).’

‘students who are Japanese’

These examples involve the combinations of two noun phrases with the genitive marker.

The first noun phrases in these constructions semantically may or may not have various

theta-roles related to the second nouns, and thus various kinds of nouns can precede another nouns.

3.1.2 The genitive marker as a pronominal element

In the following examples, the genitive marker functions as a *pro*-form in (7):

(7) a. siro-no

white-one

‘the white one’

b. Arizona-kara-no

from-one

‘the one from Arizona’

c. hasitteiru-no

running-one

‘the one which is running’

(Murasugi 1991: 56)

The genitive marker is attached to the noun in (7a), to the postposition in (7b) and the verb in (7c). The function of the marker in these examples is equivalent of *one* in English. The environments where the marker appears in (7) are different from the ones that we observed in 3.1.2 in that the marker in 3.1.2 occurs only between two nouns. If the genitive marker

functions as *pro*-form in one way and functions as a connector between two nouns in another, one might expect that one noun can be attached by the marker twice, one as a connector and the other as a *pro*-form: Noun-Gen-Gen [N-Gen-one]. Although the two occurrences of the genitive marker is not acceptable in standard dialects, some expressions with such sequences appear to be grammatical in standard dialects to certain people and also in some dialects of Japanese (see also 3.1.3 below).

- (8) a. [akai-no-no] hyousi
 red-one-Gen front.page
 ‘the front page of the red one’

(Murasugi 1991: fn 31)

- b. kore-wa [watasi-no-no] de-wa arimasen.
 this-Top I-Gen-one is-Top not
 ‘This is not my one.’

(Murasugi 1991: 70, citing from Yuzawa 1980)

The successive sequences of the genitive markers in (8a,b) are different in the following ways.

- (9) a. [[adjective-*one*]-Gen]-NP =(8a) ---in morphology
 a’. adjective-no-no-NP ---in phonology

b. [pronoun-Gen]-*one* = (8b) ---in morphology

b'. pronoun-no-no ---in phonology

In (9a), the adjective modifies the *pro*-form *-no*, which is represented with *one*, which is combined with another noun by the genitive marker. In (9b), the pronoun attached by the genitive marker is combined with the nominal *-no*.⁴⁸

3.1.3 The genitive marker as a complementizer-like element

In the following example, *-no* can be replaced with *koto* ‘fact’.

(10) Taro-wa [Ziro-ga tegami-o dasita-no/koto]-o sitteiru.
Top Nom letter-Acc posted NO/KOTO-Acc knows

‘Taro knows that Ziro sent the letter.’

Wrona (2005: 199-120) argues that *-no* is the head C of CP, based on the subcategorization facts observed in the following examples.⁴⁹

(11) a. Taro-wa [Ziro-ga biiru-o nomu-no/*koro]-o mita.
Top Nom beer-Acc drink-NO/KOTO-Acc saw

‘Taro saw that Ziro was drinking beer.’

⁴⁸ Some dialects such as the Toyama dialect have different morphemes for the genitive marker [no] and the *pro*-form [ŋa] (Murasugi 1991, 72, fn. 34).

⁴⁹ I cite the examples from Wrona (2005), where Wrona uses -NO in the gloss of the genitive marker, whereas I use Gen for it.

b. [Otukisan-ni roketto-ga tuita*-no/koto]-o kangaeteiru.
 moon-Dat rocket-Nom landed-NO/KOTO-Acc thinking

‘thinking about the fact that a rocket has landed on the moon.’

The determination of choices between *-no* and *-koto* depends on the matrix predicate verbs: whereas in (11a) it is only possible to use *-no*, (11b) only *koto* can be used. These two choices are different from the case in (10), where both *-no* and *koto* are possible (Makino 1969, Josephs 1976, Kuno 1973, but cf. Fukui and Sakai 2003). According to Wrona (2005), this alternation between *-no* and *koto* is possible only for a C head in the embedded clause (i.e. a C head that is subcategorized for by a verb).

Similarly, in (12), *-no* appears at the end of the sentence, which is used only in colloquial speech.

(12) a. Taro-ga kita (no). (with rising intonation)

Nom came Gen

‘Did Taro come?’

‘(I am telling you) Taro came.’

b. Taro(-ga) (*no) (with rising intonation)

T-Nom Gen.

‘Taro?’

In (12a), the genitive marker as a sentential particle *-no* itself is not a Q-morpheme because the sentence can be interrogative or not depending on the intonation, regardless of the presence/absence of the marker. Note that the particle *-no* cannot be replaced with *koto* in (12a), unlike in the case of (10) above. This use of *-no* is a sentential particle. In (12b), the genitive marker is attached to the subject, which is part of the incomplete sentence in echo question, and thus it is ungrammatical.

The observations in this subsection suggest that the use of *-no* as Comp here is different from the previous two *-nos* as a connector of two nouns and as the *pro*-form of the genitive marker. This gets support from some dialects of Japanese. While these three functions are realized as *-no* in Standard Japanese, the Fukushima dialect (in Northern Japan) possesses a three-way distinction in pronunciation of the genitive marker: the genitive marker [ɲa], the *pro*-form is realized as [ɲaN], and the complementizer as [no], according to Wrona (2005:125), citing Hirayama et al. (1993).

Relating to these uses of *-no*, in child speech, the overgeneralization of *-no* is observable.

- (13) a. [ohana motteru]-no wanwan (relative clause) (child speech)
 flowers holding-Gen doggy
 ‘ a doggy holding flowers’

b. asoko-no doa-no simata]-no oto (relative clause) (child speech)

there-Gen door-Gen shut-Gen sound

‘the sound that the door shut down.’

c. [suppai]-no zyuusu (adjective+noun) (child speech)

sour-Gen juice

‘sour juice’

(Murasugi 1991: Chapter 5)

These examples are ungrammatical in Modern Japanese unless the genitive marker that is attached to the expressions in the brackets is omitted in (13). However, Old Japanese shows a similar fact in (14).

(14) [[...yayemu]-no kokoro] (old Japanese)

stop-Gen feeling

‘the feeling that will end’

(Wrona 2005:133)

The aspect of *-no* shared by the *no-koto* conversion cases, the sentential particle cases, the child speech cases, and the Old Japanese case is that they attach to expressions that have tense (in a relative clause or at the end of the main sentence), as Murasugi (1991) and Wrona (2005) point out. This suggests that *-no* in these cases may function as Comp.

3.1.4 Nominative-Genitive conversion

Besides the above examples, the use of *-no* is observable in Nominative-Genitive conversion constructions only in relative clauses and nominal complements (Harada 1976, Miyagawa 1993, Watanabe 1996, Ochi 2001 among others).

(15) a. [Taro-**ga/no** katta] hon
Nom/Gen bought book
'the book Taro bought'

b. Taro-ga [Ziro-ga/no kita-no/koto]-o sitteiru.
Nom Nom/Gen came-NO/Fact-Acc knew
'Taro knows that Ziro came.'

Only the nominative-marked subject can undergo the conversion and thus the arguments that carry other markers cannot undergo the same operation in (16):

(16) a. [hon-o/*-no katta] hito
book-Acc/Gen bought person
'the person who bought a book'

b. [Taro-ni/#-no atta] hito
Dat/Gen met person
'the person who met Taro'

One might think that the noun phrase with the genitive marker in (15a) should function as a possessor rather than the argument of the verb *katta* ‘bought’, as in (17).

- (17) [Taro-no] [*pro* katta] hon
 Gen bought book
 ‘Taro’s book that he bought’

However, Ochi (2001) shows that the noun phrases with the genitive marker like the nominative Case-marked noun phrases remain within the relative clauses in (18):

- (18) a. [John-**ga** [tenisu-ka sakkaa]-**ga** dekiru] riyuu
 Nom/Gen tenisu-or soccer-Nom/Gen can reason
 ‘the reason that John can play tennis or soccer’
 ‘* John’ reason that he can play tennis or soccer’
- b. [John-**no** [tenisu-ka sakkaa]-**ga** dekiru] riyuu
 Gen tenisu-or soccer-Nom can reason
 ‘the reason that John can play tennis or soccer’
- c. [John-**ga** [tenisu-ka sakkaa]-**no** dekiru] riyuu
 Nom tenisu-or soccer-Gen can reason
 ‘the reason that John can play tennis or soccer’

d. [John-**no** [tenisu-ka sakkaa]-**no** dekiru] riyuu
 Gen tennis-or soccer-Gen can reason

‘the reason that John can play tennis or soccer’

(Ochi 2001, 256-257)

Japanese allows multiple nominative constructions with stative predicates as in (18a). Once they are embedded within relative clauses, the arguments may have genitive markers in (18b, c, and d). In particular, in (18c), the subject carries the nominative Case *-ga* whereas the object carries the genitive marker. The object with the genitive marker cannot function as a possessor staying outside the relative clause, because the object is not related with the head noun of the relative clause. This shows that phrases with the genitive marker do not always function as possessors or modifiers that modify noun phrases outside relative clauses. There is no rule to confine this generalization only to the object with the genitive marker in relative clauses. The subject of relative clauses that possesses the genitive marker also stays within relative clauses.

Note that these conversions occur only within nominal environments. Compare them with the following examples in (19):

(19) a. *[John-**no** [tenisu-ka sakkaa]-**ga** dekiru] (to omou)

Gen tennis-or soccer-Nom can Comp think

‘(I think that) John can play tennis or soccer’

b. *[John-**ga** [tenisu-ka sakkaa]-**no** dekiru] (to omou)

Nom tennis-or soccer-Gen can Comp think

‘(I think that) John can play tennis or soccer’

c. *[John-**no** [tenisu-ka sakkaa]-**no** dekiru] (to omou)

Gen tennis-or soccer-Gen can Comp think

‘(I think that) John can play tennis or soccer’

In (19), the *ga-no* conversion cannot be observed in non-relative clausal environments.

This shows that the arguments can have either *-ga* and *-no* in these environments.

The following list is the summary of our observations regarding the distribution of the genitive marker.

(20) a. NP-*no*-NP

b. NP-*no* (as *pro*-form)

c. *no-koto* conversion

d. [sentence final particle]-*no*

e. [[relative clause]-*no*] NP (only in child speech and Old Japanese)

f. *ga-no* conversion

Having laid the distribution of *-no* by reviewing some major previous analyses, I will now attempt to relate to these distributions of *-no* that that of *-no* in Noun-Gen-pronoun constructions in (2) and show that the genitive marker in the constructions is syntactically different from the genitive markers in the ones in (20).⁵⁰ The ultimate goal of the analysis of the internal structure of Noun-Gen-pronoun constructions supports the DP hypothesis for Japanese.

3.2 Analyses of the genitive marker *-no*

In the previous section, I summarized the distribution of the genitive marker observed in the Japanese linguistic literature. In this section, I will review major previous analyses of the marker and apply them to the genitive marker in Noun-Gen-pronoun constructions to find its status. The previous studies of the marker can be classified into three groups: a phonological analysis, a lexical analysis like a *pro*-form and/or a copula, and a realization of some kind of a functional head such as Comp or D. Although the first analysis has been (implicitly or explicitly) accepted by many linguists, the phonological analysis of the genitive marker tied with the head-finality assumption, which says that the genitive marker does not have a projection in syntax, faces many difficulties. I will discard this analysis.

⁵⁰ In the following section, I will not consider the possibility of the genitive marker as the one in the *ga-no* conversion constructions because it is clear that that is not case, because the marker cannot be replaced with the nominative marker in the constructions in question.

After I also reject a lexical analysis like a *pro*-form for the genitive marker in Noun-Gen-pronoun constructions, I will make the claim that the genitive marker as a linker has a position in syntax and pursue the third line (i.e. a realization of a functional head). The goal of this section is analyze the genitive marker in Noun-Gen-pronoun constructions, which function as a preliminary section in order to argue the constructions in terms of the DP hypothesis.

In 3.2.1-3.2.5, after showing that the first four previous analyses fail to account for the status of the genitive marker, the fifth analysis is readily applicable to it. In 3.2.6, I will offer detailed syntactic offer to Noun-Gen-pronoun constructions, in relation to Pronoun-noun constructions. My conclusion is that the NP in Noun-Gen-pronoun constructions is an inverted predicate, which leads me to argue that *-no* is the realization of a functional head in syntax.

3.2.1 Phonological rules for the genitive marker *-no*

When two noun phrases are connected to form a constituent, the genitive marker *-no* is generally required. As observed, the first noun phrases in NP-Gen-NP constructions may semantically have various theta-roles related to the second nouns. In order to explain the distribution of the genitive marker in Japanese along with the one in Chinese, Kitagawa and

Ross (1982) assume a phonological rule of modifying marker (MOD) insertion in (21).

(See Murasugi 1991 for a similar rule based on the Case Filter.)

(21) MOD insertion rule:

$$[_{NP} X NP] \rightarrow [X MOD NP]$$

According to this rule, when some X modifies a NP, MOD (i.e. *-no*) is inserted in phonology (not in syntax). This rule explains the distributions of Japanese *-no* and Chinese *-de*.

If this phonological rule is correct, it is applicable to the constructions in (9), repeated below.

- (9) a. [[adjective-*one*]-Gen]-NP =(8a) ---in morphology
a'. adjective-no-no-NP ---in phonology
b. [pronoun-Gen]-*one* =(8b) ---in morphology
b'. pronoun-no-no ---in phonology

Under the assumption that a *pro*-form of the genitive marker does not employ the phonological rule in (21) for unknown reasons, the combination of the adjective and the first genitive marker as a *pro*-form, which is represented with *one* in the structure, is categorically a noun phrase in (9a), and thus that NP is connected with another noun phrase with the genitive marker via the rule in (21). In (9b), the second genitive marker is a *pro*-

form, which is combined with the pronoun, again, by the application of the rule in (21). The rule in (21) (partially) successfully accounts for the distribution of the marker except that it cannot explain the inapplicability of the rule for the *pro*-form of the genitive marker. Note that the two successive occurrences of *-no* in (9) are not possible in standard Japanese (cf. some dialects of Japanese in 1.3 above), and one of the two *-nos* should be phonologically omitted in the constructions.⁵¹ The MOD insertion rule in (21) also covers the distribution of the genitive marker *de* in Mandarin Chinese. That is, the morpheme appears between a prenominal element and the head noun in every case.

However, it is not case that the rule is applicable to all the cases in Japanese. One clear example is the fact that *-no* does not appear when the modifier is a non-nominal element as in (20e).

(20) e. [[relative clause]-*no*] NP (only in child speech and Old Japanese)

Kitagawa and Ross propose the following additional rule in (22).

(22) *No* deletion rule

$$[_{NP} X\text{-}no\ NP] \rightarrow [X\ NP]$$

where: (a) NP is not empty and

(b) X is a tensed element with [+V].

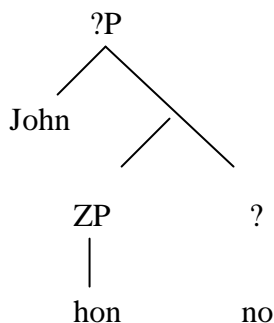
⁵¹ Okutsu (1974) proposes a rule which reduces two successive *nos* to one (see also Kamio 1983).

This language-specific rule says that *-no* is deleted if the prenominal element involved a tensed verb and the modified nominal is not phonologically empty.

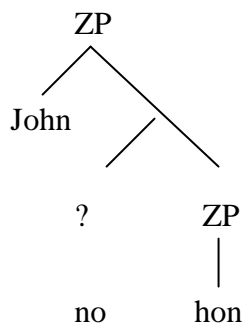
Behind these phonological rules, head-finality is implicitly assumed. If the genitive marker is the head of a phrase in syntax, the structures for (23) should be following in (24a) or (24b):

(23) John-no hon
 Gen book

(24) a.



b.



The order in (24a) is not correct though it captures head-finality: *NP-NP-Gen. In (24b) the status of the genitive marker is not clear in syntax. Once either structure in (24) is given, as long as a position for the genitive marker is assumed in syntax, it is problematic under the head-finality assumption for Japanese in general. This is the reason that Kitagawa and Ross assume that the genitive marker should be visible only in phonology and not in syntax.

The phonological rule for the genitive marker is readily applicable to the constructions in (2), because they consist of a common noun phrase and a personal pronoun along with the genitive marker. Consider the linear order of the constructions in (2), which is illustrated in the schemes of (25):

- (25) a. common NP-pronoun ---in syntax
b. common NP-**Genitive**-pronoun ---in phonology (via the rule in (21))

If this is correct, it suggests that the common NP in Noun-Gen-pronoun constructions is a modifier, according to the rule in (21). If the genitive marker in the constructions is not a realization of a locus in syntax, however, some problems are raised.

The phonological rules for *-no* under-/over-generate certain nominal examples. As previously observed in (1), ‘non-switched’ Pronoun-noun constructions cannot have the genitive marker between the pronouns and the common noun phrases. It is strange to say that the preceding pronouns in the constructions carry a [+tense, +V] feature in the constructions and thus that the *-NO* deletion rule in (22) is applied to those constructions. If this were the case, what tense would they have? Moreover, as will be observed in Chapter 4, the fact that numeral classifiers preceding the host noun phrases “optionally” have the genitive markers within the noun phrases also cannot be captured by these phonological rules, either.

Furthermore, the equal treatment of all preceding noun phrases is not correct for the following more complex examples:

(26) a. tomodati-no ^ Yuuko-tati gakusei
 friend-Gen Pl student

‘Yuko and her company who are students and are my friends’

b. *tomodati-no Yuuko-tati ^ gakusei
 friend-Gen Pl student

The notation “^” indicates the presence of a pause in (26), where the difference in position of a pause makes the expression ungrammatical in (26b), unlike in the case of (26a), according to my informants’ judgments (including mine).

I assume the following structures for the two expressions in (27) based on the assumption that a pause reflects their constituency in (27).

(27) a. [NP-Gen [proper noun NP]] (=26a)

b. *[[NP-Gen proper noun] NP] (=26b)

If Japanese only projects NPs and the phonological rules for the genitive marker are applied to every noun phrases equally, both structures should be ungrammatical because they do not respect the phonological rule in (21): the proper noun and the most right noun phrase are not connected with the genitive marker, violating the rule, contrary to fact in the case of

(27a). Thus, the phonological rule for the genitive marker is not empirically correct.⁵²

Note that Other linguists assume a genitive-marked NP appearing in Spec of DP (Saito and Murasugi 1990, Miyagawa 1993, Ochi 2001 for Japanese, Ilham 2005 for Turkish). I do not review this kind of view here because it (implicitly or explicitly) assumes that the genitive marker is a phonological product via Case assignment/checking in Phonological Form (PF), which was shown not to be the case (at least) for Japanese. I discard a phonological analysis of the genitive marker that lacks a position in syntax.

Notice that in the current work I abandon not only the phonological analysis of the genitive marker but also the head-finality assumption, particularly, for the study of the genitive marker. Instead, I assume that the genitive marker has a projection in syntax (Koike 1999, den Dikken and Singhapreecha 2004), under the head-initiality assumption for Japanese, along with Kayne (1994), Koike (1999), Murasugi (2000) and Koopman (2005).

⁵² Marcel den Dikken points out that unless it can be made sensitive to the syntactic bracketing — which is not entirely unthinkable: there are, after all, phonological rules that show sensitivity to syntactic bracketing. However, the phonological rule sensitive to the syntactic bracketing cannot account for the inapplicability of the rule to the pro-form of the genitive marker, the unavailability of the genitive marker in Pronoun-noun constructions and the (seeming) optionality of the marker in NQ-(Gen)-NP constructions. I will not pursue this line any longer.

3.2.2 Is the genitive marker a *pro*-form?

Is the genitive *-no* within Noun-Gen-pronoun constructions in (2) a *pro*-form? The answer seems to be negative. If the genitive marker in Noun-Gen-pronoun constructions of (2) were a *pro*-form like *one* in English, one might assign logically possible schemas as in (28):

(28) a. [_X noun [_X *one* [pronoun]]]

b. [[_X noun *one*] [pronoun]]

In (28a), the pronoun-like genitive marker forms a constituent with a pronoun, and in (28b) it builds a constituent with a common noun. If this were the case, however, they would be syntactically and semantically problematic. For (28a) the *pro*-form functions as the subject of the smaller constituent, whose entire phrase becomes a predicate of the noun. How can a predication (the constituent formed by having the pronoun predicated of *one*) serve as a predicate? Predications are fully saturated, and hence cannot be predicated of anything. That is, probably, at the root of the problem in (28a).⁵³

Questions in the case of (28b) are whether (a) a personal pronoun can serve as a predicate to begin with and (b) assuming for the sake of argument that the answer to (a) is positive, how the pronoun could take a *predication* as its subject. Predications aren't usually subjects; to the extent that candidates for small clause subjects have been presented in the literature (cf. e.g. [*workers about the pay*] *is just the sort of situation that the ad*

⁵³ I owe Marcel den Dikken this argument.

campaign was designed to avoid – Safir 1983), those always involve abstract noun phrases, headed by things like *situation*, as the predicate, never pronouns.⁵⁴ Because the structures in (28) are not possible, I will not further think of the possibility of a *pro*-form for the genitive marker in the constructions in question. Hence, the genitive marker in the constructions is not a realization of a *pro*-form.

3.2.3 Is the genitive marker a complementizer?

Is the genitive marker in Noun-Gen-pronoun constructions a complementizer (Comp)? The marker is also unlikely to be Comp or a sentential particle in (29) below, because (at least) Modern Japanese does not allow the overt realization of Comp in relative clauses.

(29) [ComP [Relative Clause t_i/pro_i NP ...]-no] [pronoun_i]

If the genitive marker is Comp, it is not clear why the Comp head needs to be present only in the structure in (29) and not in other relative clause constructions in Modern Japanese as in the generalized structure of (20e). Moreover, some linguists assume that Japanese relative clauses are IP (not CP) that attach to noun phrases (Murasugi 1991, 2000).

Murasugi (1991, 2000) argue that Japanese relative clauses do not project CP but IP because they do not involve movement and thus do not exhibit island effects in (30):

⁵⁴ I owe Marcel den Dikken this argument.

(30) [DP [DP e_i e_j kiteiru youhuku_j]-ga yogoreteiru] $sinsi_i$
 wear suit-Nom dirty gentlemen

‘the gentleman who [the suit that he is wearing] is dirty

(Murasugi 2000:216)⁵⁵

In this example, *sinsi* ‘gentleman’ is ‘relativized’ out of a complex NP. If the Japanese ‘relative clause’ necessarily involves movement, the example should be ruled out by Subjacency, according to Murasugi. Furthermore, the fact that the restriction on the ‘relativization’ of adjuncts for Japanese is tighter than for English in (31a,b) comes not from restrictions on movement but from a non-movement analysis.

(31) a. *[[Mary-ga [John-ga e_i kaetta to] omotteiru riyuu t_i]
 Nom Nom return Comp think reason

‘the reason [that Mary thinks [that John left t]

(Murasugi 2000:218)⁵⁶

b. [the reason _{i} [(for which) John thinks [that Mary was fired t_i]

(Murasugi 2000:219)⁵⁷

Murasugi argues that the reason that this Japanese example is ungrammatical stems from the property of e in (31a). The empty element e is not a trace left by movement but stands

⁵⁵ The example with all brackets and notations is cited from Murasugi’s paper.

⁵⁶ The example with all brackets is cited from Murasugi’s paper.

⁵⁷ The example with all brackets is cited from Murasugi’s paper.

for a *pro*. It is the *pro* that has the restriction that the *pro* should be an argument and cannot be an adjunct. Since it is an adjunct in (31a), the example is ungrammatical. Hence, Murasugi concludes that this example indicates that Japanese ‘relative clauses’ are not derived by movement (cf. Watanabe 1992). Because Japanese relative clauses are not derived by movement, they only project IP (not CP).

(32) [DP [IP ...] [NP NP]]

(Murasugi 2000:221)⁵⁸

If an IP analysis of relative clauses as proposed by Murasugi is correct, there is no locus for the genitive marker *qua* complementizer. Thus, the NP with the genitive marker in Noun-Gen-pronoun constructions is not a relative clause, either.

3.2.4 Is the genitive marker a realization of D?

Koike (1999) argues for the status of the genitive marker as a realization of the functional category D, and attempts to unify a variety of uses of the genitive marker and proposes that the genitive marker sits in D.

(33) [DP XP [D' *no* [NP XP]]]

Since Japanese appears to be able to add an unlimited number of noun phrases with the help of the genitive marker *-no* on the surface, Koike assumes recursion of DP in (34).

⁵⁸ I slightly simplify Murasugi’s structure.

(34) [DP XP [D' *no* ... [DP XP [D' *no* [NP XP]]]]

A motivation for Koike's (1999:91) argument of DP recursion is based on the following Greek fact in (35a) and Spanish phi-feature agreement property in (35b).

(35) a. **to** meghalo **to** ghermaniko **to** piano

Def big Def German Def piano

'the big German piano'

b. **l-a-s** niñ-**a-s** list-**a-s**

Def-F-Pl girl-F-Pl smart-F-Pl

'the smart girls'

In (35a), *to* 'the' appears before every lexical element regardless of its categorial, syntactic status, and in (35b) the gender agreement *-a-* and the plural marker *-s* also appear all the lexical elements. Koike argues that the (seemingly) unlimited occurrences of the genitive marker on noun phrases within Japanese noun phrases arise in the same ways as the Greek determiner on every element of noun phrases and as Spanish phi-feature agreement. The treatment of the genitive marker *-no* as the realization of D is problematic, however.

The first problem for Koike's analysis of *-no* as D is that the Spanish feature agreement cannot be completely assimilated to Japanese genitive marker *-no* on noun phrases. That is, the genitive marker cannot be a realization of a phi-feature agreement

because the genitive marker is unrelated to any kinds of phi-features (number-, gender-, or person-features). If the genitive marker is related to a [+/-D] feature as in Turkish (Ilham 2005) or in Hebrew (Damon 2006), why is it the case that genitive-marked common noun phrases are insensitive to (in)definiteness, unlike in (35a) (and also in Hebrew)? Furthermore, the Greek facts are not standardly analyzed as DP recursion, unlike Koike's (implicit) assumption. Rather they are generally analyzed as a realization of D feature on the elements of one noun phrase and not the case of DP recursion (e.g. Alexiadou and Wilder 1998, Androutsopoulou 2003).

Moreover, why are the head nouns unable to have the genitive marker in the following examples in (36) below, unlike in the agreement cases in (35a,b) above?

(36) a. [Watasitati-**no** kuro-**no** kaban (*-**no**)]-o nakusita.

we-Gen black-Gen bag-Gen-Acc lost

‘(I) lost our black bag.’

b. Kore-wa [watasi-**no** kuro-**no** kaban (*-**no**)] desu.

this-Top my-Gen black-Gen bag-Gen Cop

‘This is my black bag.’

In (36), the first two elements need the genitive marker but not the last noun, whether the entire noun phrase appear in argument position or in predicate position. This distribution of

the genitive marker (in comparison to the multiple realization of the Greek definite marker in (35a)) suggests that the genitive marker *-no* may not be an agreement realization of a syntactic feature.

If the Japanese genitive marker were a realization of D, situations would become more complicated, rather than more simply accountable for. Consider the structure of the bracketed noun phrase in (36) would be as follows.

(37) [DP watasitati [D' -no [DP kuro [D' -no [kaban]]]]]

The personal pronoun and the nominal expression *kuro* ‘black’ sit in the Spec of DP in (37) under Koike’s hypothesis. On the other hand, the same personal pronoun preceding another noun in Pronoun-noun constructions cannot be marked with the genitive marker as in (38).

(38) [watasitati (*-no) sensei]-ga sekinin-o motimasu
 we Gen professor-Nom responsibility-Acc have

‘We professors have the responsibility’

Because the personal pronoun in (38) cannot have the genitive marker, it may or may not sit in the Spec of DP. If the pronoun is still located in the Spec of DP, it is not clear why the genitive marker cannot appear in (38). If the personal pronoun does not appear in the Spec of DP in (38) unlike in the case of (37), where is it? One might say that because the

pronominal expression in (37) is a possessive construction, the genitive marker as D appears whereas the expression in (38) is not and thus the genitive marker is not required. If this were the case, it is not clear whether this restriction is not applicable to the embedded NP in (37), whose expression does not have a possessive reading although the genitive marker is present. Koike's hypothesis of the Japanese genitive marker as D based on the Greek and Spanish examples in (37) does not perfectly fit the examples. Thus, I reject Koike's analysis of the genitive marker as D proposed for Japanese noun phrases with the genitive marker.⁵⁹

3.2.5 Is the genitive marker the realization of a copula?

Some linguists assume that the genitive marker (in some cases) is one inflectional form of a copula (Martin 1975, Nakahara 2002, den Dikken and Singhapreecha 2004). Nakahara (2002) observes the distribution of copula in which she includes the genitive marker in (39c) and makes a list in (40).

⁵⁹ Although I reject Koike's hypothesis of the genitive marker as D, his analysis of the genitive marker as D may not be completely wrong once demonstratives, which have been argued to be located in the Spec of DP in the current work, are morphologically decomposed (Kuno 1983, Martin 1975, Shibatani 1990).

- (i) a. ko-no 'this'
 b. so-no 'that/the'
 c. a-no 'that'

Japanese demonstratives are decomposed into two morphologies in (i). Once Koike's hypothesis is applied to (i), we arrive at (ii).

- (ii) [_{DP} ko/so/a [_{D'} -no [...]]]

This analysis can readily be consistent to the current argument that Japanese demonstratives are located in the Spec of DP with the slight modification. However, I leave this possibility open for further research on demonstratives in the future.

(39) a. Tanaka-si-wa bengosi **da**.

Mr.-Top lawyer Cop

‘Mr. Tanaka is a lawyer.’

b. bengosi-**no** Tanaka-si

lawyer-Gen Mr.

‘Mr. Tanaka, who is a lawyer

c. sizuka-**na** heya

quiet-NA room

‘a quiet room/a room which is quiet’

(40) Japanese copula inflection

plain forms	glosses
-------------	---------

da	‘is’
----	------

na	‘is’
----	------

no	‘is’
----	------

...	
-----	--

(Nakahara 2002: 4-5)

Although Nakahara does not observe Noun-Gen-pronoun constructions, they semantically form predication relations in that common noun phrases are predicated of

pronouns. Thus, the genitive marker in the constructions functions as a copula (den Dikken 2006).

Even if the genitive marker in Noun-Gen-pronoun constructions functions as a copula, which I support in the current work, it is not still clear about several syntactic issues in relation to Pronoun-noun constructions. What is the syntactic status of the genitive marker? What is the relation between Pronoun-noun constructions and Noun-Gen-pronoun constructions? Is one construction derived from the other between Pronoun-noun constructions and Noun-Gen-pronoun constructions? Are they independent of each other?

In the next subsection, I will offer answers to these questions.

3.2.6 Movement analysis for Noun-Gen-pronoun constructions

Before analyzing Noun-Gen-pronoun constructions in relation to Pronoun-noun constructions, I will review one characteristic property on movement of predication constructions and demonstrate that the Japanese nominal constructions in question also exhibit the same property. This analysis of predicate-inversion serves as a preliminary in order to argue the constructions in terms of the DP hypothesis

Den Dikken (2006:78, emphasis is his) distinguishes two types of copular sentences, following Moro (1990, 1997):

(41) Two types of copular sentences

a. **canonical** copular sentences (SUBJECT-*BE*-PREDICATE)

b. **inverse** copular sentences (PREDICATE-*BE*-SUBJECT)

Let us look at some examples citing from den Dikken (2006):

(42) a. Imogen considers Brian (to be) the best candidate.

b. Imogen considers the best candidate *(to be) Brian.

(den Dikken 2006:1, based on Moro's 1993 original observation)

In (42a,b), the two sentences are a (near) minimal pair, in which the two noun phrases in the small clause are switched, besides the obligatoriness of the copular in (42b). Den Dikken argues that *the best candidate* raises via A-movement and derives the necessary presence of the copula in (42b) from the locality theory based on Chomsky (1995, Chapter 3) in terms of domain-extending head movement. That is, the sentence in (42b) is an inverse copular sentence, unlike the canonical copular sentence in (42a).⁶⁰

In order to show the distinction between canonical copular sentences and inverse copular sentences consider the following predication examples:

(43) a. Whose arrest do you think [*t*] was the biggest upset? (ibid. 72)

b. How big an upset do you think Brian's arrest was [*t*]?

⁶⁰ The optional copula in (42a), a *relator* and the obligatory copula in (42b) is a *linker* in den Dikken's terms.

The above copular sentences in the embedded sentences are canonical copular sentences, where both the subject and the predicate can undergo A-bar movement. On the other hand, A-bar movement both of the subject and of the predicate is prohibited in the next inverse copular sentence:

(44) a. * Whose arrest do you think the biggest upset was [*t*]?
b. * How big an upset do you think [*t*] was Brian's arrest?

Den Dikken argues that the difference between canonical copular sentences and inverse copular sentences comes from a restriction on further movement in inverse copular sentences. Inverted predicates as well as subjects in inverse copular sentences cannot undergo A-bar movement (see den Dikken 2006 for further detailed argument).

I will reproduce the argument of inverse predicates for Japanese 'switched' Noun-pronoun constructions in favor of the movement analysis. Kayne (1998) proposes that English focus particles (*even, only*) appear in a functional head fairly high up the structure and that they attract the focused constituent up into their specific position in overt syntax. Likewise, Futagi (2004:73) argues that Japanese expressions attached by *-dake* 'only'⁶¹ move to a higher position called Particle Phrase (PartP) in Futagi's terms (which is Focus

⁶¹The equivalent of *only* in Japanese is *-dake* or *yuuitu....-dake*. The former is used in this subsection, and the latter is used for a constituency test in 4.1.2.1 below.

Phrase (FocP) in the current work) and that the moved phrases always have wider scopes in clauses.

- (45) a. Taro-wa Hanako-to-**dake** asob-eru
 T-Top H-with-only okat-can

‘The only person Taro can play with is Hanako (he cannot play with others).’

Scope: only>can, *can>only

(Futagi 2004:104)

- b. [TP [FocP/PartP *hanako-to-dake*_i [ModP [VP *t_i asobe*]]] ru]

In (45b), the entire postposition phrase attached by the focus particle moves to Spec of PartP. Since PartP is higher than Mod(al) Phrase (ModP), the focus phrase obligatorily takes wide scope.

Departing from Futagi’s analysis of the particle within noun phrases that requires a dual status of the particle, I attempt to a unified analysis of the Japanese focus particle -*dake* ‘only’ as realization of a focus feature by applying Kayne’s analysis of the English focus particle (and Futagi’s analysis of the particle within clauses) to Japanese nominal constructions with the focus particle. I assume the following structure for noun phrases attached by the focus particle in (46).

- (46) [FocP ZP_i-*dake* [Foc’ -no ... [XP *t_i*]]]

When a phrase ZP is base-generated within XP and carries the focus particle *-dake*, it needs to overtly undergo overt focus movement to Spec of FocP, which head is realized as the genitive marker *-no*.⁶² Note that this genitive marker in the head of FocP is different in position from that of the ‘switched’ Noun-Gen-pronoun constructions.

Against the background of the focus overt movement analysis of phrases with *-dake* ‘only’, let us consider the following two types of genitive-marked noun phrases attached by *-dake* ‘only’.

- (47) a. [Sensei-(***dake**)-no watasitati]-ga sekinin-o motimasu.
 professor- Gen we-Nom responsibility-Acc have

‘(Lit.) Only professors’ us/we have the responsibility’

- b. [Sensei-(***dake**)-no anatagata]-ni situmonsimasu.
 professor-Gen you(Pl) -to ask

‘(Lit.) I have a question to ask only professors’ you’

- c. [Sensei-(***dake**)-no karera]-ga kaigi-ni sankasita
 professor-Gen they-Nom meeting-to attended

‘*Only professors’ they/them attended the meeting.’

⁶² I speculate that the realization of the head of FocP as the genitive marker seems parallel that of the D head in (ii) of Footnote 59. It appears that the head of functional phrases within noun phrases needs to be realized as the genitive marker when their Specs are filled with NPs and PPs in Japanese.

- (48) a. *syasinka-dake-no satuei*
photographer-only-Gen photograph
'only photographers' photographing'
- b. *syasinka-niyoru asi-dake-no satuei*
photographer-by leg-only-Gen photograph
'only legs' photographing by a photographer'
- c. *2-jikan-dake-no paatti*
hour-only-Gen party
'a party only for two hours'
- d. *koko-dake-no hanasi*
here-only-Gen talk
'a talk only here'
- e. *kotton-dake-no fuku*
cotton-only-Gen cloth
'a cloth that is made only from cotton'
- f. *nihonjin-dake-no gakusei*
Japanese-only-Gen students
'students who consist only of Japanese'

g. [kono sensei-(tati/-gata)-**dake**-no hon]

this professor-PI-only-Gen book

(i) the books about the professor(s) only

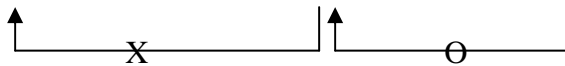
(ii) the books possessed by the professor(s) only

(iii) the books written by the professor(s) only

(iv) the books to the professor(s) only

In (47), the noun phrases in Noun-Gen-pronoun constructions cannot permit the focus particle *-dake* ‘only’ while the prenominal noun phrases in (48) do not reject the particle. I propose that the ungrammaticality of the former stems from movement.

(49) *_{[FocP NP_i-dake [_{Foc} -no ... [_{NumP} t_i [_{PredP} pronoun t_i]]]]}



In (49), a pronoun and a noun phrase underlyingly form a predication relation, in which the predicate is inverted to the Spec of the next higher phrase, i.e. Number Phrase (NumP). This inversion is grammatical, as in the case of the constructions without the focus particle in (47). Because of the focus particle, further movement is required. The focus-marked phrase is required to be raised to Spec of FocP. However, this Focus movement is ungrammatical, parallel to the English *wh*-extraction examples in (44b) above. That is,

inverted predicates cannot undergo A-bar movement. If this is correct, the noun phrases in Noun-Gen-pronoun constructions are inverted predicates.

Notice that the inversion of the nominal predicates generates the genitive marker. Additionally, along with the genitive marker resulting from the predicate-inversion, the genitive marker should also be overtly realized in the head of FocP in (49), according to the structure for nominal focus movement in (46). Thus, the inverse nominal predicate in nominal predication constructions should carry two genitive markers as in (50).

(50) * [_{FocP} NP-*dake*_i [_{Foc'} -*no* ... [_{NumP} *t'*_i -*no* [_{PredP} pronoun *t*_i]]]]⁶³

In Modern Standard Japanese, however, sequences of two genitive markers are phonologically prohibited, as previously observed in 3.1, and thus one of the two genitive

⁶³ Futagi also observes and discusses the behavior of the focus particle within noun phrases. Look at the following examples.

- (i) a. yakamasii (*-no) ongaku
 noisy-Gen music
 ‘music that is noisy’
 b. kireina (*-no) heya
 clean-Gen room
 ‘a room that is clean’

Attributive adjectives do not require the genitive marker and thus the insertion of the marker results in ungrammaticality in (i). Compare it to the following examples attached by the focus particle with the above examples.

- (ii) a. yakamasii-**dake-no** ongaku
 noisy only-Gen music
 ‘music that is only noisy (not interesting, not beautiful, etc.)’
 a’. *yakamasii-**dake** ongaku
 noisy only-Gen music
 b. kireina-**dake-no** heya
 clean-only-Gen room
 ‘a room that is only clean (not comfortable, not elegant, etc.)’
 b’. *kireina-**dake** heya
 clean-only room

(Futagi 2004: 73)

In these examples, the adjectives carry the focus particle, unlike the adjectives in (i). Once they take the marker, the prenominal adjectives also need the genitive marker and the ones without the particle causes ungrammatical in (ii).

markers is (phonologically) omitted in (49) in line with Okutsu (1974) (though the structure in (49) is still ungrammatical, due to the violation of further movement of the inverted predicate).

Importantly, the same restriction on inverted predicates is observable in clauses in (51):

(51) a. (Sonotoki) watasitati-wa gakusei-na-**dake** desita.

that.time we-Top student-being-only was

‘We were only students (and not other occupations) (at the time).’

b. Anatagata-wa gakusei-na-**dake** desu ka.

you (PI)-Top student-being-only Cop Q

‘Are you only professors (and not other occupations)?’

c. Sonotoki-wa sono karera-wa gakusei-na-**dake** desita ka.

that.time-Top those/the they-Top student-being-only were Q

‘(Lit.) Were those/the they only students (and not other occupations)?’

In (51), the focus particle is attached to the predicate nominals and the sentences are grammatical. However, the inverted predicates with the focus particle in clauses (as well as in nominal predications) undergo further movement in (52), which causes the ungrammaticality.

- (52) a. (Sonotoki) *gakusei-na-**dake**-wa watasitati desita
 that.time student-being-only-being-Gen-Top we was
- b. *Gakusei-na-**dake**-wa anatagata desu ka.
 student-being-only-Top you (PI) Cop Q
- c. *Gakusei-na-**dake**-wa karera desita ka.
 that.time- being-only- Top they were Q

If this is correct, Noun-Gen-pronoun constructions are derived from Pronoun-noun constructions via predicate inversion of the predicate NP. The genitive marker is a linker copula via head-movement of Pred in PredP.

3.2.7 Interim conclusion

In this section, I examined the status of the genitive marker and the noun in Noun-Gen-pronoun constructions. In the Japanese linguistic literature, the status of the genitive marker has been studied in various ways. If the phonological treatment of the genitive marker had been applicable to the genitive marker in Noun-Gen-pronoun constructions, the status of NP in the constructions would have been considered to be an adjunct (Kitagawa and Ross 1982). However, I argued that this analysis cannot capture the empirical facts including the constructions in questions. The genitive marker is not a *pro*-form, either, in terms of its semantics. It is not a realization of a functional category such as the head of

CP or of DP, either. I showed that the marker is that of an inverted copula by replicating den Dikken's argument of inverted predicates for Noun-Gen-pronoun constructions. That is, based on the impossibility of the attachment of the focus marker to the first common noun phrase (due to a ban on A-bar-movement of the inverted predicate), I argued that the NPs before the pronouns result from predicate-inversion. I assume that the NP moves to Spec of the next higher phrase⁶⁴, and the genitive marker is the realization of that phrase in (53).

- (53) a. [_{PredP} pronoun [_{Pred'} Pred noun]] ---predication established
- b. [_{NumP} NP_i [_{Num'} *no*_j [_{PredP} pronoun *t_j t_i]]]] --- movement of the Pred head, and
 ---movement of the predicate*

Once having established the predicate-inversion analysis for Noun-Gen-pronoun constructions, in the next section, I will apply the current analysis to some other nominal collocation constructions, and show that the inversion is not freely applicable within noun phrases, due to the presence of DP.

3.3 Inversion and intervention within nominal predication constructions

In the previous section, I showed that the common noun phrase undergoes predicate-inversion across the pronominal subject in Noun-Gen-pronoun constructions. One may

⁶⁴ I will argue on some properties of NumP in the next section.

expect that numeral quantifiers (NQs) as predicates behave in the same way as common noun phrase predicates within pronominal collocation constructions, because they appear (relatively) freely in the vicinity of common noun phrases as we observed their basic behaviors in the previous chapter.⁶⁵ In particular, NQs and other quantifiers can appear pronominally accompanying the genitive marker as in (69c) and (70c) in Chapter 2, repeated in (55a,b) below, besides the fact that they can precede common NPs in (69a) and (70a) in Chapter 2, repeated in (54a,b).

(54) a. Suzuki sensei-wa [gakusei **3-nin**]-o sikatta.
 professor-Top student CI-Acc scolded

‘Prof. Suzuki scolded three students.’

b. Suzuki sensei-wa [gakusei **suumei/oozei**]-o sikatta.
 professor-Top student some/many-Acc scolded

‘Prof. Suzuki scolded some/many students.’

(55) a. Suzuki sensei-wa [**3-nin-no** gakusei]-o sikatta.
 professor-Top CI-Gen student-Acc scolded

‘Prof. Suzuki scolded three students.’

⁶⁵ Moreover, Zweig (2005) argues that a numeral phrase is cross-linguistically nominal, (even when they behave like adjectives). It may be true in Japanese, because NQs consist of numerals and classifiers and classifiers employ the same Chinese letters as nouns (Downing 1996). For instance, *-nin* is a classifier to be used to count people and also the Chinese letter for it is the same as *hito* ‘people’. *3-nin-no hito* is literally translatable into ‘3 people’s people’, which means ‘three people’. The nominal status of NQs is reasonable.

b. Suzuki sensei-wa [suumei/oozei-no gakusei]-o sikatta.
 professor-Top some/many-Gen student-Acc scolded

‘Prof. Suzuki scolded some/many students.’

In these examples, NQs and other quantifiers precede and follow common NPs. In particular, when they follow NPs the genitive marker is not present in (54). In contrast, in (55), the marker is present with the quantifiers NPs preceding.

NQs can also follow pronouns as observed in (73) in Chapter 2, repeated as in (56):

(56) a. Suzuki sensei-wa [(sono) watasitati **3-nin**]-o sikatta.
 professor-Top those/the us CI-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) us three.’

b. Suzuki sensei-wa [(sono) anatatati **3-nin**]-o sikatta no?
 professor-Top those/the you(pl) CI-Acc scolded Q

‘(Lit.) Did Prof. Suzuki scold (those/the) you three?’

c. Suzuki sensei-wa [(sono) karera **3-nin**]-o sikatta.
 professor-Top those/the them CI-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) them three.’

Thus, it is expected that the NQ predicates can get inverted across the pronominal subjects in pronominal predication constructions. However, this is *not* the case in (57):

(57) a. *Suzuki sensei-wa [(sono) **3-nin-no** watasitati]-o sikatta.

professor-Top those/the Cl-Gen us-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) us three.’

b. *Suzuki sensei-wa [(sono) **3-nin-no** anatatati]-o sikatta no?

professor-Top those/the Cl-Gen you(pl)-Acc scolded Q

‘(Lit.) Did Prof. Suzuki scold (those/the) you three?’

c. *Suzuki sensei-wa [(sono) **3-nin-no** karera]-o sikatta.

professor-Top those/the Cl-Gen them-Acc scolded

‘(Lit.) Prof. Suzuki scolded (*those/the) them three.’

In (57), regardless of the presence/absence of a demonstrative, the raising of the NQ predicates across the pronominal subjects makes the expressions ungrammatical, unlike in the case of common noun phrases as in (55) above.

This ungrammaticality of raising is not unique to NQ predicates, however.

Consider the following examples.⁶⁶

(58) a. (?) anagata sensei-gata

you(Pl) professor-Pl

‘you professors’

⁶⁶ The combination of the plural first person pronoun and a plural common noun phrase appear to be ungrammatical, though Furuya does not mention it. I do not know the reasons of the impossibility and leave it for future research.

b. anatagata sensei-tati

you(Pl) professor-Pl

‘you professors’

c. anatatati sensei-gata

you(Pl) professor-Pl

‘you professors’

d. karera geijutuka-tati

they artist-Pl

‘(*) they/them artists’

(Furuya 2004)

Furuya (2004) observes that the predicate noun phrases in the construction may have plural markers. Interestingly, once the plural predicative noun phrases are inverted, the plural expressions turn out to be ungrammatical in (59), unlike in the case of bare noun phrase predicates as in (2), which is repeated below.

(59) a. *sensei-tati-no anatagata

professor-Gen you(Pl)

b. *sensei-gata-no anatagata

professor-Pl-Gen you(Pl)

c. * geijutuka-tati-no karera

artist-Pl-Gen they

(2) a. [sensei *(-no) watasitati]-ga sekinin-o motimasu.

professor- Gen we-Nom responsibility-Acc have

‘(Lit.) *Professors’ us/we have the responsibility’

b. [sense*(-no) anatagata]-ni situmonsimasu

professor-Gen you(Pl)-to ask

‘(Lit.) *(I) have a question to ask professors’ you’

c. [sensei*(-no) karera]-ga kaigi-ni sankasita

professor-Gen they –Nom meeting-to attended

‘*Professors’ they/them attended the meeting.’

Note that not all plural nouns are rejected when they precede other noun phrases, however.

Look at the following examples.

(60) a. sensei-**tati/gata**-no tukue

Professor-Pl-Gen desk

‘(the) professors’ desks/ (the desks for (the) professors)’

b. kodomo-**tati**-(e)-no tabemono

child-Pl-to-Gen food

‘(the) food for (the) children’

c. kodomo-**tati**-no byooin

child-Pl-Gen hospital

‘the/a hospital for (the) children’

In (60), the first noun phrases with the genitive marker can have the plural morpheme and the expressions are still grammatical, unlike in the case of the inverted predicates in (59). This suggests that the restriction on plurality is not applicable to all prenominal common noun phrases, but only to inverted predicates within nominal predication constructions.

A similar observation relating to the plurality restriction is offered by Koike (1999).

Bloch (1970: 61-62 ft. 45, cited by Koike 1999) observes the following noun phrase can have two readings.

(61) isya-no oji⁶⁷

doctor-Gen uncle

‘the/a doctor’s uncle’

(Possessor reading)

‘my uncle, who is a doctor’⁶⁸

(Copular reading)

⁶⁷ It should be noted that the word *oji* is always relational and means ‘someone’s uncle(s)’, not just ‘uncle(s)’.

⁶⁸ I cite the example from Koike (1999) for the translations of (61) and (62), though the readings are not

In (61), *oji* always has a relational reading and possesses two readings: one is a possessor reading and the other is a copular reading. In the former case, the relational noun can be definite and indefinite depending on contexts. In the latter case, on the other hand, it should be definite like proper nouns (Cheng and Sybesma 1999 for Chinese).

Let us look further at the Koike's observation in (62), which clearly reflects the different readings of the relational noun phrase:

- | | | | |
|------|-------------------------------|--------------------|----------------------|
| (62) | [<i>isya-tati</i>]-no | <i>oji</i> (-tati) | |
| | doctor-Pl-gen | uncle-Pl | |
| | '(the) doctors' uncle(s)' | | (Possessive reading) |
| | *'my uncles, who are doctors' | | (Copular reading) |

Once the first noun *isya* 'doctor' carries the plural marker, that noun phrase loses the copular reading while the possessor reading is still possible in (62). This shows the same fact that plural nominal predicates cannot precede the subject.

I offer one more piece of data relevant to Noun-Gen-pronoun constructions. Proper nouns can also follow personal pronouns in (63), as well as they can precede common nouns and form predications with common noun phrases (Furuya 2004).

appositive or relative clause readings.

(63) karera Tanaka-san-tati

they Mr.-Pl

‘(Lit.) they Mr. Tanaka and his company/they Mr. Tanakas’

However, plural proper nouns cannot undergo predicate-inversion in (64) below, like NQ and plural common noun phrase predicates above.

(64) *Tanaka-san-tati-no karera

Mr.-Pl-Gen they

‘(Lit.) they Mr. Tanaka and his company/they Mr. Tanakas’

One difference among the cases above is that proper nouns cannot precede the pronominal subject in (64), even when it does not possess a plural morpheme in (65b), while it can follow the pronoun in (65a):

(65) a. watasitati Tanaka

we

‘(Lit.) we Tanakas’

b. *Tanaka-no watasitati

Gen we

‘(Lit.) Tanakas’ we’

Our observations are summarized as follows:

(66) Generalization for nominal predicate-inversion:

Only bare common noun phrase predicates can get inverted with pronominal/proper noun subjects.

In addition to NQs, plural noun phrases and proper nouns are cannot be inverted predicates unlike bare common noun phrase when the subjects are personal pronouns in nominal predication constructions. I translate the generalization into the structures in (67):

- (67) a. [..._{NumP} NP_i-*no* [_{PredP} pronoun t_i]]
- b. * [..._{NumP} NQ_i-*no* [_{PredP} pronoun t_i]]
- c. * [..._{NumP} NP-Pl_i-*no* [_{PredP} pronoun t_i]]
- d. * [..._{NumP} proper noun (-Pl)_i-*no* [_{PredP} pronoun t_i]]

To summarize this beginning of the second half of the current chapter, I extended the movement analysis to the four distinct nominal collocation combinations and showed that there are certain constrains on the constructions, some of which will be shown to be caused by DP in this section.

In 3.3.1, I will set up theoretical assumptions for argument of predicate-inversion within noun phrases. In 3.3.2-3.3.5, I will argue that under an Agree operation, a D-feature checking observes intervention effects in certain cases.

3.3.1 Assumptions

I will lay out the assumptions regarding features that play important roles. In particular, I will assume EPP, D features and (un)interpretability of features. Since Abney (1987) and Szabolcsi (1987, 1994) propose the DP hypothesis, the presence of (a) feature(s) unique to DP has been proposed (Brugè 1996, Campbell 1996, Danon 2006, Enç 1991, Longobardi 1994, 2001, Szabolcsi 1994, Campos 2005 among others). Szabolcsi (1994:220-221), based on Hungarian data and interpretations of noun phrases, proposes that Det consists of [\pm def(inite)] and [\pm spec(ific)] features (cf. Enç 1991) and that these features determine the choice of determiners, their definiteness and specificity interpretations: a [+def, +spec] feature and a [-def, +spec] features select the obligatory overt presence of a definite article whereas a [-spec] feature or a [+spec] feature alone selects the absence of a definite determiner. As was observed in Chapter 2, Enç (1991) offers an alternative analysis for specificity interpretations, in terms of indices, which semantic mechanism is translated by Campbell (1996) into syntax and adopted in the current work.

Campbell (1996) argues that English demonstratives have a morphosyntactic feature [+Th] that the definite article *the* in D heads and thus occurs only in DP, on the analogy with wh-phrases that have the feature [+Wh] in CP. Particularly, Campbell argues that

demonstratives (as well as a null Operator in DP) are [+Th] operator and proposes the following criterion.

(68) *Th-Criterion*:

A [+Th] determiner has a [+Th] specifier, and a [+Th] operator specifies a [+Th] determiner. (Campbell 1996:167)

This is similar to the Wh-criterion, according to which Wh-operators occur in Specs of all and only [+Wh] Comp positions (May 1985, Rizzi 1990). He notes that there is another similarity between the two cases: in neither case both Spec of XP and X can be overt in English at the same time. Adopting the core idea, I assume that a feature uniquely related to D called *D-feature* is similar to a [wh] feature in that the D head (like C in CP of a clause) and some nominal elements such as pronouns, proper nouns and demonstratives (as in the case of wh-words) possess the relevant feature, and may need checking. This D serves as the referential anchor of noun phrases in that it requires elements with interpretable features that are related to referentiality that enable noun phrases to refer as in the relation of C of CP to elements in CP such as wh-phrases (Grewendorf 2001).

Following Campbell's insight, I also assume that a D with a [+D] feature possesses an uninterpretable EPP feature⁶⁹ and thus that Spec of DP needs to be occupied by an

⁶⁹ Chomsky (1995: Chapter 4) defines EPP as a 'strong D feature'.

element either via movement or insertion (Bošković 2005, Campos 2005, Davies and Dubinsky 2003, Ihram 2005 among others).

Given these assumptions, I will analyze the ungrammatical constructions in (57) in the following subsections.

3.3.2 Restriction on Num

In this subsection, I will examine *NP-Pl-Gen-pronoun constructions in (67c) and give an account for the question of why the plural nominal predicate cannot allow for an inversion operation, unlike its singular/bare equivalent. The analysis on NumP (a phrase between PredP and DP) in this subsection does not directly support the DP hypothesis (cf. Kurafuji 2004) but builds a basis for the argument in the following subsection of 3.3.3, which maintains the DP hypothesis for Japanese.

Let us look at the structures in (67a, c), repeated below.

(67) a. [... [NumP NP_i-*no* [PredP pronoun t_i]]]

c. * [... [NumP NP-Pl_i-*no* [PredP pronoun t_i]]]

The bare/singular NP in (67a) undergoes predicate-inversion and the plural NP in (67c) cannot. One might consider that the plural morpheme and the genitive marker compete for the Num head in (67c), as is shown below.

(69) * [... [NumP NP [Num' Pl, -*no* [PredP pronoun t_i]]]

In (69), the plural morpheme and the genitive marker appear in Num, along with the movement of NP to Spec of NumP. If this is the case, however, where would the plural morpheme of predicate nouns in Pronoun-noun constructions of (58), repeated below, be located?

(58) a. (?) anatagata sensei-gata
 you(Pl) professor-Pl
 ‘you professors’

b. anatagata sensei-tati
 you(Pl) professor-Pl
 ‘you professors’

c. anatatati sensei-gata
 you(Pl) professor-Pl
 ‘you professors’

d. karera geijutuka-tati
 they artist-Pl
 ‘(*) they/them artists’

(Furuya 2004)

The plural morphemes of the nominal predicates are attached to nominal predicates. If the plural morpheme attaching the common noun phrases were located in Num of the entire noun phrases as argued in (69), it is not clear of the positions of the pronominal subject and the nomina predicates. Thus, the structure in (69) is not correct.

Alternatively, one may relate a Japanese plural morpheme to D, as Kurafuji (2004) argues. According to Kurafuji, Japanese plural morpheme *-tati* as well as Chinese *-men* create definiteness readings in addition to the semantics of plurality. Common noun phrases attached by a plural morpheme have definite interpretations in (70):

(70) a. Kono ie-ni [kodomo]-wa i-masu ka.

this house-in child-Top exist-Pre Q

‘Is there a child in this house?’

b. Kono ie-ni [kodomo-tati]-wa i-masu ka.

this house-in child-Pl-Top exist-Pre Q

‘Are the children in this house?’

(Kurafuji 2004:215)

The only difference between the noun phrases in the brackets is that the noun phrase in (70a) has a bare noun phrase whereas the one in (70b) involves the plural morpheme *-tati*. The presence of the plural morpheme creates the definite reading of the noun phrase in the latter

example as the English translation shows, according to Kurafuji. Note that the definition of Kurafuji's definiteness involves specificity (cf. Enç 1991). Kurafuji claims that Japanese plural markers cannot be used as a predicative NP in (71).

(71) Karera-wa gakusei (*-tati/*-ra) desu.

they-Top student-Pl Cop

'They are (*the) students.'

(Kurafuji 2004:215)

Kurafuji aims to show that plural common noun phrases are definite due to the presence of the plural morphemes and thus cannot appear in predicate position.⁷⁰ If Kurafuji's argument were correct, the ungrammatical structure in (67c) could follow from the size restriction on nominal predication constructions: *DP within another DP (see 2.3.2). However, if this were the case, the non-inverted nominal predication constructions with plural nominal predicates as in (58), should also be ungrammatical violating the size restriction, contrary to fact.

⁷⁰ Furuya (2005) observes that Japanese common noun phrases with a plural morpheme in general cannot denote properties whether they appear in argument position or not as in (ib), unlike bare common noun phrases as in (ia).

- (i) a. **Kodomo**-wa 4% hetta
 child-Top decreased
 'Children have decreased by 4%.'
 b. ***[Kodomo-ra/tati]**-wa 4% hetta
 child-Pl-Top decreased
 'Children have decreased by 4%.'

In the subject positions, the plural expression cannot have a generic interpretation and instead denote multiple individuals in (ib), which is (semantically) ungrammatical, unlike in the case of the singular nominal in (ia).

Moreover, it is possible for a plural common noun phrase to appear in predicate position in a clause as in (72):

(72) a. Atira-no katagata-wa [**sensei-tati/-gata**] desu.
 over.there-Gen people-Top professor-Pl Cop
 ‘The people over there are professors.’

b. Atira-no katagata-wa [**sensei**] desu.
 over.there-Gen people-Top professor Cop
 ‘The people over there are professors.’

In (72a), the predicate nominal agrees in number with the subject, whereas in (72b) the predicate is a bare nominal. The former expression has an individual-based interpretation derived from the kind. The latter expression, on the other hand, refers to the professor kind or a capacity reading. This difference between the two noun phrases in predicate position is observable also in Romance and Germanic languages (de Swart, Winter, and Zwarts 2007).

(73) a. Jan en Sofie zijn [leraren].
 and are professors
 ‘Jan and Sofie are professors.’

b. Jan en Sofie zijn [leraar].

and are professor

‘Jan and Sofie are professors.’

(De Swart, Winter, and Zwarts 2007: 218-219)

In the Dutch examples in (73), the plural subjects are acceptable with both a bare common noun phrase predicate and a plural noun phrase predicate. These Dutch examples are similar to the Japanese examples in (71) and (72) in that both bare noun phrases and plural noun phrases can be predicates of plural subjects in clauses. The more important point here is that the predicate noun phrases do not have definite/discourse anaphoric interpretations and the expressions are still grammatical, even when they are attached by a plural morpheme. Because Kurafuji’s argument of the impossibility of plural expressions in predicate positions is not empirically maintained, Kurafuji’s definite analysis of Japanese plural noun phrases is not adopted in this work.⁷¹

Furuya (2004) argues that the singular Num head possesses an EPP property (Chomsky 1999, 2000, see 4.3.3.2) while the plural Num head lacks this property. The argument by Furuya for the EPP property on a singular Num head is traced on Kishimoto’s

⁷¹ Nakanishi and Tomioka (2004) also argue that the Japanese plural marker *-tati* is not (semantically) unrelated to definiteness. Note that they argue that Japanese plural morphemes are not able to be attached to common noun phrases that have generic readings because that the denotations of noun phrases in plurality do not uniformly denote the same objects. For instance, *kodomo* ‘child’ with the plural marker *-tati* has the reading like ‘child/children and others’. This analysis is compatible with the ungrammaticality of the predicate plural noun phrases that cannot appear in predicate position that possesses the generic reading.

argument. Kishimoto entertains the argument for NumP with English data. According to him, there is a class of nouns called ‘light’ nouns (such as *one, thing, body, place*) that is susceptible to overt N-raising in a way similar to the semantically ‘light verbs’, *have* and *be*. Just as a light verb can be raised to T with a [+finite] specification, so a ‘light’ noun can be raised to Num with a [-plural] specification in the following examples (Kishimoto 2000:564).

(74) a. [DP some [NumP [NP interesting [NP one/place/thing]]]]

a'. [DP someone_i/someplace_i/something_i [NP interesting_i [NP *t*_i]]]⁷²

b. [DP some [NumP [NP interesting [NP ones/places/thing]]]]

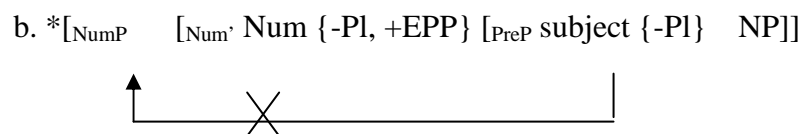
b'. * [DP someones_i/someplaces_i/somethings_i [NP interesting [NP *t*_i]]]

Given the assumption that quantifiers such as *some* are base-generated in DP, the singular expressions are grammatical in (74a,a') because the EPP feature on Num is successfully satisfied: the Num head itself moves to D in the former (although Kishimoto does not discuss this case) and the ‘light’ nouns move to Spec of NumP in the latter. On the other hand, when Num is [+plural], as in (74b,b'), Num does not have an EPP property so that the light nouns cannot move to the NumP Spec in (74b'). The unnecessary movement makes the expression ungrammatical.

⁷² Kishimoto assumes that a noun like *everyone* is construed as one word only in PF but not in the syntax; and the quantifier part occurs in DP and the light noun in NumP.

Once the argument that a singular Num possesses EPP has been established, according to Furuya (2004), the ungrammaticality of English singular Pronoun-noun constructions (e.g., **I patient*) is readily accountable for under the nominal predication hypothesis. An EPP feature on the singular Num remains unchecked and makes the singular constructions ungrammatical because the subject in nominal predication constructions does not move by definition (see 2.4.4 and den Dikken 2006) and because the personal pronouns in the constructions are too ‘heavy’ to get raised to a higher position (i.e. Spec of NumP) to check the relevant feature in Kishimoto’s sense in (75).⁷³

(75) a. **I patient*



In (75), the EPP on the Num with a [-plural] feature cannot be checked by the subject and remains unchecked. This causes the ungrammaticality.

As was observed in Chapter 2, English Pronoun-noun constructions and their Japanese equivalents share some properties, one of which is that the constructions in both languages have the number restriction in the same way. That is, plural constructions are grammatical while the singular counterparts are ungrammatical in (25) of Chapter 2, which is repeated in (76):

⁷³ It is necessary to examine the concept of ‘heaviness’ more clearly. I will leave it for future research.

(76) a. *watasi kanzya

I/me patient

‘*I/me patient’

b. *anata kanzya

you patient

‘*you patient’

c. *kare kanzya

he patient

‘*he/him patient’

Furuya (2004) proposes the following identical structure for the ungrammatical Japanese singular Pronoun-noun constructions.

(77) [NumP [Num' {-PI, +EPP} [PredP watasi {-PI} NP]]]⁷⁴

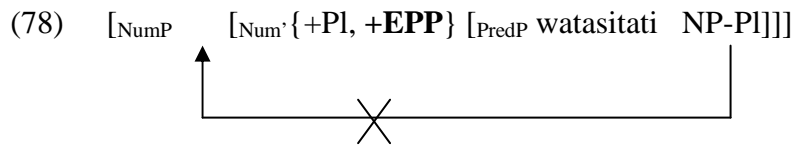
If Furuya's EPP analysis of Num and Kishimoto's argument of heaviness/lightness of noun phrases are correct, and also if it is assumed that Num with [+PI] may also possess

⁷⁴ Although Furuya (2004) does not consider the possibility of the predicate NP's movement to Spec of NumP in (77), that movement is perfectly grammatical in Japanese: NP-Gen-pronoun (singular). On the other hand, the English equivalent is still ungrammatical. One possible account is that 'heaviness' of noun phrases between Japanese and English might be different: Japanese bare noun phrases are 'light' and can move to Spec of NumP whereas English 'light' nouns are limited in numbers.

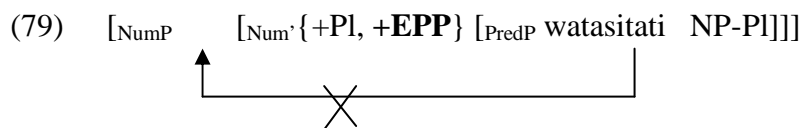
EPP,⁷⁵ it is readily extended to accounts for the nominal predicate-inversion structures in (67a,c), which are repeated below.

- (67) a. [... [NumP NP_i-*no* [PredP pronoun *t_i*]]]
 c. * [... [NumP NP-PI_i-*no* [PredP pronoun *t_i*]]]

In (67a), the Japanese bare noun phrase predicate gets raised to Spec of NumP because it is ‘light’ in Kishimoto’s sense, and thus the structure is grammatical. On the other hand, the plural nominal predicate in (67c) is not ‘light’ (as in the English plural case of (74b’) above) and cannot get raised to Spec of NumP and the EPP on Num is left unchecked, as is illustrated below.⁷⁶



Notice that the pronominal subject cannot get raised, either, because the subject in nominal predication constructions is assumed not to get raised by definition in 2.4.4 or because the pronominal subject is ‘heavy’ in Kishimoto’s sense in (79):



⁷⁵ In 4.3.3, I discuss this issue of the optionality of EPP on Num, assimilating Bennis, Corver and den Dikken (1998) into the examination of NQ-NP constructions.

⁷⁶ After the step of the predicate-inversion operation in (82), D is inserted in (i).

(i) [DP D [NumP Num {+Pl, +EPP} [PredP watasitati NP-PI]]]

In this configuration, DP is a sister to NumP the EPP on Num, and the EPP cannot get checked by D. This structure is ungrammatical. Note that Chomsky (2000:19) proposes that a non-phrasal EPP feature, like that of T, is obligatory, while phrasal EPP features are optional.

In this subsection, I examined the nature of NumP, and argued that Num with a [+plural] feature may or may not possess an EPP property. When it does not possess EPP, the predicate nominal in the constructions does not get raised. On the other hand, when Num has EPP, the predicate is inverted to Spec of NumP. This EPP on Num can be checked by only ‘light’ nominal predicates (i.e. bare noun phrases) via predicate-inversion operation. The argument on NumP in this subsection is not directly related to the DP hypothesis and yet builds a basis for the analysis of the ungrammatical NQ-Gen-pronoun constructions for the hypothesis in the next subsection.

3.3.3 *NQ-Gen-pronoun constructions

In 3.1, I have argued for existence of a [+D] feature, which is assumed to behave like a [+wh] feature on the analogy of C in CP and wh-phrases (Grewendorf 2001). In this subsection, I will detail how a D feature is relevant to nominal predication constructions and also give an account to the ungrammatical constructions (NQ-Gen-pronoun) constructions in (57), which I repeat below.

(57) a. *Suzuki sensei-wa [(sono) **3-nin-no** watasitati]-o sikatta.
 professor-Top those/the Cl-Gen us-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) us three.’

b. *Suzuki sensei-wa [(sono) **3-nin-no** anatatati]-o sikatta no?

professor-Top those/the Cl-Gen you(pl)-Acc scolded Q

‘(Lit.) Did Prof. Suzuki scold (those/the) you three?’

c. *Suzuki sensei-wa [(sono) **3-nin-no** karera]-o sikatta.

professor-Top those/the Cl-Gen them-Acc scolded

‘(Lit.) Prof. Suzuki scolded (*those/the) them three.’

I assume that non-predicative elements (or non-common noun phrases) possess [+D] features in Japanese. In particular, personal pronouns in the nominal collocation constructions possess an uninterpretable D feature (i.e. [+D_{int}]) once a person feature is relevant to D (Campos 2005), besides the assumption that the D head and demonstratives have an EPP property in 3.3.1 above.

Given these assumptions, let us look at checking operations of a D feature within nominal collocation constructions (see Furuya 2004 for a checking analysis of non-predicate-inverse Pronoun-noun constructions).

(80) Derivation of Noun-Gen-pronoun constructions

Step1: predicate-inversion

[_{NumP} NP_i-Gen [_{PredP} pronoun {+D_{int}} t_i]]

Step 2: insertion of D, checking of $\{+D_{-int}\}$

$$[_{DP} D \{EPP, +\cancel{D}_{-int}\} [_{NumP} NP_i\text{-Gen} [_{PredP} \text{pronoun} \{ +\cancel{D}_{-int}\} t_i]]]$$

Step 3: insertion of Dem or Op, checking of EPP

$$[_{DP} \text{Dem/null Operator} [D \{\cancel{EPP}\} [_{NumP} NP_i\text{-Gen} [\text{pronoun} t_i]]]]$$

In (88), in Step 1 after forming a predication relation, the next step starts with predicate-inversion: a bare noun phrase gets raised to Spec of NumP due to the EPP on Num as argued in 3.3.2. Along with the phrasal movement, the Pred head gets moved to Num, which is realized as the genitive marker. At this stage, the $[+D_{-int}]$ feature on the pronominal subject is not checked yet. In Step 2, the D head is inserted. The D head possesses a $[+D_{-int}]$ feature and thus checks against the pronominal subject for the relevant feature. That head also involves an EPP feature, which is checked via insertion of a demonstrative or a null Operator in Spec of DP. Because all relevant features are successfully checked and eliminated, the derivation in (80) is legitimate.⁷⁷ If this analysis is on the right track, the obligatory presence of a demonstrative or a null Operator (indirectly) results from the presence of the pronominal subject in the nominal predication constructions, whether the common noun phrase predicate gets raised to NumP or not (see

⁷⁷ I assume that insertion is more economical than movement. In order to check an EPP feature on D, rather than moving a predicative NQ from Spec of NumP to Spec of DP, insertion of a demonstrative or a null Operator to Spec of DP is more economical. Moreover, there is another economical movement of a NQ to Spec of DP than its movement to DP through the Spec of NumP, as will be observed in Chapter 4.

Furuya 2004 for the analysis of non-inverted Pronoun-noun constructions). That is, the existence of the pronominal subject calls for the presence of a D with a relevant feature to check the relevant feature. This D happens to possess an EPP property, too. Because of this feature, insertion of a demonstrative or a null Operator is required.

I will apply the same analysis to the ungrammatical NQ-Gen-pronoun construction in (81).. Consider the derivation in (81):

(81) Derivation of *NQ-Gen-pronoun constructions

Step1: predicate-inversion

$$[\text{NumP NQ}_i\text{-Gen } [\text{pronoun}\{+\text{D}_{\text{-int}}\} \ t_i]]$$

Step 2: insertion of D, checking of $\{+\text{D}_{\text{-int}}\}$

$$[\text{DP } \text{D}\{\text{EPP}, +\cancel{\text{D}}_{\text{-int}}\} \ [\text{NumP NQ}_i\text{-Gen } [\text{pronoun}\{+\cancel{\text{D}}_{\text{-int}}\} \ t_i]]]$$

Step 3: insertion of Dem or Operator, checking of EPP

$$[\text{DP } \text{Dem/null Operator } [\text{D}\{\cancel{\text{EPP}}\} \ [\text{NumP NQ}_i\text{-Gen } [\text{pronoun} \ t_i]]]]$$

One surface difference between the nominal inverse-predicate construction in (80) and the construction in (81) is that the former possesses a bare common noun phrase predicate whereas the latter involves a NQ predicate. In Step 1, a NQ undergoes predicate-inversion and get moved across the pronominal subject to Spec of NumP, where its head is realized as the genitive marker. In Step 2, D is inserted and checks a $\{+\text{D}_{\text{-int}}\}$ feature against the

pronominal subject, which also has the relevant feature. In order to complete the derivation due to the existence of the EPP on D, a demonstrative or a null Operator is inserted into Spec of DP. Since no uninterpretable feature is left unchecked in Step 3 in (81), the derivation should be grammatical, contrary to fact. What makes the derivation ungrammatical in (81)? If the predicate-inversion follows from an EPP reason on Num, Step 1 is considered to be fine in (81) (as in the case of (80)). The EPP checking on D in Step 3 should also be unproblematic as in the case of (80).⁷⁸ If this line of consideration is correct, one speculates that Step 2 should be problematic. If this is the case, why would Step 2 be problematic?

Let us consider the following English examples in (82) to answer that question.

- (82) a. *the a student
 b. * this a boy

I assign the following structures in (83) to the expressions in (82), based on Campbell's nominal predication constructions for definite noun phrases in 2.3.3.1.

- (83) a. *[_{DP} [_D the a [_{PredP} *pro* student]]
 b. *[_{DP} this [a [_{PredP} *pro* student]]

If all the determiners were merged in D and numerals could be high up in the structure in (83a), the two Ds could compete for the same position –“doubly-filled D filter” (Campbell

⁷⁸ I will examine properties of DP more in detail in Chapter 4.

1996). However, in (83b), the demonstrative and the singular indefinite article do not compete for the same position (under the current assumption that demonstratives appear in Spec of DP when they are at left periphery in Chapter 2), but it is still ungrammatical. I assume that there are features unique to D once determiners are regarded as realization of feature bundles at the specific position. More specifically, the D head is realized as *the* or *a*, depending on the value of a [\pm D] feature, from Zamparrelli's (2005: 920) insight of a binary D feature.

With this approach in mind, the co-occurrence restrictions such as * *this a boy* are naturally explained. Consider the derivation of (84).

(84) Derivation of **this a pro student*

Step1: Insertion of the indefinite article in D

[_{DP} a {-D_{+int}} [*pro* {+D_{-int}} *student*]]

Step 2: Insertion of *this*; failing of checking {+D_{-int}} on *pro*

[_{DP} this {+D_{+int}} [a {-D_{+int}} [*pro* {+D_{-int}} *student*]]]]

In (84), in Step 1, insertion of the indefinite article into D cannot check the [+D_{-int}] on the subject *pro*. This potential element mismatches with the subject, however. The uninterpretable feature on the subject cannot be checked by the potentially closest element because this mismatch in feature rules out the expression. In Step 2 further derivation does

not save the crashed derivation at earlier steps, due to the closer element in D. That is, this Agree relation between the element in Spec of DP and the pronominal subject cannot be established, due to *Defective Intervention Constraint* (Sigurdsson 2006). The Defective Intervention Constraint is a ‘representing’ locality condition, which prohibits an establishment of an Agree relation when a closer but inactive goal intervenes between a probe and another goal in the configuration in (85).

(85) $*\alpha > \beta > \gamma$

In (85), α is a Probe, γ a Goal, and β an intervener. Given the Defective Intervention Constraint, β and γ matches α (but β is inactive), so that matching is blocked. Only the head of the chain blocks matching under the Minimal Link Condition. How is this assumption of the binary feature $[\pm D]$ unique to D along with the Defective Intervention Constraint related to the ungrammatical NQ-Gen-pronoun constructions in (57)?

Cheng and Sybesma (1999:528) observe the fact that a NQ+NP order necessarily yields an indefinite interpretation in Chinese. This is also true of Japanese.

(86) Kinou Tanaka-sensei-wa [3-nin-no gakusei]-ni aimasita. Sosite
yesterday professor-Top Cl-Gen student-Dat met and
Kyou-mo Tanaka-sensei-wa [3-nin-no gakusei]-ni aimasita.
today-also professor-Top Cl-Gen student-Dat met

‘Prof. Tanaka met three students yesterday. And he met (*the) three students today, too.’

In (86), the second occurrence of a NQ+NP sequence is the same as the first one and yet cannot have a definite/anaphoric reading. According to Cheng and Sybesma, numerals (or NQs) are associated with an existential quantificational force (Diesing 1992, Tsai 2001, but Link 1983), which is responsible for indefiniteness. I interpret an existential quantificational force of numeral indefinites as a [-D] feature in (87):

(87) Numerals (quantifiers) possess a(n) (interpretable) [-D] feature

Given the assumption for numeral indefinites in (87), let us look back to the derivation in (81), whose revised steps are as follows in (81’).

(81’) Derivation of *NQ-Gen-pronoun constructions

Step1: predicate-inversion

$$[\text{Num NQ}_i\{-D_{+int}\} \quad [\text{PredP pronoun}\{+D_{-int}\} \quad t_i]]$$

Step 1 represents the predicate-inversion operation. The raised NQ in Spec of NumP carries $\{-D_{+int}\}$, whose feature mismatches with that of the pronominal subject. This clash stops further steps of the derivation. Thus the NQ-Gen-pronoun construction is ungrammatical. Even if further steps are made in the derivation in (81’), it cannot save the ungrammaticality as follows.

(81') Derivation of *NQ-Gen-pronoun constructions

Step 2: insertion of Operator

[_{DP} Operator [D{EPP,+D_{-int}} [NQ{-D_{+int}} [pronoun {+D_{-int}} t_i]]]

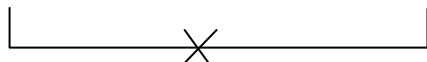
In this Step, a null Operator is inserted into Spec of DP. The element in Spec of DP enters checking operations with the D head for EPP and a {+D_{-int}} feature on D.

(81') Step 3: checking of EPP, and a [-D_{+int}] feature on D as is illustrated below:

*[[_{DP} Dem/OP{+D_{+int}} [D{~~EPP~~,~~-D_{+int}~~} [NQ{-D_{+int}} [pronoun{+D_{-int}} t_i]]]]

In Step 3 of (81') above, the closer potential goal [-D] on NQ blocks the Agree relation between the Operator (goal) and the pronominal subject (probe). Thus, even though the uninterpretable features on D are checked and deleted, another uninterpretable feature on the pronoun remains unchecked because the Operator in Spec of DP possesses the relevant feature but it is not closest to the pronoun, i.e., due to the Defective Intervention Constraint. This uninterpretable feature on the pronoun remains unchecked and causes the ungrammaticality in (88).

(88) [_{DP} Dem {+D_{+int}} [NQ{-D_{+int}} [pronoun{+D_{-int}}]]]



If the current argument is on the right track, Japanese projects DP. Moreover, a D feature is active in Japanese (cf. Fukui and Sakai 2003). This supports the DP hypothesis.

In the following subsection, I will consider the fourth (ungrammatical) construction of the nominal predicate-inverse constructions in (67d), further in favor of the main claim of the DP hypothesis.

3.3.4 Proper nouns and nominal predication constructions

In this subsection, I will give an analysis to the ungrammatical construction in (67d), repeated below.

(67) d. * $[\dots [_{\text{NumP}} \text{proper noun } (-\text{Pl})_i \text{-}no [_{\text{PredP}} \text{pronoun } t_i]]]$

Proper nouns have been semantically and/or syntactically analyzed mainly in two ways. One view is that proper nouns are generated as plain common noun phrases and combine with definite determiner as distinguished definite description (Frege 1892, Russell 1905, Burge 1973, Longobardi 1994, Anderson 2004, Matushansky 2006, Coates 2006 among others). This view is supported by languages in which names in argument positions are always or often used with a definite article such as Greek, various dialects of German and Italian, Northern Norwegian, Northern Swedish, Tagalog among others (Matushansky 2006). It is also possible to observe the behaviors of proper nouns like common noun phrases in English in (89):

(89) a. **Three Peters** called for you last night

b. That woman is **a real Clytemnestra**

c. **Almost all Mohammads** are muslims.

(Bennett 2006:6)

d. the barber John

(Burton-Roberts 1975)

These facts show that proper nouns appear to bear a syntactic resemblance to common nouns. By treating proper nouns like common nouns, this view (implicitly or explicitly) holds the idea that proper nouns have inherent contexts.

The opposing view on proper nouns is that proper nouns do not have inherent context (Donnellan 1966, 1970, Kripke 1972, Segal 2001, Bennett 2006 among others) and function as rigid designators. Donnellan (1966, 1970) argues that definite descriptions are distinguished into *referential use* and *attributive use*. A definite description is used attributively in the assertion to state something about whomever or whatever is the so-and-so. The referential use is that a definite description is a tool to pick out whom or what he is talking about and states something about the person or thing. Segal (2001) extends the two uses of definite descriptions to proper nouns. Proper nouns are used as constants in (90) or as in meta-linguistic use in (91).

(90) (x) (x satisfies 'Aristotle' iff x = Aristotle)

(91) a. (x) (x satisfies 'Aristotle₁' iff x = Aristotle₁ (the philosopher))

b. (x) (x satisfies 'Aristotle₂' iff x = Aristotle₂ (the magnate))

Segal (2001:551)

In (90), the proper noun is used as a rigid designator. In (91), the proper nouns are treated by a sort of 'quasi-descriptive theory' of names (Segal 2001: 551). Segal claims that proper nouns do not behave like common nouns in that they are able to appear within a clause without any support of an article unlike common noun phrases, which is a strong piece of evidence for proper nouns as axioms.

Japanese proper nouns are like personal pronouns in that they are syntactically located in a lower position than DP and function as the subjects of nominal predication relations in (92).

(92) a. (sono)Yuuko-tati gakusei

PI student

'(Lit.) (those/the) Yuko and her company students

b. (sono) Tanaka-san-ra syain

Mr.-PI employee

'(Lit.) those/the Mr. Tanaka and his fellow employees'

In (92), the proper nouns form predication relations with common nouns like personal pronouns. They allow the presence of demonstratives in the left periphery. Moreover,

when proper nouns are in the subject position, they allow the common noun phrase predicates to get inverted in (93):

(93) a. *gakusei-no Yuuko-tati*

student-Gen PI

‘Yuko and her company students’

b. *syain-no Tanaka-san-ra*

employee-Gen Mr.-PI

‘Mr. Tanaka and his fellow employees’

Furthermore, nominal predication constructions with proper nouns as the subject also show the Defective Intervention Constraint. Consider the following examples.

(94) a. *Tanaka(-san)-tati 3-nin*

Mr.-PI CI

‘Three Mr. Tanaka’s’

‘Mr. Tanaka and two people’

b. *3-nin-no Tanaka(-san)-tati⁷⁹

CI-Gen Mr.-PI

The NQ can follow the pronoun in (94a) and yet cannot precede them, like in the cases with pronominal subjects. The ungrammaticality in (94b) suggests that proper nouns in the subject position possess an uninterpretable [+D] feature which remains unchecked due to the presence of a NQ in (95) below, as in the case with the pronominal subject in the case of Step 3 in (81').

(95) *[[_{DP} Dem/Op{+D_{+int}} [D{~~EPP~~, +D_{-int}} [NQ{-D_{+int}}[proper noun {+D_{-int}} t_i]]]]

In the structure in (95), the proper noun in the subject position possesses an uninterpretable D feature {+D_{-int}} and cannot successfully check it due to the intervention of the inverted NQ, which makes the structure ungrammatical. These examples demonstrate that proper nouns are located in a lower position within the noun phrases like the pronominal subjects with a D feature in the constructions (Burnett 2006).

However, Japanese proper nouns also behave like common noun phrases in that they are able to appear in the predicate position of nominal predicate constructions in (63)

⁷⁹Compared with the example in (94b), the inverse construction in (ib) is grammatical.

- (i) a. gakkou-wa [Tanaka(-san) 3-nin]-o suisensita
 school-Top Mr. CI-Acc recommended
 'The school recommended three (Mr.) Tanakas.'
 b. 3-nin-no Tanaka(-san)
 CI-Gen Mr.
 'three Tanakas'

The behavior of a NQ in (ib) is that of a bare common noun phrase predicate. However, a proper noun predicate-inversion is ungrammatical in (94b). I have no accounts for the chameleon-like behavior of proper nouns in (ib) in the current work and left open for future research.

and (65a) above, all repeated below.

(63) karera Tanaka-san-tati

they Mr.-Pl

‘(Lit.) they Mr. Tanaka and his company/they Mr. Tanakas’

(65) a. watasitati Tanaka

we

‘(Lit.) we Tanakas’

In the above examples the proper nouns with/without the plural marker follow the personal pronouns like common noun phrases in the nominal predication constructions.

The current feature-checking analysis also accounts for the grammaticality of (63) and (65a) above, where proper nouns appear in the predicate position, which structure is as follows under the assumption that there is no phase within a DP (cf. den Dikken 2006).

(96) [DP Dem/OP{+D_{+int}} [D{EPP/~~+~~D_{-int}} [pronoun{+D_{-int}} proper noun {+~~∅~~_{-int}}]]]

In (96), all uninterpretable features are checked and eliminated and thus the structure violates nothing.

One may expect that inversion of a proper noun predicate within a nominal predication construction be grammatical unlike a NQ predicate, because the uninterpretable

feature on the subject should be successfully checked because of the pronoun in the subject position. However this is not correct in (64) and (65b), repeated below:

(64) *Tanaka-san-tati-no karera

Mr.-Pl-Gen they

‘(Lit.) Mr. Tanaka and his company’s they /Mr. Tanakas’ they’

(65) b. *Tanaka-no watasitani

Gen we

‘(Lit.) we Tanakas’

In (64), the proper noun carries the plural marker *-tati* and thus is considered to be too ‘heavy’ in Kishimoto’s sense to get inverted as plural common noun predicates as argued in 3.3.2 above. The structure for (64) is as follows:

(97) [NumP [Num' {+Pl, +EPP} [PredP watasitani proper noun {+Pl}]]]

In (97), the movement of the proper noun is invalid and thus it cannot get moved to Spec of NumP, where EPP on Num remains unchecked and causes the ungrammaticality.

Compared with the expression in (97), the proper noun predicate without the plural morpheme in (65b) ‘should be unrelated to ‘heaviness’ and is still ungrammatical. If proper nouns were like common noun phrases as in the case of predicate-inversion

derivation for Noun-Gen-pronoun constructions, however, it would be predicted that proper noun predicate be inverted, contrary to fact. This implies that proper nouns are always ‘heavy’ and cannot get inverted whether they are singular or plural, unlike (singular/bare) common noun phrases.

To summarize, I examined the chameleon-like properties of proper nouns. They appear both in the subject position like personal pronouns and in the predicate position like common noun phrases within nominal predication constructions. One aspect that makes proper nouns different from common noun phrases (but is shared with pronouns) and at the same time similar to personal pronouns is that they carry an uninterpretable D feature and require that feature to be checked. This requirement calls for the presence of a D with a relevant feature (and a demonstrative/null Operator) and thus makes proper nouns in argument positions definite.

If this argument is correct, it also supports the DP hypothesis for Japanese. In the next subsection, I will extend the current analysis to bare noun phrases with definite/anaphoric interpretations.

3.3.5 Definite bare noun phrases and DP

In 2.4.5.2, we observed that bare noun phrases with definite/anaphoric interpretations show specificity effects and thus do not allow NQ predicates to float away outside the associated

noun phrases in nominal collocation constructions (due to the presence of a null Operator in Spec of DP), like in the case of the constructions with pronominal subjects. This specificity effect for both constructions is evidence for DP. However, there is one difference between Pronoun-noun constructions and definite common noun phrase constructions within nominal predication relations: the former do not allow NQ predicates to invert to NumP in (57), repeated below, while the latter permit it as in (98).

(57) a. *Suzuki sensei-wa [(sono) **3-nin-no** watasitati]-o sikatta.

professor-Top those/the CI-Gen us-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) us three.’

b. *Suzuki sensei-wa [(sono) **3-nin-no** anatatati]-o sikatta no?

professor-Top those/the CI-Gen you(pl)-Acc scolded Q

‘(Lit.) Did Prof. Suzuki scold (those/the) you three?’

c. *Suzuki sensei-wa [(sono) **3-nin-no** karera]-o sikatta.

professor-Top those/the CI-Gen them-Acc scolded

‘(Lit.) Prof. Suzuki scolded (*those/the) them three.’

(98) Suzuki sensei-wa [(sono) **3-nin-no** gakusei]-o sikatta

professor-Top those/the CI-Gen student-Acc scolded

‘Prof. Suzuki scolded those/the 3 students.’

In these examples, the NQs can precede the common noun phrase whereas they cannot precede pronouns though both expressions have definite/discourse anaphoric interpretations.

Where does the difference in grammaticality stem from in (98)?

Under the assumption that common noun phrases cannot be the subject for definite/discourse anaphoric nominal expressions in the current work, the nominal expression in questions in (98) possesses a *pro* in the subject position in (99).

(99) [PredP *pro* [NumP NQ_i-*no* [PredP common NP *t_i*]]]

The PredP structure in (99) is similar to that of the expression in (100a), which analyses the bracketed parts in (100b):

(100) a. Sonogo keisatu-wa buji [(sono) karera **3-nin-no**
 later police-Top safely those/the them Cl-Gen
 kodomo(-tati)]-o hogosita.
 child-Pl-Acc protected
 ‘(Lit.) *Later, they saved those/the them three children safely.’

b. [PredP pronoun [NumP NQ_i-*no* [PredP common NP *t_i*]]]

In (100b), this structure involves two predication relations: one is in the predicate position, where the common noun phrase is the subject and the NQ is the inverted predicate, which is predicated of the subject *pro* within another predication relation.

The next structure illustrates Agree relations within the structure of (100b).

- (101) [[_{DP} Dem/OP{+D_{+int}} [_D ~~EPP~~, +~~D_{-int}~~] [_{pronoun} {+~~D_{-int}~~} [_{NumP} NQ_i-no{-D_{+int}}
 [_{PredP} common NP *t_i*]]]

The uninterpretable features of the subject pronoun and of the D head enter into Agree relations. An EPP on D is also checked against a demonstrative or a null Operator in Spec of DP. No uninterpretable feature remains unchecked. Thus the structure in (101) is grammatical. Likewise, Agree relations of the nominal example with a *pro* in the subject position in (99) are illustrated in (102):

- (102) [_{DP} Dem/OP{+D_{+int}} [_{D'} D{~~EPP~~, +~~D_{-int}~~} [_{PredP} *pro* [+~~D_{-int}~~] [_{NumP} NQ_i-no{-D_{+int}}
 [_{PredP} common NP *t_i*]]]

In (102), all relevant uninterpretable features are checked and thus the structure is also grammatical. Note that the interpretable [-D] feature on the predicate NQ does not conflict with the [+D] on the element in Spec of DP because there is no Agree operation or other operation required and thus no violation is observed.

To summarize this subsection, I argued that movement of a predicate NQ across a pronominal subject in nominal predicate constructions is illicit, because that predicate functions as a defective intervener in the Agree relation between D and the subject in the constructions. On the other hand, movement of a predicate NQ across a common noun

phrase subject (which cannot have a definite/discourse anaphoric reading) is grammatical because the NQ does not function as a defective intervener. If the current checking analysis is on the right track, checking of a D feature on the subject of nominal predication constructions in addition to the presence of DP is obligatory, which supports for the DP analysis for Japanese.

3.4 Conclusion

In this Chapter I investigated the internal structure of Japanese definite/discourse anaphoric noun phrases by examining Noun-Gen-pronoun constructions in relation to Pronoun-noun constructions, ultimately, in order to maintain the DP hypothesis. This chapter had two parts: 3.1 and 3.2 on the one hand, and 3.3 on the other. In the first half, I accounted for the internal structure of Noun-Gen-pronoun constructions in relation to Pronoun-noun constructions. In 3.1, I reviewed the six uses of Japanese *-no* that have been extensively studied in the literature. In 3.2, I applied the previous five analyses of the genitive marker to the marker in Noun-Gen-pronoun constructions. In 3.2.1, I showed that the phonological rules for the genitive marker under-/over-generate certain nominal examples including some nominal collocation constructions and are thus discarded. In 3.2.2, the lexical analysis of the marker as a *pro* also fails to account for the marker in the constructions in questions, mainly for semantic reasons. 3.2.3-3.2.4 cover the analyses as the realization of

Comp or D for the genitive marker. If the genitive marker were a Comp head, the NP would be some kind of a relative clause. However, (at least) in Modern Japanese, relative clauses, which appear prenominal in Japanese, do not call for the genitive marker. If the genitive marker in Noun-Gen-pronoun constructions is the realization of Comp, it is not clear why it requires the genitive marker as Comp to be phonologically realized in this case and not in other relative clauses. Moreover, some linguists argue that Japanese relative clauses are IP. If this is correct, no Comp Phrase (CP) is projected for Japanese relative clauses and the genitive marker should not be the realization of CP in the constructions. If the marker were D, instead, the noun phrases attached by another phrase with the genitive marker would project DP. Japanese should allow multiple DP structures because NP-Gen may be recursive in prenominal positions. The motivations for the recursion of DP are, however, weak in that the ‘spreading’ of a D feature within a noun phrases in Greek is not analyzed as recursion of DP in standard analyses. Moreover, it is not clear why every occurrence of the genitive marker should be equally realized as a realization of a feature agreement such as in the Spanish cases. The application of these four analyses of the genitive marker in NQ-Gen-NP constructions do not successfully account for the status of the marker. In 3.2.5, unlike the previous analyses, the analysis of the genitive marker as a copula is applicable to Noun-Gen-pronoun constructions in terms of their semantics and

thus adopted it to the constructions. However, the adoption of the copula analysis of the genitive marker in Noun-Gen-pronoun constructions does not explain the syntactic status of the genitive marker as well as the nouns in the constructions, in relation to Pronoun-noun constructions. In 3.2.6, I employed den Dikken's (2006) predicate-inversion analysis and gave an account for Noun-Gen-pronoun constructions. In particular, I claimed that the NP is a result of movement to Spec of NumP via a predicate-inversion operation, supported by the evidence of the impossible additional movement of the inverted predicates with the focus particle within nominal predication constructions. I concluded that if this movement analysis is correct, the genitive marker is the realization of Num and the noun phrase in the constructions moves to Spec of NumP. The application of the movement analysis to Noun-Gen-pronoun constructions accounted for the status of the noun phrase along with the genitive marker in the constructions since the examinations of both statuses go hand-in-hand.

Having established the predicate-inversion analysis for Noun-Gen-pronoun constructions, in the second half of this chapter, I extended the predicate-inversion analysis to further data and showed that the inversion faces some restrictions: only bare common NP predicates are allowed to invert and other noun phrases such as plural noun phrases, NQs and proper nouns cannot. After having assumed the existence of D feature uniquely related to D in 3.3.1, I examined the impossible inversion of plural common NP predicates and

argued that because the predicate-inversion is sensitive to ‘heaviness’ in Kishimoto’s (2000) sense, plural nominal predicates are too ‘heavy’ to get raised unlike bare common noun phrase predicates, and an EPP on Num remain unchecked in 3.3.2. This causes the ungrammaticality. Even though this argument is not directly in favor of the DP hypothesis, the argument of the inversion of the predicate to NumP builds the bases for the following argument in 3.3.3. In that subsection, I argued that inverted NQ predicates in NumP function as defective interveners when the pronouns in the subject position attempt to enter into an Agree relation with D for an uninterpretable [+D] feature. Because of the failure of the Agree relation, the uninterpretable feature on the pronoun remains unchecked, causing the ungrammaticality. If the argument is correct, it provides evidence for the DP hypothesis. In 3.3.4, I studied proper nouns in nominal predication constructions. Interestingly they can appear in the subject position like personal pronouns and in the predicate position like common noun phrases in nominal predication constructions. When they are in the subject position, proper nouns cannot have their NQ predicates invert around them, because the NQs function as defective interveners of Agree relations between Ds and the proper nouns in the subject position like pronominal subjects. In predicate positions, proper nouns can have a plural marker although it is not obligatory. Whether they have a plural morpheme or not, proper nouns cannot undergo predicate-inversion. The

impossible movement of proper noun predicates with and without a plural morpheme is assimilated to that of the plural common noun phrase predicates in 3.3.2 in that proper nouns are ‘heavy’ to undergo predicate-inversion. The contribution of this subsection also holds the DP hypothesis for Japanese. In 3.3.5, I focused on definite bare noun phrases with NQ predicates in definite NQ-Gen-NP constructions. Bare noun phrases with definite interpretations allow NQ predicates to invert across the common noun phrases (i.e. definite NP-Gen-NP constructions), unlike the pronominal subjects in *NQ-Gen-pronoun constructions. The structure of definite bare noun phrases with NQs is different from that of *NQs-Gen-pronoun constructions in that the former possesses two predication relations: they have another predication relation in predicate position, which consists of a common noun phrase and a NQ in predicate position. This predication relation itself cannot be related to definiteness by definition and requires the presence of a pronoun or a *pro* in the subject position. This subject possesses D and needs checking of the uninterpretable feature on it, which calls for a demonstrative or a null Operator, to bear definiteness.

If the current argument based on the Agree operation is correct, definiteness comes from the element in Spec of DP, but not pronouns or *pros* in the subject position of nominal predication constructions, an insight originally attributed to Enç (1991) and Campbell (1996). Importantly, the current argument shows that Japanese not only projects DP but

also establishes an Agree relation for a D feature within noun phrases (Takahashi 2000).

This supports the DP hypothesis for Japanese.

4 DP hypothesis and the left periphery of noun phrases

In the previous Chapter, I examined NQ-Gen-NP constructions and argued that the NQs undergo predicate-inversion to Spec of NumP (particularly 3.2.6).⁸⁰ Look at one example in (1), which is (69c) in Chapter 2, and its structure in (2) (which is the same structure in (79) for the latter case in 2.4.4).

- (1) Suzuki sensei-wa [3-nin-no gakusei]-o sikatta.
professor-Top Cl-Gen student-Acc scolded

‘Prof. Suzuki scolded three students.’

- (2) a. [Pred P NP [Pred' NQ]]
b. [NumP NQ_i [Num' -no [Pred P NP t_i]]

The bracketed noun phrase in (1) underlyingly involves a nominal predication relation in (2a), where the predicate NQ undergoes predicate-inversion in (2b), along with the raised head realized as the genitive marker in NumP.

Japanese has another construction whose linear order is similar to that of (1). Look at the following example in (3) and the scheme of the noun phrase in the object position is in (4).

⁸⁰ I will offer further arguments of NQs in the current Chapter.

(3) Suzuki sensei-wa 3-nin gakusei-o sikatta.

professor-Top Cl student-Acc scolded

‘Prof. Suzuki scolded 3 students.’

(4) NQ-NP

The only difference between the bracketed noun phrases in (1) and (3) appears to be the presence/absence of the genitive marker. Thus, one might treat their structures equally, as Watanabe (2006) assumes.⁸¹ However, there is a clear difference in syntax between NQ-Gen-NP constructions and NQ-NP constructions.

Look at the following examples in (5):

(5) a. [(Yakamasii) 5-nin-no gakusei]-ga kita.

noisy Cl-Gen student-Nom came

‘(The) five noisy students came.’

b. [(*Yakamasii) 5-nin gakusei]-ga kita.

noisy Cl student-Nom came

(Fujita 1994:29-30)

The NQ-Gen-NP construction allows adjectival modification in the left periphery whereas the NQ-NP construction cannot tolerate it. In the Japanese literature on NQs, the locus of

⁸¹ Watanabe assumes that the genitive marker is phonologically present but does not have a position in syntax (Kitagawa and Ross 1982). See 3.2.1 for the failure of the phonological analysis for the genitive marker.

the NQ in NQ-NP constructions is particularly controversial. Some linguists argue that the quantifier should be located outside the associated noun phrase (Kamio 1983, Kitahara 1993, Kawashima 1993, 1998). Other linguists assume that it is within the associated noun phrase (Watanabe 2006). The ungrammaticality of the example with the adjectival modifier in the left periphery in (5b) seems to support the former analysis because the adjectival modifier attaches to the non-constituent combination of the NQ and the associated noun phrase if the NQ is outside the associated noun phrase and does not form a constituent with it.

However, if the NQ is located within the associated NP instead, one may pose a question on the impossibility of adjectival modification in relation to the absence of the genitive marker in (5b). Because the noun phrases in the brackets share the same basic semantics whether the genitive marker is present or not in (5a,b), one can safely say that the ungrammaticality in the case of the presence of the adjectival modification in (5b) is not attributed to its semantics. Rather, I assume that the ungrammaticality stems from its syntax and argue for the presence of DP in the constructions to support the DP hypothesis. That is, the NQ in the constructions is located within the associated noun phrases as Watanabe (2006) assumes. However, departing from Watanabe, I argue that the location of the NQ within the associated noun phrases without the genitive marker is different from the

one with the marker. In particular, I maintain that NQs not attached by the genitive marker are located in Spec of DP and argue that the impossibility of adjective modification in the left periphery follows from the general ban argued by Chomsky (1986), in support of the DP hypothesis for Japanese.

(6) Adjunction to the maximal projection of nominal arguments is disallowed.

(Chomsky 1986:6)

In 4.1, I will review non-constituent analyses for NQ-NP constructions in the literature and re-examine them. I will also offer evidence for the constituent analysis. Once the constituent analysis is established, I will examine further distinctive properties of NQ-NP constructions in 4.2. In 4.3, I will analyze the constructions by applying three extant analyses of noun phrases to the constructions. Particularly, I will argue that the NQ in the constructions undergoes A-bar movement to Spec of DP, along with three pieces of evidence to support this argument. The conclusion of this Chapter is in 4.4. If this argument is correct, it will further sustain the DP hypothesis.

4.1 NQ-NP constructions

I will critically review arguments for the non-constituent analyses of NQ-NP constructions in the literature in 4.1.1, and will attempt to offer a constituent analysis of the constructions in 4.1.2.

4.1.1 Previous analyses of NQ-NP constructions as non-constituents

I will review two arguments against the constituency analysis of NQ-NP constructions.

The first strong objection to the constituency analysis comes from coordination constructions observed by Kamio (1983) in (7):

- (7) * Taro-ga [3-satu hon-to 3-bon pen]-o katta.
Nom Cl book-and Cl pen-Acc bought

‘Taro bought three books and three pens.’

The fact that two NQ-NP constructions cannot be coordinated with the bound morpheme *-to* ‘and’ is compatible with the non-constituent analysis: once the first NQ-NP construction is outside the object noun phrase, the coordination of the two NQ-NP constructions is impossible.

Although Kamio claims that the example is ungrammatical, my informants and I perfectly accept it once the emphasis is added onto the NQs.⁸² The grammaticality of the expression is distinctively clearer once emphasis is added onto the NQs in (6) in the context of the number list reading. Additionally, a pause between the NQs and the associated noun phrases makes it to sound more natural in (7’):

⁸² I agree with Kamio’s judgment in that the expression in the bracket is ungrammatical if it has a neutral reading without an emphasis on the NQs.

(7') a. Taro-ga [3-satu, hon-to 3-bon, pen]-o katta.

Nom Cl book-and Cl pen-Acc bought

‘Taro bought **three** books and **three** pens.’

b. Taro-ga [3-bai, uisukii-to 2-hai, kakuteru]-o nonda.

Nom Cl whiskey Cl cocktail-Acc drank

‘Taro drank **three** whiskeys and **two** cocktails.’

In (7'), the bold expressions indicate that they have emphasis and the commas after the NQs represent a pause. Because the coordination constructions with the emphasis reading of the NQs in (7') are grammatical,⁸³ it suggests that the NQs in NQ-NP constructions may stay within the associated noun phrases in the coordination constructions.

Another objection to the constituent analysis observed by Kamio (1983) comes from the contrast in (8).

(8) a. *Taro-ga katta-no-wa [3-satu hon]-o da.

Nom bought-Gen-Top Cl book-Acc Cop

b. Taro-ga katta-no-wa [3-satu-no hon]-o da.

Nom bought-Gen-Top Cl-Gen book-Acc Cop

‘What Taro bought is three apples.’

⁸³ I do not know why the expressions with the emphatic reading are grammatical. See Footnote 97 below.

In the following subsection, I will offer strong evidence that the NQs in NQ-NP constructions are located within the associated noun phrases, whose analysis ultimately leads to support for the DP hypothesis.

4.1.2 Argument for NQs within the associated NPs

Watanabe (2006) argues that the fact that there are concomitant differences among the various NQ constructions does not rule out the possibility that they are derivationally related. That is, it is not surprising to find some concomitant semantic differences⁸⁵ (while the basic meanings are the same) as long as they have different derived structures, though this idea has been abandoned by many Japanese linguists who examine constructions with NQs (Inoue 1978, Kawashima 1998, Kobuchi-Philip 2003; 2007, Nakanishi 2003). Watanabe simply assumes that all the NQ constructions including prenominal NQ constructions share the same underlying structures. In particular, he assumes that the NQs in NQ-NP constructions stay within the associated noun phrases as well as NQ-Gen-NP constructions. To support Watanabe's assumption, I will offer three pieces of evidence to support the constituency analysis in this subsection.

⁸⁵ The basic meanings of the expressions are the same while there is a difference in terms of the (un)availability of (in)definiteness readings, as will be shown shortly (see also 2.4 for other distribution of NQs and the analyses of them).

4.1.2.1 C-command relation and insertion of *yuuitu...dake* ‘only’

As Miyagawa (1989) observes, NQs cannot be associated to common noun phrases once PP intervenes between the NQs and the noun phrases.

(10) a. John-wa [2-tu-no kouen-ni] itta.
Top Cl-Gen park-to went

‘John went to two parks.’

b. * John-wa [kouen-ni] 2-tu itta.
Top park-to Cl went

In (10a), the NQ is associated with the common noun phrase within PP. In (10b), on the other hand, once the NQ follows PP, NQs cannot be associated with common noun phrases. That is, once NQs are outside PP while the host noun phrases are within PP, the expressions are ungrammatical.

With this property in mind, let us look at the next example.

(11) John-wa [2-tu kouen-ni] itta.
Top Cl park-to went

‘John went to two parks.’

There are (at least) two possible structures assigned to the bracketed phrase in (11) as follows in (12).

(12) a. [PP [2-tu kouen] ni]

b. 2-tu [PP [kouen] ni]

The structures in (12a,b) illustrate that the NQs in both structures C-command the associated noun phrases. Yet, there is a difference between the two structures: in the former the NQ is within PP whereas the NQ in the latter is outside the PP. I will show that the structure in (12a) should be the correct one using the constituency test with *yuuitu...dake* ‘only’.

The combination of a NQ and a noun phrase can be sandwiched with *yuuitu...dake* ‘only’⁸⁶ whether the prenominal NQ is attached by the genitive marker or not as shown in

(13):

(13) a. **Yuuitu** [5-nin gakusei]-**dake**-ga konakatta.

only Cl student-only-Nom did.not.come

‘Only five students did not come.’

b. **Yuuitu** [5-nin-no gakusei]-**dake**-ga konakatta.

only Cl-Gen student-only-Nom did.not.come

‘Only five students did not come.’

⁸⁶ *Yuuitu* in *yuuitu...dake* ‘only’ is optional. In 2.6 of Chapter 3, expressions with the focus particle – *dake* are examined.

This focus particle cannot sandwich non-constituent combinations as in (14a), where an adverb is inserted within the noun phrase in the bracket, unlike in the case of (14b).

(14) a. ***Yuuitu** [**isoide** gakusei]-**dake**-ga kita.

only quickly student-only-Nom came

b. **Yuuitu** [gakusei]-**dake**-ga isoide kita.

only student-only-Nom quickly came

‘Only students came quickly.’

This fact clearly shows that the prenominal NQ without the genitive marker in NQ-NP constructions as in (13a) is located within the associated noun phrase as the NQ with the genitive marker.

Against this background, let us apply the focus particle to the PP with NQs preceding it in (15):

(15) a. John-wa **yuuitu** [2-tu kouen-ni]-**dake** itta.

Top only Cl park-to-only went

‘John went only to two parks.’

b. *John-wa 2-tu **yuuitu** [kouen-ni]-**dake** itta.

Top Cl only park-only-to went

The focus particle *yuuitu...dake* sandwiches the PP with the NQ-NP construction in (15a),

whereas in (15b) the focus particle sandwiches the PP including the associated noun except the NQ. The former is grammatical whereas the latter is not because the particle does not sandwich the constituent in the latter case. This difference in grammaticality shows that the NQ stays within PP in (15a). That is, the NQ forms a constituent with the associated NP and should lie within it.

4.1.2.2 Insertion of adverb

The next supporting piece of evidence for the idea that the NQ in the NQ-NP sequence lies within the noun phrase comes from the insertion of adverb. Fujita (1994:27) and Vermeulen (2006) among others observe that adverbs like *kyou* ‘today’ cannot intervene between a NQ and the associated noun phrase when the quantifier stays within it in (16):

(16) a. * [Gakusei **kyou** 5-nin]-ga kita.

student today CI-Nom came

‘(Indicated) Five students came today.’

b. * [5-nin-no **kyou** gakusei]-ga kita.

CI-Gen today student-Nom came

Likewise, the insertion of the adverb is impossible in (17).

(17) a. * 5-nin **kyou** gakusei-ga kita.⁸⁷

⁸⁷ Once a pause is inserted before or after *kyou* ‘today’, then the expression in (17a) becomes improved. Kitagawa and Kuroda (1992) notes the presence/absence of a pause disambiguates constructions. The

Cl today student-Nom came

b. **Kyou** 5-nin gakusei-ga kita.

today Cl student-Nom came

‘Five students came today.’

The adverbial insertion makes the expression ungrammatical in (17a). It shows that the NQ is located within the construction like in the cases in (17b). On the other hand, in (17b) the adverb is outside the noun phrase and adverb insertion does not change the grammaticality.

4.1.2.3 Topicalization

The last piece of evidence for the constituency analysis of NQ-NP sequences involves Topicalization.⁸⁸ Japanese allows multiple occurrences of the topicalization marker *-wa* in (18), similar to multiple nominative marker *-ga* constructions (Watanabe 1996).

(18) Kinou(-wa) kouen-de(-wa) watasi-wa okasi-wa tabenakatta.

yesterday-Top park-in-Top I-Top snack-Top did.not.eat

‘I did not eat snacks in the park yesterday.’

‘(Lit.) As for yesterday, as for in the park, as for snacks, I did not eat.’

fact that the insertion of a pause shows the difference in grammaticality tells us that the constructions in (17a) should involve two structures: one is the structure in which the NQ is within the associated noun phrase so that the insertion of the adverb makes the expression ungrammatical; and the other is the structure that involves a NQ.

⁸⁸ I owe Marcel den Dikken for the insight of this test.

In (18), all noun phrases including the object argument in the clause are attached by the topic marker.

The following example may imply that noun phrases within another noun phrase appear to be also able to be attached by the topic marker.

(19) a. [John-kara-no tegami]-wa kita

from-Gen letter-Nom came

‘A letter from John came.’

b. [John-kara]-wa [tegami]-wa kita

from-Top letter-Nom came

‘(Lit.) As for from John, a letter came.’

The fact that the PP is attached by the genitive marker shows that it forms a constituent with the head noun in (19a). The PP can be attached by the topic marker in (19b). Based on this data, one might assume that noun phrases within another noun phrase seem to be able to get raised and be attached by the topic marker. However, the next example shows that this is not the case.

(20) a. [John-kara-no tegami]-wa suterareta.

J-from-Gen letter-Top was.thrown.away

‘A letter from John was thrown away.’

b. *[John-kara]-wa [tegami]-wa suterareta.

J-from-Top letter-Top was.thrown.away

The PP followed by the genitive marker in the brackets stays within the noun phrase in (20a). That PP cannot be attached by the topic marker in (20b), however. This shows that an element within another noun phrase cannot get raised and carry the topic marker in place of the genitive marker. Let us apply this rule to the NQ constructions in question.

Consider the following examples in (21):

(21) a. 5-nin-no gakusei-wa yukkurito kita.

Cl-Gen student-Top slowly came

b. 5-nin gakusei-wa yukkurito kita.

Cl student-Top slowly came

‘Five students came slowly.’

c. *5-nin (-no)-wa gakusei-wa yukkurito kita.

Cl-Cl-Top student-Top slowly came

Both NQs in NQ-Gen-NP and in NQ-NP constructions in (21a,b) cannot have the topic markers in (21), which leads to the conclusion that the NQs in NQ-NP constructions are placed within the associated noun phrases as in the case of NQs in NQ-Gen-NP constructions.

from NQ-Gen-NP constructions besides the unavailability of adjectival modification in (5b), and will analyze properties of the left periphery of NQ-NP constructions.

The first difference that NQ-NP and NQ-Gen-NP constructions cannot be syntactically treated equally comes from the treatment of demonstratives.

(22) a.* Kyou [sono 3-nin gakusei]-o sikatta.

today those/the Cl student-Acc scolded

‘(Intended reading (Int.)) (he) scolded those three students today.’

b. [Sono 3-nin-no gakusei]-o sikatta.

those/the Cl-Gen student-Acc scolded

‘(He) scolded those/the three students.’

In (22a), the co-occurrence of the demonstrative and the NQ is prohibited in the NQ-NP construction while, in (22b), that co-occurrence is grammatical in the NQ-Gen-NP construction. This property of NQ-NP constructions is similar to the ones with adjectival modifiers in (5b). The ungrammaticality in (22a) should stem from its syntax but not from its semantics due to the fact that the NQ-NP construction has the same basic semantics as that of the grammatical NQ-Gen-NP construction in (22b). The change in grammaticality via insertion of demonstratives suggests that NQ-NP constructions with demonstratives are syntactically ungrammatical, unlike in the case of NQ-Gen-NP constructions.

The second property unique to NQ-NP constructions involves their (in)definiteness interpretations. That is, NQ-NP constructions cannot have definite interpretations as observed in the Japanese linguistic literature (Kamio 1983, Watanabe 2006 among others).

- (23) a. NQ-NP: ^{out} definite descriptions
 ^{ok} indefinite interpretations
- b. NQ-Gen-NP: ^{ok} definite descriptions
 ^{ok} indefinite interpretations

NQ-NP constructions do not allow definite interpretations, unlike NQ-Gen-NP constructions. The difference in (un)availability of indefinite reading also suggests that NQ-NP constructions are syntactically different from NQ-Gen-NP constructions once their syntax is assumed to feed semantics.

There is, however, one property that NQ-NP constructions share with NQ-Gen-NP constructions. Consider the following examples in (24):

- (24) a. *Suzuki sensei-wa [(sono) **3-nin** watasitati]-o sikatta.
 professor-Top those/the Cl us-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) three us.’

b. *Suzuki sensei-wa [(sono) **3-nin** anatatati]-o sikatta no?

professor-Top those/the Cl you(pl)-Acc scolded Q

‘(Lit.) Did Prof. Suzuki scold (those/the) three you?’

c. *Suzuki sensei-wa [(sono) **3-nin** karera]-o sikatta.

professor-Top those/the Cl them-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) three them.’

When the NQs precede the personal pronouns, the expressions are ungrammatical in (24) whether a demonstrative appears in the left periphery or not. This ungrammaticality is shared with that of NQ-Gen-NP constructions, as observed in (57) of Chapter 3, which is repeated in (25):

(25) a. *Suzuki sensei-wa [(sono) **3-nin-no** watasitati]-o sikatta.

professor-Top those/the Cl-Gen us-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) us three.’

b. *Suzuki sensei-wa [(sono) **3-nin-no** anatatati]-o sikatta no?

professor-Top those/the Cl-Gen you(pl)-Acc scolded Q

‘(Lit.) Did Prof. Suzuki scold (those/the) you three?’

c. *Suzuki sensei-wa [(sono) 3-nin-no karera]-o sikatta.

professor-Top those/the CI-Gen them-Acc scolded

‘(Lit.) Prof. Suzuki scolded (*those/the) them three.’

Once pronouns become subjects in nominal predication constructions, NQ predicates cannot precede them, whether the genitive marker is present or not. Note that it is grammatical when NQ predicates follow pronominal subjects, as in the case of (73) of Chapter 2, repeated below.

(26) a. Suzuki sensei-wa [(sono) watasitati 3-nin]-o sikatta.

professor-Top those/the us CI-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) us three.’

b. Suzuki sensei-wa [(sono) anatatati 3-nin]-o sikatta no?

professor-Top those/the you(pl) CI-Acc scolded Q

‘(Lit.) Did Prof. Suzuki scold (those/the) you three?’

c. Suzuki sensei-wa [(sono) karera 3-nin]-o sikatta.

professor-Top those/the them CI-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) them three.’

To sum up this section, we observed three properties of NQ-NP constructions besides the impossibility of adjectival modification in their left periphery: (i) NQ-NP

constructions do not allow demonstratives in their left periphery; (ii) they should be always indefinite; (iii) NQ predicates cannot precede pronominal subjects. The following summarizes the observations on NQ-NP constructions.

- (27) a. [(*demonstratives/*adjective) [NQ NP]]
b. indefinite/*definite
c. *NQ-pronoun (cf. *NQ-Gen-pronoun)

Among the three properties of NQ-NP constructions, the last ungrammatical property of (27c) is shared by NQ-Gen-pronoun constructions.

In the following sections, I will analyze NQ-NP constructions by giving an account to the properties in (27) in terms of the DP hypothesis, and support it for Japanese.

4.3 The locus of the NQs in NQ-NP constructions

I will account for the three properties of NQ-NP constructions in (28) in this subsection. In particular, I will apply three analyses of the nominal left periphery argued for by Watanabe, (2006) in 4.3.1, Cheng and Sybesma (1999) in 4.3.2, and Bennis, Corver and den Dikken (1998) to the constructions in 4.3.3 once I briefly review their relevant points, and show that one analysis is more readily applicable to the constructions. In 4.3.4, I will offer further evidence for it, in favor of the DP hypothesis.

4.3.1 Watanabe (2006)

Watanabe (2006) treats the structure for QP-NP constructions equally to that of the QP-Gen-NP constructions, assuming that the genitive marker is just a phonological realization in PF but does not occupy a position in syntax, following Ross and Kitagawa (1982) in (28):⁸⁹

$$(28) \quad [_{\text{NumP/QP}} \text{NQ}_i (-no) [_{\text{NP}} t_i]]$$
⁹⁰

Watanabe argues that NQs are originally located lower than the associated noun⁹¹ and move from behind the associated noun phrase to the front in (28).

Watanabe's structure captures the correct word order for NQ-NP constructions and NQ-Gen-NP constructions, and also the fact that NQs stay within the associated noun phrases. It predicts that some phrasal elements such as demonstratives and adjectival modifiers should be available for both constructions, because higher structures on top of NumP/QP are projected in (28). However, this prediction for NQ-NP constructions is not correct (while it is correct for NQ-Gen-NP constructions) as observed in (5b) and (22). That is, the uniform treatment of NQ-NP and NQ-Gen-NP constructions is problematic once the properties of NQ-NP constructions unique to the constructions are given in (27a,b), repeated below.

⁸⁹ See 3.2.1 for the review of the argument by Rose and Kitagawa (1982) and the failure of the phonological explanation of the genitive marker.

⁹⁰ Watanabe assumes QP on top of NP, which is NumP in our framework.

⁹¹ I simplify the more complicated structure proposed by Watanabe.

b. [Zek gau] zungji sek juk.

Cl dog like eat meat

‘The dog likes to eat meat.’ Not: ‘Dogs likes to eat meat.’

c. Ngo zungji tong [zek gau] waan.

I like with Cl dog play

‘I like to play with the dog.’ Not: ‘I like to play with dogs.’

(ibid. 1999:511)

The noun phrases in the brackets only have definite singular readings regardless of their positions in a clause. Assuming that classifiers in classifier languages have an individualizing-singularizing function, Cheng and Sybesma link this function to that of D. According to their definition of D (which is not a standard definition for D), D mediates between the description provided by the NP and whatever specific entity in the real world the description is applied to—the deictic function. That is, D possesses the individualizing-singularizing function (1999:518), like classifiers.

Cheng and Sybesma propose that the Chinese classifier head has the function performed by D in languages with articles, which is illustrated in (30):

(30) [CIP Cl [NP]] (definite interpretations)

(ibid. 1999:518)

Before Cheng and Sybesma (1999), Tang (1990) argues that Chinese projects DP in (31b) based on the fact that demonstratives are projected on top of numeral classifiers as in

(31a):

(31) a. zhe san ben shu
 Dem three Cl book
 ‘there three books’

b. [DP zhe [NumP san [CIP ben [NP shu]]]]

If the DP hypothesis argued Tang and the CIP hypothesis argued by Cheng and Sybesma are both correct, Chinese allows two structures for definite descriptions: DP projected by a demonstrative and CIP projected by a classifier in (32).

(32) a. [DP demonstrative [...]]

b. [CIP Cl [NP]] (=30)

If this is the case, Universal Grammar allows various ways to create definite descriptions: some languages use articles/determiners and other languages use the head of a different phrase for the same function.

In the following subsection, I will attempt to apply the CIP structure proposed by Cheng and Sybesma to Japanese NQ-NP constructions.

4.3.2.2 Application of CIP hypothesis to Japanese

As seen above, both Mandarin and Cantonese allow classifiers to stand alone next to the associated noun phrases without the presence of numerals, only when the interpretations are singular. In particular, Cantonese allows the constructions to have definite interpretations. Under the assumption that a classifier is in the head of a phrase in the left periphery for Cantonese, Cheng and Sybesma argue that CIP functions like DP for Chinese, an articleless language. Japanese is also a classifier language and does not possess an article like Chinese. However, Japanese does not allow the combination of a classifier and a noun without the presence of a numeral, unlike Chinese in (33):

- (33) a. *[Hiki inu]-wa niki-ga suki. (cf. 29b)
Cl dog-Top meat-Nom like
- b. *Watasi-wa [hiki inu]-to asobu-no-ga suki. (cf. 29c)
I-Top Cl dog-with play-Gen-Nom like

The ungrammaticality of these examples suggests that the argument by Cheng and Sybesma is not directly applicable to Japanese.

Even though the proposal of classifiers as determiners proposed by Cheng and Sybesma is not directly applicable for Japanese, one may still attempt to modify their argument and continue examining whether certain modified arguments of classifiers as

determiner might be applicable to Japanese NQ-NP constructions because Japanese does have classifiers like Chinese. Consider one possible structure under the nominal predication hypothesis in (34).

(34) $[_{CIP} [_{CI'} CI [\text{NP Number}]]]$

One may assume that Japanese classifiers in the head of CIP have EPP and require numerals to sit in its Spec for NQ-NP constructions. Note that this modified structure for Japanese is different from Cheng and Sybesma's structure for Chinese in that they assume that numerals are projected in the Spec of Numeral Phrase (NumP) on top of CIP (which Spec is empty) as in the structure of (30).

Given the above underlying structure in (34), let us look at the most possible/simplest derivation of NQ-NP constructions under the CIP hypothesis in (35):

(35) NQ-NP constructions

a. $[_{PredP} \text{NP} [_{Pred'} \text{Classifier Number}]]$ ----Predication relation is established

b. $[_{CIP} \text{Number}_j [_{CI'} \text{Classifier}_i [[_{PredP} \text{NP } t_i t_j]]]$

---Insertion of a classifier takes places

---Predicate-inversion takes places

The NP and the Number form a predication relation in (35a). The Number predicate gets raised to Spec of CIP, along with the insertion of Classifier to the head of CIP and the head

of PredP movement to the head of CIP. Note that the head of CIP does not have the genitive marker, because the classifier lexicalizes Cl after movement of the Pred head.

If this is correct, this accounts for the property of Japanese NQ-NP constructions in (27a), repeated below.

(27) a. [(*demonstratives/*adjective) [NQ NP]]

Under the application of the revised Cheng and Sybesma's CIP hypothesis in (34) and (35) to NQ-NP constructions, a more detailed structure of (28a) is as follows.

(36) [CIP (*demonstratives/*adjective) [CIP Number [Cl Classifier NP]]

Because the CIP functions like DP according to Cheng and Sybesma's CIP hypothesis, one may say that adjunction of demonstratives and adjectives to the highest phrase CIP won't be allowed, under the assumption that the left periphery of noun phrases do not allow for adjunction (see (6)).

Furthermore, according to Cheng and Sybesma, numerals (or NQs) are associated with an existential quantificational force (Diesing 1992, Tsai 2001, but Link 1983), which is responsible for indefiniteness. This explains the second property of NQ-NP constructions in (27b): numerals in Spec of CIP is the highest position and functions as operators for indefiniteness.

(27) b. indefinite/*definite

The third property of NQ-NP constructions in (28c), repeated below, seem to be also readily accountable for under the revised analysis of Cheng and Sybesma's CIP analysis in (34).

(27) c. *NQ-pronoun

Because numerals create indefiniteness whereas personal pronouns are definite, one may say that the semantic conflict leads to the ungrammaticality in (27c) (though it is not clear why the combinations of a personal pronoun and a classifier in (26) are grammatical if that is the case for (27c)).

If the application of the revised Cheng and Sybesma's analysis to Japanese is correct, one may assume that Japanese allows two nominal constructions in (38).

(37) a. [_{DP} demonstratives [...]] (for definite expressions)

b. [_{CIP} Numbers [_{CI} CI [...]]] (for indefinite expressions)

The structure in (37a) is the working hypothesis in the thesis and the structure in (37b) is the revision of the revised Cheng and Sybesma's CIP hypothesis.

Given the two structures, I will apply the revised analyses to the analysis for NQ-Gen-NP constructions to account for the one of the properties observed in (23b), repeated below.

(23) b. NQ-Gen-NP: ^{ok} definite descriptions

^{ok} indefinite interpretations

How is it possible for NQ-Gen-NP constructions to have indefinite and definite interpretations under the revised analyses in in (37)?

In Chapter 3, I assumed that the subject NP and the predicate NQ (Numeral Classifier) of NQ-Gen-NP constructions underlyingly form a predicate relation in (38a) below, and the predicate undergoes predicate-inversion along with the phonological realization of the combination of Num and Pred.

(38) Indefinite NQ-Gen-NP constructions

a. [_{PredP} NP [_{Pred'} (null head) NQ (Numeral+classifier)]]

---Predication relation established

b. [_{NumP} NQ (Numeral+classifier)_i [_{Num'} -no [_{PredP} NP *t_i*]]

---Predicate-inversion takes places

If this derivation is correct, one must discard the assumption that NQ-NP constructions and NQ-Gen-NP constructions share the same underlying structure even if the nominal predication assumption is maintained for both: In (34) above, which is the structure for NQ-NP constructions, numerals alone move to Spec of CIP and classifiers independently sit in the head of CIP; and in (38) below, which is structure for NQ-Gen-NP constructions, the combination of a numeral and a classifier is in predicate position and gets

raised to Spec of NumP. If this is correct, it requires different structures for indefinite constructions.

One wonders where the definiteness of Japanese NQ-Gen-NP constructions in (23b) under the application of Cheng and Sybesma's analysis comes from. One possible analysis is that the constructions have a higher projection on top of NumP in (39) as is argued in the current work (i.e. a null Operator). If this is the case, Japanese noun phrases have three structures in (39):

- (39) a. [_{DP} demonstrative/null Operator [...]] (for definite expressions)
- b. [_{CIP} Number [_{CI'} CI [...]]] (for indefinite expressions of NQ-NP constructions)
- c. [_{NumP} NQ [_{Num'} Genitive [...]]]
- (for indefinite expressions of NQ-Gen-NP constructions)

If this is on the right track, Japanese allows two structures for indefiniteness. One structure CIP does not allow for adjectival modification as in (5b), repeated below, whereas the other structure NumP permit adjectival modification as in (5a), repeated below.

- (5) a. [(Yakamasii) 5-nin-no gakusei]-ga kita.
 noisy CI-Gen student-Nom came
 ‘(The) five noisy students came.’

b. [(**Yakamasii*) 5-nin gakusei]-ga kita.
noisy Cl student-Nom came

(Fujita 1994:29-30)

The modified application of Cheng and Sybesma's analysis for Japanese can descriptively account for the (in)definiteness properties of NQ-NP constructions and of NQ-Gen-NP constructions, although more structures are required for Japanese noun phrases.

In the next subsection, I will apply an alternative simpler analysis to NQ-NP constructions by employing Bennis, Corver and den Dikken's (1998) proposal.

4.3.3 Bennis, Corver and den Dikken (1998)

I will review the relevant argument for the left periphery of Dutch noun phrases offered by Bennis, Corver and den Dikken (1998) in 4.3.3.1 and in 4.3.3.2, I will attempt to apply it to the Japanese constructions in question.

4.3.3.1 Review of Bennis, Corver and den Dikken (1998)

Bennis, Corver and den Dikken (1998) argue that some noun phrases observe A-bar movement as well as A-movement within noun phrases, as in clauses. Under the nominal predication hypothesis, particularly, *wat*, an underspecified quantifier, has a [+wh] feature, and needs to move from a predicate position to Spec of DP and check the feature against D

in interrogative constructions. This quantifier predicate shows two kinds of movement, according to Bennis, Corver and den Dikken. I review this point in detail here.

Look at the following Dutch example.

- (40) Wat voor (een) jongen(s)?
what for a boys

(Bennis, Corver and den Dikken 1998: 108; 110)

In (40), the presence of the indefinite article is optional. This Dutch nominal expression captures the parallelism of the following clausal expression in (41a) in that the two nominal expressions are in predicate positions. Note that the elements of *voor* and *een* are set aside in (40) for the moment.

- (41) a. Wat zijn dat?
what are that
b. [wat_i [XP dat t_i]

(ibid. 1998: 103)

Wat is base-generated at predicate position, and overtly moves to the front for checking of the [+wh] feature. Bennis, Corver and den Dikken claim that the indefinite quantifier *wat* in (40) undergoes movement in the same vein.

Consider the following derivation for the expression in (40) without *een* in (42):

- (42) a. [_{XP} jongen(s) wat]
- b. [_{XP} wat_i [voor [jongen(s) t_i]]]

In (42a) *Jongen(s)* ‘boy(s)’ is underlyingly located in subject position and the indefinite quantifier *wat* sits in predicate position. In (42b), this quantifier predicate overtly gets moved across the subject to the front of the nominal expression.

Given the structures in (42), let us look more closely at the location of the landing site of *wat*. Bennis, Corver and den Dikken argue that the preposition *voor* ‘for’ is the lexical reflex of the [+wh] feature of the D-head of the *wat voor* construction in (40), in parallel with *voor* as the head of CP in a clause in (43).

- (43) a. een boek [Op voor in te kijken]
 a book for into to look
 ‘a book to look into’
- b. Dat is een man [Op voor in het oog te houden]
 that is a man for in the eye to keep
 ‘That is a man to keep an eye on.’

(ibid. 1998:108)

In (43), *voor* is a prepositional complementizer with an interrogative force and functions as a [+wh] operator head in infinitival constructions, in which that feature operator movement

to Spec CP. Similarly, *voor* in (42b) fills the D-head while *wat* is located in its Spec, under the assumption that D and C are parallel (Kayne 1994, Szabolcsi 1994) in (44).

(44) [_{DP} *wat* [_{D'} *voor* (*een*) *jongen(s)*]]?

what for a boys

(Bennis, Corver and den Dikken 1998: 108)

In (44), the indefinite quantifier occupies the Spec of DP and *voor* sits in its head.

If this is correct, another question arises on the structure. Where is the indefinite article in (40) located? Why is it optional? According to Bennis, Corver and den Dikken, the cue for the first question is based on two properties of the structure in (44). The first property is that the presence of the indefinite article is not sensitive to the number specification in the construction, unlike in other constructions as in (45).

(45) *handen als (*een) kolenschoppen*

hands like a coal shovels

(ibid. 1998: 97)

The plural noun phrase *kolenschoppen* does not allow the presence of the indefinite article in (45) because the following noun is in plurality, whereas the plural noun *jongens* in (44) does not reject the indefinite article despite of the plurality of the following noun. This fact suggests that the role of the indefinite determiner in (44) is different from that in (45).

The second property of the construction in (44) comes from the assimilation to that of English inverted predication constructions in (46), as observed in (42) in 3.2.6.

(46) a. Imogen considers Brian (to be) the best candidate.

b. Imogen considers the best candidate *(to be) Brian.

In (46), predicate-inversion leads to the obligatory presence of a copular element in the surface string. While the infinitival copula *be* can be freely omitted in (46a), it cannot be left out in the predicate-inversion counterpart of (46b), under the locality constraint of the minimalist theory. The optionality parallelism between (46b) and (44) comes out very clearly in the following structure (ibid. 1998: 91, 110).

(47) a. $[_{IP} [_{FP} \text{the best candidate}_i [_{F'} F (=be)+X_j [_{XP} \text{Brian} [_{X'} t_j t_i]]]]$ (46b)

b. $[_{DP} \text{wat}_i [_{D} \text{VOOR} [_{FP} t'_i [_{F'} F (=een) +X_j [_{XP} \text{jongen(s)} [_{X'} t_j t_i]]]]]]$ (46)

In both, predicate-inversion obtains and in both a perfectly meaningless element shows up (along with the phrasal movement), apparently for purely structural reasons only. That is, the presence of *een/be* in the structures is the surface reflex of the presence of F.

Given the arguments for the loci for the preposition *voor* and the indefinite article *een* in the construction of (44), let us focus on the optionality of the indefinite article. Unlike the structure for the example with the indefinite article in (47b) above, the structure for the example without the indefinite article is proposed in (48):

(48) [DP wat_i [D voor [XP jongen(s) [X' Ø t_i]]]] (ibid. 1998: 109)

The difference between (47b) and (48) is that the feature difference in X affects the presence/absence of FP: the X-head with the relevant features requires the existence of FP in (47) while the featureless X does not in (48). The summary is as follows.

(49) X in *wat voor* interrogatives can be of two types: X can be radically featureless as in (48); and X can possess morphosyntactic features phonologically realized in F.

This difference is also associated to the difference in *wat*-movement. Under the assumption that Spec of DP is A-bar position (Kayne 1994, den Dikken 1998), the quantifier predicate moves to the A-bar position directly in (48) whereas it is raised through Spec of FP (which is assumed to be an A position) to the Spec of DP in (47b). Thus, the surface optionality of *een* in (42) is attributed to the following different structures in (47b) and (48) above, repeated below.

(47) b. [DP wat_i [D voor [FP t'_i [F' F (=een) +X_j [XP jongen(s) [X' t_j t_i]]]]]

(48) [DP wat_i [D voor [XP jongen(s) [X' Ø t_i]]]]

Both structures involve nominal predications at the earliest derivation. In (47b), *wat* moves to Spec of DP through Spec of FP whereas the quantifier moves directly to Spec of DP in (48). In these derivations, Bennis, Corver and den Dikken see symmetry in movement

between the clausal and nominal domains: predicate movement to A- and A-bar positions. In particular, they take FP to be like IP in a clause and DP like CP in a clause. Likewise, the movement of the quantifier to FP is considered to be A-movement and the one to DP as A-bar-movement. This argument of the two types of movement of the quantifier within Dutch nominal predication constructions by Bennis, Corver and den Dikken can capture the behaviors of Japanese NQs.

In the next subsection, I will show that NQ predicates show the same two types of movement as the Dutch *wat* and apply Bennis, Corver and den Dikken's analysis to Japanese.

4.3.3.2 Application of A-bar movement analysis to Japanese

It is readily possible to assimilate the surface optionality of the Dutch indefinite *een* in (42) to Japanese two prenominal NQ constructions: NQ-Gen-NP and NQ-NP constructions. Under the nominal predication hypothesis, the NQs in all nominal constructions are originally located in predicate position in (2), repeated below.

(2) [Pred P NP [Pred' NQ]]

Given the structure in (2), the next derivation is of the NQ movement to the Spec of a higher phrase. First, I focus on the movement to FP in Bennis, Corver and den Dikken's term (NumP in the current work). Note that FP/NumP appears for the Dutch structures in

(47b) but not in (48). According to Bennis, Corver and den Dikken, its presence/absence stems from the property of the head of XP (PredP in the current work) before it adjoins to the head of FP: when *een* is projected in X, F (FP) is needed in (47b); and otherwise, F is not required in (48). I take the (seeming) optionality of the genitive marker in comparison of NQ-Gen-NP constructions and NQ-NP construction as that of *een*, in relation to EPP on Num. That is, I assimilate their argument of the “optional” presence of FP/ NumP to the property of Num that I argued in 3.3.2, where I claimed that Num may or may not have EPP based on the optional predicate-inversion facts in Japanese plural nominal collocation constructions. Because noun phrases generally have features on numbers, I assume that NumP is obligatorily present while the presence of EPP on Num is optional. When Num has an EPP property, NQ predicates move to its Spec, along with the realization of its head via the genitive marker, which generates NQ-Gen-NP constructions. This derivation is illustrated in (50):

- (50) a. [_{PredP} NP [_{Pred'} NQ]] (=2)
- b. [_{NumP} [_{Num'} {+EPP} [_{PredP} NP NQ]] ---Num with EPP projected
- c. [_{NumP} NQ_i [_{Num'} Gen [_{PredP} NP *t_i*]]] ---Predicate-inversion

In the case of NQ-NP constructions, Num does not possess an EPP property. In the case of the lack of this feature, I assume that Spec of NumP is inactive. Since no element is

required to move to Spec of NumP due to the lack of EPP on Num, the genitive marker is not required to be present on Num, either. How can the NQ predicates get moved across the subjects in the constructions? This derivation for NQ-NP construction is as follows:

- (51) a. [_{PredP} NP [_{Pred'} NQ]] (=2)
- b. [_{NumP} [_{PredP} NP NQ]] ---Num without EPP projected
- c. [_{YP} [_{NumP} [_{PredP} NP NQ]]] ---X with EPP projected
- d. [_{YP} NQ_i [_{NumP} [_{PredP} NP t_i]]] ---NQ movement

I assume that the phrase YP on top of NumP has an EPP property and attracts the NQs in the constructions. If the current argument is on the right track, nominal complex constructions not only in Dutch but also in Japanese show two types of movement within the constructions: in one the predicate moves to Spec of NumP; and in the other the predicate moves to higher Spec of Num across NumP.

What is the status of YP in (51)? If the application of Bennis, Corver and den Dikken's analysis for Dutch is perfectly feasible for Japanese nominal constructions with NQs, YP is DP and its Spec is an A-bar position. On the other hand, NumP/FP should be an A-position and its Spec is an A position in the structures of (50) and (51).

In the following subsection, I will examine the two types of NQ movement in (50) and (51) to see whether their movement shows properties of A or A-bar movement and whether YP is DP.

4.3.4 Supporting evidence of the DP projection by NQ-NP constructions

I will offer three pieces of evidence to support the DP hypothesis for Japanese in this subsection. The first argument is directly related to A and A-bar movement within noun phrases made by Bennis, Corver and den Dikken (1998) in 4.3.4.1. The second argument comes from the size restriction on nominal predications (see 2.3.2) in 4.3.4.2. The third argument involves unwanted movement to DP and the general ban on adjunction to it in 4.3.4.3. If the argument is correct, it will provide further evidence for the DP hypothesis for Japanese.

4.3.4.1 A- and A-bar distinction: *otagai* ‘each other’

In this subsection, I will show independent evidence for the existence of two types of movement in Japanese noun phrases, by observing the reciprocal (*otagai*) within noun phrases. If this analysis is correct, it demonstrates that the distribution of the reciprocal is the same as that of the distribution of the Dutch indefinite quantifier *wat* in that they show that the reciprocal has A- and A-bar movement within a noun phrase: One type is movement to Spec of the next higher phrase, NumP (FP in Bennis, Corver and den

Dikken's terms), whose head is phonologically realized with the genitive marker; and the other type is movement directly to Spec of the highest phrase, probably, DP.

According to Herlofsky (1991:59), ‘...(T)*otagai* (or *otagai*)...behaves in a manner predicted by Principle (A) ... (A)lthough *otagai* requires a clausemate antecedent, it does not always function as a reciprocal. In Japanese, it is not always necessary for *otagai* to indicate a mutual relationship in which the arguments affect each other in the manner designated by disjoint transitive verbs. There are also similarly parallel to actions or emotions, termed the “respective” function, and “group solidarity”.’

Look at the three types of behaviors (Herlofsky 1991:54-55) in (52):

(52) a. *Otagai-ni kyouryoku suru.* (Reciprocal function)

each-other cooperate do

‘They cooperate with each other.’

b. *Otagai-ni hitto-o 12-hon utta.* (Respective function)

each-other hit-Acc Cl hit

‘They each had twelve hits apiece.’

c. *Otagai-ni ganbarimashou.* (Group solidarity function)

each-other do-best-let's

‘Let's each (both) of us do our best’

In (52), all the subjects in Herlofsky's original data happen to be *pros*, which function as antecedents of the reciprocal. The use of the reciprocal means a mutual relationship in (52a). In (52b), that reading is absent and, instead, the meaning 'each, respectively' is chosen. In (52c), the meaning of the reciprocal is similar to the one in (52b), and yet Herlofsky differentiates it from the rest as 'a group solidarity'.

Interestingly, the reciprocal follows Principle A, regardless of the difference in meaning (i.e. mutual or nonmutual). If it is not bound by an antecedent, the expression is ungrammatical as in (53b,c):

- (53) a. Gakusei-tati-wa otagai-o nagutta.
 student-Pl-Top each.other-Acc punched
 'They punched each other.'
- b. * Otagai-wa gakusei-tati-o nagutta.
 each.other-Top student-Pl-Acc punched
- c. * Otagai-ga gakusei-tati-niyotte nagurareta.
 each.other-Nom student-Pl-by punched

When the reciprocal is in the subject position by switching the argument positions in (53b) or by passivization in (53c), it loses the antecedent, and thus the expressions become ungrammatical even though the reciprocals are located in A-positions.

Compared with the examples in (53b,c), the following scrambling example is grammatical, although the antecedent does not precede the reciprocal in (54).

- (54) Otagai-o gakusei-tati-wa nagutta.
each.other-Acc student-Pl-Top punched
'(Lit.) Each other, they punched.'

In (54), the reciprocal with the accusative Case marker *-o* is scrambled across the subject. This A-bar movement is grammatical. The difference in the (un)grammaticality between (53b,c) and (54) is attributed to the A-/A-bar distinction. That is, because A-bar movement allows for reconstruction, the reciprocal object raised via A-bar movement can be interpreted at the original object position, which is successfully governed by the antecedent. On the other hand, since A-movement does not reconstruct, hence ungrammaticality results in (53b,c), as Saito (1992) argues with scrambling examples.⁹²

If this reconstruction analysis of the reciprocal to diagnose the A-/A-bar distinction is correct, the analysis can be extended to its behaviors within noun phrases.

Look at the following examples in (55):

⁹² Saito's data involves the bounding facts observed with Japanese scrambling of *wh*-words. I extended his proposal to the reciprocal data (cf. Mahajan 1990 for possible A-movement of clause internal scrambling for Hindi).

(55) a. [Gakusei-tati otagai]-ga iken-o itta.

student-Pl each-other-Nom opinion said

‘Students each said our own opinions.’

b. [Sensei-gata otagai]-ni iken-o ittemoraimasyou.

professor-Pl each-Dat opinion-Acc say.should

‘Professors each should say opinions.’

c. Watasi-wa [[syain-tati otagai]-no kangae]-o sonchousimasu.

I-Top employee-Pl each-Gen idea-Acc respect

‘(Lit.) I respect opinions of employees each’

As observed in (55) above, the reciprocal appears after noun phrases within noun phrases.⁹³

It can also precede noun phrases in (56).

(56) a. [Otagai gakusei-tati]-ga iken-o itta.

each student-Pl-Nom opinion-Acc said

b. [Otagai sensei-gata]-ni iken-o ittemoraimasyou.

each-Gen professor-Pl-Dat opinion-Acc say.let

c. Watasi-wa [[otagai syain-tati]-no kangae]-o sonchousimasu.

I-Top each-Gen employee-Pl-Gen idea-Acc respect

⁹³ As Marcel den Dikken points out, it is not clear whether the antecedents and the reciprocals form a predication relation within noun phrases in (55).

The pronominal reciprocals in (55) as well as in (56) do not have mutual readings but ‘individual’ readings when their antecedents are the noun phrases within the brackets.

However, the pronominal reciprocal is not always accepted as in (57):

- (57) a. *[Otagai-no gakusei-tati]-ga iken-o itta.
 each-Gen student-Pl-Nom opinion-Acc said
- b. *[Otagai-no sensei-gata]-ni iken-o ittemoraimasyou.
 each-Gen professor-Pl-Dat opinion-Acc say.let
- c. *Watasi-wa [[otagai-no syain-tati]-no kangae]-o sonchousimasu.
 I-Top each-Gen employee-Pl-Gen idea-Acc respect

Once the reciprocal before the head noun phrases is attached by the genitive marker *-no* this results in ungrammatical expressions in (57). Although the original location of the reciprocal within the noun phrases is not clear within the noun phrases, if the reciprocal in pronominal position is raised from the post nominal position across the antecedent noun phrases, the (un)grammaticality follows from A-/A-bar distinction in (56) and (57). In (56), the pronominal position of the reciprocal that is not attached by the genitive marker is an A-bar-position, and thus the expression is grammatical due to reconstruction. In (57), on the other hand, *otagai*, which is attached by the genitive marker, undergoes A-movement. This violates Principle A and the expression is ungrammatical.

These reciprocal examples suggest that Japanese nominal predication can be input to both A- and A-bar-movement, as in the case of Dutch *wat*. This does not immediately mean that the A-bar position is Spec of DP, though these Japanese data are compatible with the proposal made for Dutch by Bennis, Corver and den Dikken.

In the subsections to follow I will present another stronger piece of evidence to support the DP hypothesis for Japanese.

4.3.4.2 Size restriction 2

In Chapter 2, I argued that subconstituents of nominal predication constructions (i.e. the subject and the predicate) in nominal predication constructions cannot be larger than DP in (58), which is (68b) of 2.3.2.

(58) * [DP [PredP [...] [DP]]

If NQ-NP constructions project DP, it is predicted that they cannot appear within nominal predication constructions. This prediction is shown to be correct in the following examples of (59):

(59) a. [Watasitati 5-nin *(-no) syain]-wa isshoni ryokousita.

we CI-Gen employee together traveled

‘We five employees traveled together.’

b. Kaisha-wa [anatagata 5-nin *(-no) oubosya]-o saiyousita.
 company-Top you(Pl) Cl-Gen applicant-Acc employed

‘The company employed you five applicants.’

c. Sensei-wa [karera 5-nin *(-no) seito]-o sikatta.
 professor-Top them Cl-Gen student-Acc scolded

‘The professor scolded them five students.’

In these examples, the examples with the NQs preceding the noun phrases that are not attached by the genitive marker are ungrammatical. I assign the following structures in (60) below for the bracketed noun phrases with and without the genitive marker in (59).

(60) a. *[_{DP} [_{PredP} pronoun [_{DP} NQ NP]]

b. [_{DP} [_{PredP} pronoun [_{NumP} NQ-Gen NP]]

In (60a) the structure has a NQ-NP predicate and in (60b) it involves a NQ-Gen-NP predicate. I argue that the NQ-NP construction projects DP and thus violates the size restriction in (58), which leads to the ungrammaticality. On the other hand, in (60b) the NP-Gen-NP construction project a phrase smaller than DP, probably NumP, and thus respects the size restriction, it is not ungrammatical. If that is correct, it demonstrates that NQ-NP constructions project DP and thus cannot appear in predicate position of nominal predication constructions, due to the size restriction.

4.3.4.3 Impossible movement to DP

I have argued that Spec of DP for definite descriptions is occupied either by a demonstrative or a null Operator by demonstrating the blocking evidence of an element outside the associated noun phrase in Chapter 2 and by showing an Agree relation between the operator and an element in subject position within nominal predication constructions in Chapter 3. This suggests that no element can move to Spec of DP because an EPP feature on D is already satisfied by a demonstrative or a null Operator. By implementing this idea, I will show that the NQs in definite expressions undergo unnecessary movement to Spec of DP, leading to ungrammaticality.

Let us look at the simple nominal collocation constructions in (26), repeated below:

(26) a. Suzuki sensei-wa [(sono) watasitati **3-nin**]-o sikatta.

professor-Top those/the us CI-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) us three.’

b. Suzuki sensei-wa [(sono) anatatati **3-nin**]-o sikatta no?

professor-Top those/the you(pl) CI-Acc scolded Q

‘(Lit.) Did Prof. Suzuki scold (those/the) you three?’

c. Suzuki sensei-wa [(sono) karera **3-nin**]-o sikatta.

professor-Top those/the them Cl-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) them three.’

The NQ predicates cannot move to the left of the subjects in (24), repeated below, however.

(24) a. *Suzuki sensei-wa [(sono) **3-nin** watasitai]-o sikatta.

professor-Top those/the Cl us-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) three us.’

b. *Suzuki sensei-wa [(sono) **3-nin** anatatati]-o sikatta no?

professor-Top those/the Cl you(pl)-Acc scolded Q

‘(Lit.) Did Prof. Suzuki scold (those/the) three you?’

c. *Suzuki sensei-wa [(sono) **3-nin** karera]-o sikatta.

professor-Top those/the Cl them-Acc scolded

‘(Lit.) Prof. Suzuki scolded (those/the) three them.’

In these examples, the expressions are ungrammatical whether a demonstrative exists in the left periphery or not. In contrast to these examples, the following examples with bare common noun phrases in the subject positions are grammatical as seen above in (5b), whose slight modified example is below in (61).

(61) [5-nin gakusei]-ga kita.

Cl student-Nom came

I argue that the difference between these two types of constructions in (24) and (61) is attributed to Spec of DP. That is, in the ungrammatical NQ-pronoun constructions in (24), the Spec of DP is filled by a null Operator or a demonstrative and thus the movement of NQ to the Spec is not wanted. This makes the expression ungrammatical. The structure of the ungrammatical expressions is illustrated in (62):

(62) * $[_{DP}$ a null Operator/demonstrative NQ_i , $[_{NumP}$ t_i]]

This is also true in the case with a demonstrative following NQs in (63), whose structure is in (64).

(63) a. *Keisatu-wa buji [3-nin kono karera]-o hogosita
police-Top safely Cl these them-Acc protected

b. *Keisatu-wa buji [3-nin kono karera]-o hogosita
police-Top safely Cl these them-Acc protected

(64) $[_{DP}$ (* NQ_i), demonstrative $[_{NumP}$.[pronoun t_i]]]

In (64), the presence of a demonstrative does not require extra element(s) (such as NQ in this case) to appear in Spec of DP and thus the movement of a NQ to Spec DP causes the ungrammaticality, as in the case of (62). That is, DP is not allowed to entertain multiple

elements in it, due to the lack of a motivation of having extra elements in Spec of DP.⁹⁴

This supports the hypothesis in (6), repeated below.

(6) Adjunction to the maximal projection of nominal arguments is disallowed.

(Chomsky 1986:6)

In the case of NQ-NP constructions as in (61) (unlike in the case of NQ-pronoun constructions in (24),) their nominal expressions do not necessarily call for the presence of a demonstrative or a null Operator (which obligatorily bears semantic definiteness as argued in the previous chapters.) Thus, an NQ predicate in the nominal collocation constructions can move to the left periphery in (65):

(65) [DP NQ_i [NumP [NP NP *t_i*]]

The fact that NQ-NP constructions should be obligatorily indefinite is accounted for by the illustration in (65): Spec of DP is not filled with a demonstrative or null Operator and thus is able to be filled with NQ predicates.

Before closing, let us consider one more example in (5), repeated below.

(5) a. [(Yakamasii) 5-nin-no gakusei]-ga kita.

noisy CI-Gen student-Nom came

‘(The) five noisy students came.’

⁹⁴ In the following subsection, further examination on this issue is conducted.

b. [*Yakamasii) 5-nin gakusei]-ga kita.
 noisy Cl student-Nom came

(Fujita 1994:29-30)

In (5), the adjectives semantically modify the noun phrases and not the NQs that immediately precede them. If it is assumed that the adjectives are raised across the NQs for some reasons in both cases, the ungrammaticality of (5a) follows from the “doubly-filled D filter” once the NQs in the constructions are in DP in (66):

(66) *_{[DP adjective [DP NQ NP]]}

This also supports the hypothesis in (6), repeated below.

(6) Adjunction to the maximal projection of nominal arguments is disallowed.

(Chomsky 1986:6)

Why does DP not allow for adjunction? This comes from the universality of the relation between argumenthood and D, specifically, for noun phrases with definite/discourse anaphoric interpretations (Longobardi 1994). That is, D serves as the referential anchor of noun phrases in that it requires elements with interpretable features that create referentiality. It enables noun phrases to refer deictically/referentially and referentiality is not recursively specified by having multiple DPs. If this is correct, Japanese projects DPs and respects the general ban on DP.

4.4 Conclusion

In this chapter, I investigated the left periphery of noun phrases by examining NQ-NP constructions and argued that the NQs in the constructions are located in Spec of DP. Although this type of constructions appeared to be similar to that of NQ-Gen-NP constructions (see Chapter 3) as Watanabe (2006) treats them equally in syntax, I showed that these two constructions are different in derivation. First, I proved that the NQs in NQ-NP constructions are part of the noun phrases and form constituents with the associated noun phrases in 4.1. After observing the three more characteristic properties of the constructions in 4.2, in 4.3, I reviewed the three extant analyses of the left periphery of noun phrases and applied them to NQ-NP constructions in order to account for the properties of the constructions. In particular, following Bennis, Corver and den Dikken (1998) I argued that the movement of NQs (to Spec of DP) in NQ-NP construction is an A-bar movement to the highest phrase, probably DP (whereas predicate-inversion of the NQs in NQ-Gen-NP constructions is the result of an A movement to Spec of NumP). In order to support this A-bar movement analysis of NQs I offered the three arguments to support the main claim of the DP hypothesis for Japanese: (i) the reciprocal *otagai* ‘each other’, (ii) the size restriction, and (iii) the unnecessary movement to DP and the ban on adjunction to DP. If the current argument of the DP analysis is correct, then NQs is present at the Spec of DP

in Japanese, particularly, in NQ-NP constructions. This analysis is not unique to Japanese, however.

Look at Hebrew examples in (67).

(67) a. šlošet ha-sfarim

three Def-books

‘the three books’

b. *ha-šlošet sfarim

the three books

c. kol esrot alfey ha-anašim

every tens thousands the-men

‘all tens of thousands of men’

Danon (1996) argues that the NQs in (67) are in DP.⁹⁵ If this is the case, the analysis of Japanese NQs in DP is not unique to Japanese.

Dutch also allows NQs in DP in certain cases.⁹⁶

(68) a. de drie studenten

the three students

⁹⁵ Shlonsky (1991) argues that universal quantifiers that precede the definite article should be analyzed as heading a QP which selects a DP complement. Pereltsvaig (2006) reanalyzes Shlonsky’s QP analysis under the DP hypothesis, in which quantifiers are in D for Hebrew.

⁹⁶ I owe the Dutch data to Marcel den Dikken.

b. *drie de studenten

three the students

c. al de studenten

all the students

d. alle drie de studenten

all three the students

In (68a,b), the numerals need to follow the determiner; otherwise the expression is ungrammatical. In (68c,d), the universal quantifier and the numeral precede the determiner. Particularly, the numeral precedes the determiner when the universal quantifier appears in the left periphery in (68d). If the determiner always appears at the head of DP, the data shows that numeral (as well as the universal quantifier) appears in Spec of DP.⁹⁷ These examples show that NQs can be in Spec of DP like in the case of NQs in NQ-NP constructions.

One note is that the current argument supports the argument of Chapter 2, where I argued the specificity effects of NQs under the assumption that Spec of DP is the only escape hatch for movement. This assumption is supported if the current argument is correct. The argument on the specificity effects was based on the observations that NQs (NQs)

⁹⁷ Den Dikken points out to me that the universal quantifier in the left periphery has an emphatic reading. This appears to be parallel to the reading of Japanese NQ-NP constructions in (7'). I will leave open the detail of the analysis.

cannot generally move outside definite noun phrases, unlike in the case of indefinite noun phrases. The examples include nominal collocation constructions with personal pronouns and even bare noun phrases. The impossibility of NQ movement is attributed to the left periphery of the definite noun phrases in (69).

(69) [*NQ_i [DP t'_i [DP demonstrative/Operator [D' t_i]]]

In (69), the NQ, which originates within the noun phrase, cannot be raised outside the definite noun phrase due to the presence of a demonstrative or a null Operator in Spec of DP. The raised NQ predicate violates “doubly-filled D filter” because it needs to adjoin to DP, on the way outside the noun phrase due to the presence of a demonstrative or an Operator in Spec of DP. If the current argument is on the right track, the analysis of Japanese NQs in NQ-NP constructions supports the DP hypothesis for the articleless language. Fukui’s non-closedness argument of Japanese nominal argument is not correct and no parameterization on the ban on adjunction to DP is necessary.

5 Conclusion

In the current work, I examined nominal collocation constructions and argued for the Determiner Phrase (DP) hypothesis for Japanese, a determinerless language. In Chapter 2, I re-examined Fukui's (1986) NP hypothesis that Japanese projects only NPs and thus that Japanese does not close off noun phrases even when the noun phrases have definite interpretations (with/without demonstratives) and offered the argument that the uniform treatment of all noun phrases as NPs cannot capture the differences in behavior between personal pronouns and common nouns in nominal collocation constructions in 2.1. In 2.2, I examined Japanese Pronoun-noun constructions and showed that personal pronouns behave differently from common nouns in that they form predication relations with common noun phrases within noun phrases like *us linguists* in English, on the basis of the four pieces of evidence: the (im)possibility of nominal combinations, its pitch accent change, partial modification and the availability of a plural morpheme. At first, Japanese Pronoun-noun constructions appeared to behave like their English equivalents in that pronouns function as 'determiners' (Postal 1969). However, further examination demonstrated that the personal pronouns in the Japanese constructions do not function as 'determiners' unlike in the case of English. Japanese pronouns in the constructions at hand are located in a lower position within noun phrases and thus the nominal collocation constructions allow demonstratives

and adjectival modifiers to appear in the left periphery. In particular, the fact that demonstratives in anaphoric use must be present in the left periphery was taken to argue for the presence of DP in Japanese once I reviewed semantic treatments of demonstrative descriptions and definite descriptions, crosslinguistic distributions and syntactic analyses of them in the literature. Once the possibility of the DP hypothesis was opened up, in 2.3 I demonstrated that the DP hypothesis is supported for Japanese nominal collocation constructions by showing that they are prohibited from being present where (full) DPs are cross-linguistically prohibited: in vocative use and DP within another larger DP in which predication relations are formed. In 2.4, I further supported the DP hypothesis in terms of specificity effects. Based on the observation that the associated NPs cannot have definite interpretations when NQs are outside their host noun phrases, I argued that NQs cannot move outside of DP when its Spec is filled by a demonstrative or a null Operator under the assumption that the Spec of DP is the only escape hatch for A-bar movement out of a noun phrase.

The discussions in Chapter 3 were divided into two parts: the first part was the examination of Noun-Gen-pronoun constructions in comparison to Pronoun-noun constructions; and the second part involved the examination of the internal structure of the constructions in relation to the checking operations and the DP hypothesis. First, I

investigated the status of the genitive marker in the constructions by reviewing its distribution observed in the literature in 3.1. In 3.2, after applying the five previous analyses and showing that the first four of the analyses are not able to capture the status of the genitive marker in Noun-Gen-pronoun constructions, I adopted the copular analysis of the genitive marker for Noun-Gen-pronoun constructions. However, the analysis does not account for the syntactic relation between Pronoun-noun constructions and Noun-Gen-pronoun constructions. I replicated den Dikken's (1998, 2006) nominal predication analysis for Noun-Gen-pronoun constructions. In particular, I argued that the nouns preceding the pronouns in the constructions undergo predicate-inversion on the basis of the discussion of impossibility of further movement of the inverted predicate nouns. Since the genitive marker appears when the predicate NP undergoes A-movement to Spec of NumP, I concluded that the genitive marker is the realization of Num.

Once having established the predicate-inversion analysis for Noun-Gen-pronoun constructions, in the second half of 3.3 I extended the movement analysis to further data and showed that only bare common NP predicates are allowed to invert and that the inversion faces three restrictions: (i) plural NP predicates, (ii) NQ predicates and (iii) proper noun predicates cannot be inverted when the subjects are pronominal in the constructions. As for the first case, I argued because predicate-inversion is sensitive to

'heaviness' in Kishimoto's (2000) sense: only 'light' nominal predicates can undergo predicate-inversion like 'light' verbs (i.e. auxiliary verbs). Put differently, noun phrases with plural morphemes are too 'heavy' to undergo movement to Spec of NumP and EPP on Num remains unchecked, which causes the ungrammaticality. As for the case of the impossible NQ predicate-inversion, the movement of NQ predicates to Spec of NumP itself is not ungrammatical. Under the assumption of a feature uniquely related to D (D feature), inverted NQ predicates function as defective interveners in the Agree relation between D and the pronominal subjects. More particularly, when the pronouns in the subject position attempt to enter into an Agree relation with D for an uninterpretable [+D] feature, the inverted NQs with the [-D] property in Spec of NumP are closer to the subjects than D and intervene in the Agree relation. Because of the failure of the Agree relation of the pronominal subjects with D, the uninterpretable feature on the pronoun remains unchecked, causing the ungrammaticality. If this argument is correct, it directly provides evidence for the DP hypothesis for Japanese. As for the third case of proper nouns, they appear in the subject position like personal pronouns and in the predicate position like common noun phrases. In the latter case, they cannot undergo predicate-inversion because they are too 'heavy' to get raised to Spec of Num. In the former case, NQ predicates cannot undergo predicate-inversion because they function as interveners and the D features on the proper

nouns remain unchecked, leading to the ungrammaticality. This argument is also in favor of the DP hypothesis. In the last subsection of this Chapter, I answered the question why NQ-Gen-noun constructions are grammatical, unlike NQ-pronoun constructions: the common noun phrases in the subject position do not possess a D feature; and thus the inverted NQ predicates do not function as defective interveners.

In Chapter 4, I detailed the left periphery of nominal collocation constructions and defended the assumption made in the discussion of specificity effects in Chapter 2 that DP does not allow for adjunction by examining NQ-NP constructions. Establishing first that the NQs in the constructions remain within their associated noun phrases by offering the three pieces of evidence, I subsequently applied the three extant analyses of the left periphery of noun phrases to Japanese NQ-NP constructions. Among the three analyses, I showed that the analysis of Bennis, Corver and den Dikken (1998) for Dutch is readily applied to the Japanese constructions without modifications and argued that Japanese showed A- and A-bar movement within noun phrases, parallel to Dutch. In particular, NQs in the constructions undergo A-bar movement to Spec of DP. When the Spec of DP is filled by another element such as a demonstrative or a null Operator, NQs cannot move into the Spec of DP. Such movement would be redundant in this case since EPP in D is already checked by a demonstrative or a null Operator and no further element is required. The fact

that NQ-NP constructions do not allow for adjectival modifiers while NQ-Gen-NP constructions permit it was also accounted for by the DP hypothesis. I claimed that the ban on adjectival adjunction follows from the ban on adjunction to DP. The reason that DP does not allow for adjunction is that it serves as the referential anchor of noun phrases in that it requires elements with interpretable features that create referentiality. It enables noun phrases to refer deictically/referentially, and referentiality is not recursively specified. If this is correct, in turn, Japanese projects DPs and respects the general ban on adjunction to DP. If this is apparent, it shows the way that (semantic) definiteness is syntactically wired in DP. The seemingly arguments against the DP hypothesis for Japanese due to the lack of determiners have been nullified under the proposed nominal predication hypothesis, particularly, for definite noun phrases including personal pronouns and proper nouns. If the current argument is correct, Japanese projects DP although some elements in DP such as a null Operator and/or a D head may be phonologically null.⁹⁸ The difference in DP is cross-linguistically reduced to morpho-phonological realizations of DP, which differ from language to language (Progovác 1998 for Serbo-Croatian, Cinque 1999 for various languages, Schmitt and Munn 1999 for Brazilian Portuguese, Danon 2006 for Hebrew, Park 2008 for Korean).

⁹⁸ Tateishi (1989) argues that Case markers in Japanese are D heads under the head-finality assumption. If this is the case, then, the D head is head-final while the head of a phrase which is realized as the genitive marker is head-initial. I consider this possibility of the case morphology as D in Chapter 1 and Appendix 1 and suggest that it probably is not tenable. See also Footnote 59.

Appendix 1: Are Case markers D heads?

Some linguists argue that Case markers attached to argument nominals project functional categories like D (Tateishi 1989, Löbel 1994, Kakegawa 2003). This section aims to show that a Case marking may not a realization of D for Japanese.

Consider the nominal expressions in (1) and their structure in (2).

(1) [John]-ga [ringo]-o tabeta.

Nom apple-Acc ate

‘John ate an apple.’

(2) [DP [D' [NP NP] -ga/-o]]

Under the hypothesis of the case morphology as D, the nominative Case marker *-ga* and the accusative Case marker *-o* project their own projections (DPs) taking NPs as their complements in (2). Tateishi (1989) connects the (optional) deletion of Case markers in colloquial speech with D in relation to lexical government, based on the fact that the accusative Case marker *-o* is droppable while the nominative Case marker *-ga* does not have the option (Saito 1985; Löbel 1994, but cf. Shibatani and Kageyama 1988, 453 for relevant data) in (3):

(3) Ken{-ga/* \emptyset } Naomi {-o/ \emptyset } semeta.
 Nom Acc blamed

‘Ken blamed Naomi’

Tateishi argues that the object marker is omissible, due to the requirement of lexical government by verbs whereas the subject cannot be omitted because the lack of the lexical government. If Tateishi’s argument is correct, one may relate the Case marker deletion of object bare noun phrases to the distribution of bare noun phrases in the Romance languages. In these languages, bare nouns are excluded from preverbal subject position, but admitted in internal argument position (Longobardi 1994, 612-616). While Tateishi’s hypothesis is attractive because of the ‘visibility’ of D, it is not empirically unproblematic, however. One clear difference between the above omission of Japanese Case-marker and bare nouns in Romance languages is that the former is not sensitive to (in)definiteness while the latter is obligatorily indefinite.

More the presence/absence of Case markers is irrelevant to specificity effects, unlike in the case of the presence/absence of the determiner in English (See 2.4.5).

Consider the following two sets of examples in (4):

(4) a. Suzuki sensei-wa [karera 3-nin](-o) sikatta yo.
 professor-Top them Cl-Acc scolded Prt

‘Prof. professor scolded them three.’

b. *[3-nin]_i Suzuki sensei-wa [karera t_i](-o) sikatta.
 Cl professor-Top them-Acc scolded

(5) a. Suzuki sensei-wa [gakusei 3-nin](-o) sikatta yo.
 professor-Top student Cl-Acc scolded Prt

‘Prof. Suzuki scolded three students.’

b. [3-nin]_i Suzuki sensei-wa [gakusei t_i](-o) sikatta yo.
 Cl professor-Top student-Acc scolded Prt

‘Prof. Suzuki scolded three students.’

In (4) and (5) the object may not obligatorily be attached by the object marker in colloquial speech. In (4b), the numeral classifier (NQ) cannot be float away from the associated noun phrase regardless of the presence/absence of the Case marker, whereas in (5b) the NQ is allowed to move outside the associated noun phrase independently of the presence/absence of the Case marker. This fact is different from the following English examples in (6), which are repeated from (81) of Chapter 2):

(6) a. Who_i did you see [a picture of t_i]? (Enç 1991)

b. *Who_i did you see [the picture of t_i]? (Enç 1991)

c. *Who did Fred read [the story about [e]]? (Fiengo and Higginbotham 1981)

In (6b,c), wh-words cannot move outside the noun phrases when the expressions possess the definite determiner unlike in the case of the indefinite determiner in (6a). The presence/absence of Case markers cannot capture specificity effects in (4) and (5). It is clear that a case morphology is irrelevant to the obligatoriness of a demonstrative or a null Operator in Spec of DP.

One may say that a Japanese case morphology just guarantees the presence of D and not the absence/presence of an element in Spec of DP in Japanese like T/I in TP/IP of a clause. If this is the case, however, why do Pronoun-noun constructions obligatorily require the presence of a demonstrative or a null Operator in Spec of DP and thus block NQs from floating outside the associated noun phrases? Under the assumption that common noun phrases are always predicative in syntax (Szabolcsi 1987, 1994; Longobardi 1994; Campbell 1996), the nominal expressions following the personal pronouns in the constructions do not control the presence of an element in Spec of DP, either (besides a case morphology). It is the pronouns that are correlated to the presence of demonstratives or a null Operator. This distinctive correlation between the elements in DPs and the pronouns at a lower position in the constructions can be regarded to parallel the correlation

between definite DPs and demonstratives at a lower position in Spanish observed by Brugè (1996) in (7):

- (7) a. el libro **este**
the book this
- b. *libro **este**
- c. *un libro **este**
a book this

Brugè argues that demonstratives, which are inherently definite, are relevant to DP even when they appear postnominally in the same way as prenominally and thus that the absence of the definite determiner or the presence of the indefinite determiner in DP is prohibited in (7b,c) in comparison with the case with the definite determiner in (7a). Following Brugè and the main argument of Agree operation between pronouns in the subject position and D in Chapter 3, I argue that the pronouns at a lower position in Japanese Pronoun-noun constructions, which are also inherently definite, trigger the obligatory presence of a demonstrative or a null Operator in DP, in favor of the DP hypothesis. If this is the case, Japanese definite DPs and a case morphology are not correlated to each other. The case morphology hypothesis as D is not tenable.

Before closing up this section, I will attempt to give a feasible answer to the question of whether the position of a case morphology exists in syntax. Pronoun-noun constructions cannot occur in certain positions. One example is a case of predicate positions:

(8) *Watasi-wa bakamono-o [karera gakusei] to yonda.

I-Top fool-Acc them student Comp called

‘(Lit.) *I called fools them students.’

The predicate positions are generally not Case-assigning positions (Anderson 2004) and thus the ungrammaticality of (8) may result from the lack of the Case for the Pronoun-noun construction in the bracket. This suggests that a full DP cannot appear where a Case is not assigned.

Given the Case assumption, consider Pronoun-noun constructions in coordination construction in (9) and Ellipsis constructions in (10):

(9) [Watasitati gakusei]-to karera sensei-ga hasitta.

we student-and them professors-Nom ran

‘Us students and them professors ran.’

(10) A. Dare-ga kono geimu-o sitaino.

Who-Nom this game-Acc want.do

‘Who wants to play this game?’

a. [Karera kodomotati]

them children

‘them children’

b. Mosi [watasitati kodomo] janakereba, dare-ga kare-o sewasuruno.

if we child are.not who-Nom him-Acc take.care

‘Who’s to take care of him if not us/*we children?’

The first conjunct in Pronoun-noun constructions in (9), the construction in (10a), an answering form to the question in (10A), and the construction in the subject position of the conditional clause in (10b) do not possess overt Case markers as well as Case assigners and these expressions are still grammatical. According to Schütze (2001), a default case licenses DPs that otherwise violate the Case Filter in these constructions cross-linguistically. I assume that the noun phrases of these examples in the brackets satisfy the Case theory by receiving a default case. If this is correct, Pronoun-noun constructions occur where a Case is assigned/checked whereas they cannot appear where a Case is not assigned/checked, in

support of DP hypothesis. Notice that a case morphology is absent where a default case is assigned/checked. Apparently DPs do not always require a case morphology in Japanese.

To summarize, having established the DP hypothesis for Japanese Pronoun-noun constructions in this work, I argued that they need Case licensing, though case morphology is not (always) required by DPs in Japanese.

Appendix 2: Is the quantificational particle a head D?

I will consider the possibility of *-ka* attaching to indeterminate pronouns as D (Watanabe 1992, Takahashi 2002) and suggest that it may not be a case. After observing the distribution of the particle in Section 1, I will examine the possibility of quantificational particle *-ka* as D in Section 2.

2.1 Indeterminate constructions and the particle *-ka*

Japanese indeterminate pronouns such as *nani* and *dare* are attached by the quantificational particle *-ka* and combine with common noun phrases (1):

- (1) a. Taro-wa [nani-ka henna mono]-o mita.

Top NANI-KA strange thing-Acc saw

‘Taro saw something strange.’

- b. Taro-wa [dare-ka henna hito]-o mita.

Top DARE-KA strange person-Acc saw

‘Taro saw someone strange.’

The constructions do not allow for adjectival modification in the left periphery in (2):

- (2) a. *Taro-wa [henna nani-ka mono]-o mita.

Top strange NANI-KA thing-Acc saw

b. *Taro-wa [henna dare-ka hito]-o mita.

Top strange DARE-KA person-Acc saw

Moreover, the common noun phrase predicates within the constructions cannot get raised across the indeterminate pronouns whether the genitive marker *-no* is present/absent, unlike in the case of Pronoun-noun constructions (see Chapter 3):

(3) a. *John-wa [henna isi(-no) nani-ka]-o hirotta.

Top strange stone-Gen Nani-KA-Acc picked.up

b. *[henna dansei(-no) dare-ka]-ga kita.

strange man-Gen DARE-KA-Nom came

Even when quantifiers are replaced with common noun phrases to follow in (4), they cannot get raised across the indeterminate pronouns with the particle (5).

(4) a. John-wa [nani-ka (henna mono) suu-ko]-o teniireta-to itteita.

Top NANI-KA strange thing some-Cl-Acc gain-COMP said

‘John said that he gained some number (of some strange objects).’

b. John-wa [dare-ka (gakusei) suu-nin]-ni tegami-o kaita.

Top DARE-KA student some-Cl-to letter-Acc wrote

‘John wrote letters to some number (of some students).’

(5) a. *John-wa [suu-ko(-no) nani-ka (henna mono)]-o teniireta-to itteita.

Top some-Cl-Gen NANI-KA strange thing-Acc gain-COMP said

‘John said that he gained some number (of some strange objects).’

b. *John-wa [suu-nin(-no) dare-ka (gakusei)]-ni tegami-o kaita.

Top some-Cl-Gen DARE-KA student-to letter-Acc wrote

‘John wrote letters to some number (of some students).’

While the quantifiers precede indeterminate pronouns with the quantificational particle in

(4), they cannot be inverted in (5).

Indeterminate nominal constructions do not allow for demonstratives, either.

(6) A. John-wa [nani-ka (henna isi)]-o hirota. Sosite...

Top NANI-KA strange stone-Acc picked.up And...

‘I picked up some strange stone. And...’

a. *[Sono nani-ka henna isi]-o uti-ni motikaetta.

that/the NANI-KA strange stone-Acc home-to taken

b. [Sono henna isi]-o uti-ni motikaetta.

that/the strange stone-Acc home-to taken

‘I took that/the strange stone to the house.’

In (6), the demonstrative cannot appear in the left periphery. These observations show that indeterminate pronouns attached by the particle *-ka* do not allow for any kind of elements in the periphery (unlike personal pronouns, which allow adjectival modification and demonstratives but not quantificational expressions as shown in the previous Chapters.)

The following is the summary of our observations.

(7) * [adjectival modifier/ NQ/demonstrative [indeterminate pronoun-*ka* [...]]]

Indeterminate constructions appear to respect the ban on nominal argument in (8) (which is (6) in Chapter 4).

(8) Adjunction to the maximal projection of nominal arguments is disallowed.

According to this ban, indeterminate in the constructions are located at the highest position so that their phrases do not allow for elements to appear at the left periphery. This suggests that they project DPs and that the highest phrase DP prevents elements from adjoining to it.

If this is the case, what is the exact structure in DP? Does it suggest that the particle *-ka* is in D as Watanabe (1992) and Takahashi (2002) assume?

In the following subsection, I will consider indeterminate collocation constructions, particularly, the status of *-ka* attaching to indeterminate pronouns.

2.2 Is the quantificational particle *-ka* the D head?

According to Abney (1987) the English quantificational phrases in (9) are analyzed as having the structures in (10), respectively (Kishimoto 2000).

- (9) a. everyone
b. something
c. any book
- (10) a. [DP [D every [NP one]]
b. [DP [D some [NP thing]]
c. [DP [D any [NP book]]

Watanabe (1992, 2004) posit the structures in (11) for Japanese various quantificational expressions in (12). The following examples and their structures, originated in Watanabe (1992), are cited from Takahashi (2002).⁹⁹

- (11) a. DAre_{mo} ‘everyone’
b. nanika ‘something’
c. daREMO ‘anyone’
- (12) a. [DP [NP DAre] [D mo]]
b. [DP [NP dare] [D ka]]

⁹⁹ The expression in (12a) is different from the one in (12c) in that the intonation in the former appears on the first sound, whereas in the latter the intonation falls onto the last sound. I will not consider the structure of (12c) here though the behaviors of *-mo* appear to be the same as/similar to those of *-ka*. See Footnote 101.

c. [DP [NP daRE] [D MO]]

Takahashi (2002:576)

Takahashi (2002: 576) notes that one important difference between English and Japanese in (10) and (12) is that the former selects complements headed by common noun phrases whereas the latter cannot; they must select the class of nominals. That is, according to Takahashi's analysis, the Japanese quantificational particle in D are selective and thus only indeterminate such as *dare* and *nani* are complements of the D head, under the implicit head-finality assumption for Japanese. According Takahashi (2002:577), the D head with the particles *-ka* or *-mo* cannot take common noun phrases in (13):

(13) a. *[DP [NP hito] [D mo]]

person every

b. *[DP [NP mono] [D ka]]

thing some

c. *[DP [NP hon] [D mo]]

book any

Takahashi (2002:577)

(14) [DP [modification [NP indeterminate pronoun]] [D ka/mo]]

Under the head-finality assumption, the quantificational particles sit in D taking indeterminate pronouns as complements. Although the analysis in (14) tries to capture the

similarity in structure between Japanese and English, it faces two problems. The first problem is that the fact Japanese indeterminate pronouns cannot allow for modifications cannot be captured under the NP hypothesis for the indeterminate pronouns in (15), unlike personal pronouns (see Chapter 2).

(15) a. John-wa [(**henna*) nani-ka]-o hirotta.

Top strange NANI-KA-Acc picked.up¹⁰⁰

b. [(**Henna*) dare-ka]-ga kita.

strange DARE-KA-Nom came

If indeterminates are the NP complements of D as Watanabe and Takahashi assume, it is not clear why they do not allow for modification in (15). Takahashi argues that a c-command relation is required between indeterminate pronouns and the quantificational particles: the particle *-ka* in D needs to c-command the associated indeterminate pronouns. However, the presence of modifiers does not violate the c-command relation and thus modification should be allowed in (15). One might attribute the ungrammaticality of (15) to their semantics rather than their syntax. That is, some NPs including indeterminate pronouns are not only syntactically but also semantically ‘indeterminate’ and thus they are semantically incompatible with modification. If this is the case, the impossibility of

¹⁰⁰ Note that the capital letters are used for the translation of indeterminates.

modification in won't be problematic. Even if this is the case, however, Watanabe and Takahashi's analysis cannot account for the examples in (1) and (2) above.¹⁰¹

The combinations of indeterminate and quantificational particle in (1) and (2) precede common noun phrases. If indeterminate pronouns project DPs and if these DPs take common noun phrase as complements, the following is the scheme in (16):

(16) *[_{DP} [_{DP} [_{NP} indeterminate pronoun] [_D ka]] NPs]]

The structure in (16) should be ungrammatical, due to the violation of the size restriction: A DP does not permit a full-DP within a smaller noun phrase for Japanese (as well as English). (See 2.3 and 4.3). Thus, that structure is not for the grammatical examples in (1) and (2).

This suggests that the treatment of *-ka* as D is not correct.

¹⁰¹ The indeterminate cannot combine with common nouns unlike the other indeterminate expression in (12a).

(i) *Taro-wa [DAREmo henna hito]-o nagutta.
 Top DARE-MO strange person-Acc punched
 '(Int.) Taro punched every strange person.'

Note also that Watanabe (2004) extends the analysis of the combination of indeterminates and the quantificational particles to Japanese wh-phrases as in the case of *dare* in the bracket in (iia), whose analysis is in (iib):

(ii) a. [dare]-ga ringo-o tabeta no.
 Who-Nom apple-Acc ate Prt
 'Who ate an apple?'
 b. [_{DP} dare [_D \emptyset]]

In (iib), the head of D is phonologically null and yet takes the quantificational phrase *dare* its complement. However, Japanese wh-expressions cannot combine with common noun phrases in (iii), like the universal quantificational expression in (i) above.

(iii) a. *[dare henna hito]-ga ringo-o tabeta no
 DARE strange person-Nom apple-Acc ate Prt
 '(Lit.) Who strange person ate apple?'
 b. *[nani (henna) object]-ga sora-no tonda no
 what strange object-Nom apple-Acc flew Prt
 'What (strange) object flew in the sky?'

This shows that not all indeterminates can be treated in the same way in syntax. However, I leave the analysis of these structures open for future research.

If the quantificational particle is treated as D, another unwelcome result follows.

Look at the following examples in (17) and (18):

- (17) a. Sensei-wa [gakusei nan-nin-ka]-o sikatta.
 professor-Top student IKU-CI-KA-Acc scolded

‘The professor scolded some students.’

- b. Ken-wa [ame iku-tu-ka]-o tabeta
 Top candy IKU-CI-KA-Acc ate

‘John ate some candies.’

- (18) a. Sono nan-nin-**ka**-no gakusei
 those/the NAN-CI-KA-Gen students

‘(Lit.) those/the some students’

- b. Kono iku-tu-**ka**-no ame
 these IKU-CI-KA-Gen candy

‘(Lit.) these some candies’

In (17), the quantificational particle *-ka* appears in the right periphery may or may not attach to the entire noun phrase. On the other hand, in (18), the combinations of the indeterminate pronoun, the classifier and the quantificational particle get moved across the head nouns, which possess demonstratives in the left periphery. If the indeterminate

particle is the realization of D in these examples, the structure of the noun phrases in (18) is as follows in (19):

(19) [DP demonstrative [XP NP [DP nannin [D' ka]]]]

A DP appears within a larger DP, which should be ungrammatical, contrary to fact, like in the case of (16) above. These examples demonstrate that *-ka* is not the head of D. What is the status of *-ka*? I assume that the particle *-ka* does not have a position in syntax but is a realization of quantificational properties on indeterminate pronouns. If this is correct, the schemes for indeterminate constructions in (1), (2), (15) and (18) are illustrated in (20).

(20) a. [DP indeterminate pronoun-ka [D' [NP...]]] (cf. 16)

b. [DP demonstrative [XP NP indeterminate pronouns-ka]]] (cf. 19)

In (20), the quantificational particles are treated as phonetic/phonological realizations of indeterminacy and do not have a position like D in syntax.

Appendix 3: Abbreviations

Acc	Accusative Case
Adj	Adjective
Comp	Complementizer
Dat	Dative Case
Def	Definite
DP	Determiner Phrase
Dem	Demonstrative
Gen	Genitive Case
NP	Noun Phrase
Intended	Intended reading
Lit.	Literal translation
Nom	Nominative Case
Pl	Plural
Prt	Particle
Sfp	Sentence final particle
Sg	Singular
Top	Topic marker
Q	Question Indic

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