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No as the Licenser of the Null Nominal Complement Constructions in Japanese*

Koji Hoshi

Abstract

*This paper investigates into the structure of noun phrases in Japanese, focusing on issues surrounding a subtype of the particle *no* in standard Japanese/Tokyo dialect and its equivalents in other dialects. Based on but extending Saito and Murasugi's (1990) insight, I will claim that there is a functional head *D* which functions as the "potential null nominal complement licensor" in Japanese, apart from a *D* as the locus of the genitive Case marker. In so doing, I will put forth a PF licensing condition on the structure of the DP and a PF economy condition on lexical realization, discussing some of the consequences of my proposal as well in connection with two types of the complementizer *C* and various constructions related to the particle *no* in Japanese.*

1. Issue

It has been observed in the literature that almost all children acquiring Japanese (around the age 2 to 4) overgenerate the particle *no* in nominal modification contexts (cf. Harada 1980; Clancy 1985, and Murasugi 1991 among others), as illustrated in (1)–(3) below:¹⁾

- (1) [[[buta san-ga tataiteiru] **no**] taiko] [M: 2; 11]
piggy-Nom is-hitting no drum
'the drum that the piggy is playing'
- (2) [[[ohana motteiru] **no**] wanwa] [T: 2; 6]
flower is-holding no doggie
'the doggie that is holding a flower'
- (3) [[[syuukuriimu tukutteru] **no**] nioi] [E: 2;11]
cream puffs making-is no smell
'the smell of someone making cream puffs'

Murasugi (1991, 2000a,b) advocates that the relevant particle *no* in (1)–(3) is a complementizer C in Japanese.²⁾ Setting aside the case in (3) for the time being, as far as (1) and (2) are concerned, this claim is clearly inconsonant with Kayne’s (1994) original analysis of N-final relatives in (4) below:³⁾

(4) $[_{DP} [_{IP} \dots t_i \dots]_j [_{DP} D [_{CP} DP_i [_{CP} C t_j]]]]$ (N-final relative)

If the relevant particle *no* is a complementizer C, as argued in Murasugi (1991, 2000a,b), then Kayne’s N-final relative structure predicts that it should follow the relative head at surface, contrary to fact in (1)–(2). Indeed, she takes this fact as one of the reasons for rejecting Kayne’s (1994) analysis of N-final relatives in Japanese. Is there really no way out of this aporia while maintaining Kayne’s original idea? One theoretical possibility is to assume that the instance of the particle *no* in N-final modification in Japanese is not C but D in the D-CP structure, as illustrated in (5):

(5) $[_{DP} [_{IP} \dots t_i \dots]_j [_{DP} D (= \textit{no}) [_{CP} DP_i [_{CP} C t_j]]]]$ (N-final relative)

In fact, Zushi (1996) entertains this possibility within the framework of Kayne (1994), proposing to analyze the subcase of the element *no* in Japanese as D. However, Murasugi (2000a:255) casts off the idea (without any arguments), stating that:

“Within Kayne’s antisymmetry analysis, it seems difficult to maintain that the over-generated *no* is of the category C. This is so, since if it were a C, it should follow the relative head. It is possible to pursue the hypothesis that it is a D, but it is not clear to me at this point that this approach is promising. It has been proposed in the literature (for example, in Zushi (1996) that the Japanese genitive Case marker *no* is generated under D. But if the *no* in (65) is the genitive Case marker, it is not clear why it appears only in child Japanese, and is not allowed in adult Japanese. That is, it is not clear how children can retreat from the overgeneration of *no*.”

The main goal of this paper is to argue that the relevant particle *no* in Japanese is to be considered as an instance of D rather than C by investigating the behavior of the particle *no* in the contexts of what I refer to as “null nominal complement constructions” in Japanese. Crucially, however, unlike Zushi (1996), I will claim that the relevant D head is not the locus of genitive Case marker but it functions as the “potential null nominal complement licenser,” which is compatible with the Kaynean analysis of N-final modification structures in Japanese.

If my analysis is not off the mark, there is no such a thing as a complementizer *no* in Japanese, contra the standard view in the Japanese syntax literature, including Murasugi (1991, 2000a,b) (cf. also Hoshi 2003 for some discussion on the complementizer system in Japanese).

This paper is structured as follows. In section 2, I will observe the parallelism between the so-called “pronominal” *no* and “nominalizer/complementizer” *no* in Japanese, concluding that there is no need for differentiating between the two. Furthermore, I will point out crucial disparities between the element *no* in Japanese on one hand and the pronominal element *one* and the complementizer *that* in English on the other hand, establishing that the element *no* in Japanese does not belong to either of them. Then, in section 3, I will propose to analyze the formative *no* in question as an instance of the functional category D in Japanese, functioning as the “potential licenser of a phonologically null nominal complement.” I will also put forth a PF licensing condition on the structure of the DP and a PF economy condition on lexical realization. At the same time, solutions to the puzzles pointed out in section 2 will be provided based on the assumptions in this section. In section 4, I will consider some consequences of my proposal in section 3: the existence of two types of complementizer C and the particular syntactic analyses of various related constructions in Japanese. Section 5 concludes this paper.

2. The Status of *No*

2.1. Parallelism between the So-called “Pronominal” *No* and the “Nominalizer/Complementizer” *No*

In the tradition of Japanese syntax, among the uses of the particle *no* in standard Modern Japanese, at least the following four major uses have been recognized (cf. Murasugi 1991, Takeda 1999, and references therein):⁴⁾

- (6) Genitive Case Marker:
Chomsky-no hon
-Gen book
‘Chomsky’s book’
- (7) Pronominal/Nominal Pro-form:
akai-no
red one
‘a/the red one’

(8) Nominalizer:

John-wa [[Mary-ga zibun-o aisiteiru]-no]-o sitteita
-Top -Nom self-Acc love -NML-Acc knew
'John knew that Mary loves him.'

(9) Complementizer:

[[Jonn-ga katta]-no]-wa Chomsky-no hon-o da.
-Nom bought Comp-Top -Gen book-Acc Copula
'It is Chomsky's book that John bought.'

In support of the clear dividing line to be drawn between (6) and (7)–(9), Takeda (1999) discusses telling facts concerning (i) the availability of Case particle attachment, (ii) the attributive ending of adjectival nouns, (iii) Kochi and Toyama dialects (cf. also Murasugi 1991), (iv) Old Japanese, and (v) Korean, among others. Observing a battery of the relevant data concerning Old Japanese, Korean, and a couple of dialects of Modern Japanese, Takeda (1999) concludes that although there is every reason to distinguish the use of *no* as the genitive Case marker from the others, there is no linguistically significant differences among the so-called “pronominal” *no*, “nominalizer” *no* and the complementizer *no* in Japanese. I will only cite the dialectal facts below, which suffices for the present purpose. Consider the following paradigms:

(10) Kochi Dialect:

- a. Mary-no hon (genitive Case marker)
-Gen book
'Mary's book'
- b. siroi-ga (nominal pro-form)
white
'white one'
- c. John-ga [[Mary-ga kita]-ga]-o sittyuu (koto) (nominalizer)
-Nom -Nom came -Acc know
'John knows that Mary came.'
- d. [[John-ga e koota]-ga]-wa hon(-o) da (complementizer)
-Nom bought -Top book-Acc copula
'What John bought is a book/books.'
- (= Takeda 1999:36, (22))

- (11) Toyama Dialect:
- a. John-no hon (genitive Case marker)
 -Gen book
 ‘John’s book’
 - b. siroi-ga (nominal pro-form)
 white
 ‘white one’
 - c. [[Yamada-ga atta]-ga]-wa Russell(-ni) da (complementizer)
 -Nom met -Top with copula
 ‘It was (with) Russell that Yamada met.’
 (= Takeda 1999:36–37, (23))

As is clear from the paradigms in (10)–(11), the genitive Case marker is realized as the element *no*, while the rest being realized as a different element *ga* uniformly in both dialects. The identical lexical realization of the uses other than the genitive Case marker use suggests that there is no strong need for differentiating among the nominal pro-form, nominalizer, and complementizer in Japanese.

The position that I would like to take with respect to the formative *no* in Modern Japanese is basically the same as the one in Takeda (1999) as far as this division of labor is concerned. However, unlike Takeda (1999), who identifies the categorial specification of *no/ga* in the cases other than the genitive Case marker as a lexical category N, I will claim that it should be analyzed as an instance of the functional category D in Japanese in what follows.⁵⁾

2.2. *No* ≠ *One/That*

There are pieces of empirical evidence in favor of **not** treating the element *no* in question on a par with the pronominal *one* or the complementizer *that* in English.

First, consider the following example in (12):

- (12) John-wa [_{DP} atarasii kuruma]-o kau tame-ni
 John-Top new car -Acc buy in order to
 [_{DP} hurui **no**]-o utta.
 old one –Acc sold
 ‘In order to buy a new car, John sold the old one.’

It has been standardly analyzed and assumed in the literature on Japanese syntax that the instance of the formative *no* in (12) is a nominal pro-form or a kind of pronoun on

a par with the English counterpart *one*. However, this assumption is merely based on translatability on the surface. There is a crucial difference between the pro-form *one* in English and its putative analogue *no* in Japanese. The pro-form *one* patterns with non-pronominal nouns with respect to pluralization, as illustrated in (13)–(14) below:

- (13) the **student(-s)** who worked hard and the **one(-s)** who did not worked hard
 (14) the **guy(-s)** who worked hard and the **one(-s)** who did not worked hard

On the other hand, the putative pro-form *no* behaves differently in this respect, as illustrated in (15)–(16) below:⁶⁾

- (15) [mazimeni sigoto-o yatta] **gakusei(-tati)** to
 hard work-Acc did student(-s) and
 [mazimeni sigoto-o yaranakatta] **no(*-tati)**
 hard work-Acc did not one(-s)
 ‘the student(-s) who worked hard and the one(-s) who did not worked hard’
 (16) [mazimeni sigoto-o yatta] **yatu(-ra)** to
 hard work-Acc did guy(-s) and
 [mazimeni sigoto-o yaranakatta] **no(*-ra)**
 hard work-Acc did not one(-s)
 ‘the guy(-s) who worked hard and the one(-s) who did not worked hard’

In (15)–(16), the elements *-tati* and *-ra* are “pluralizing” suffixal bound morphemes in Japanese to be morphologically attached to overt [+human] nouns (cf. Martin 1975). The ungrammaticality of (15)–(16) with *-tati* and *-ra* attached shows that the English pro-form *one* and the putative Japanese analogue *no* are different on this point.

As long as the putative pro-form *no* in Japanese is regarded as the analogue of the English pronominal *one*, the discrepancy observed between (13)–(14) and (15)–(16) remains mysterious. I will show that my analysis in this paper provides a natural solution to this problem in the next section.

Next, let us turn to the putative isomorphism between the English complementizer *that* and the Japanese *no*. It has been claimed in the literature that the CP in English headed by the complementizer *that* is not licensed by Case (cf. Stowell 1981). Stowell (1981) analyzes the examples such as (17) and (18) as involving extraposition and topicalization of the CP, respectively, in order to make them compatible with his Case-Resistance Principle, as formulated in (19):

- (17) John believes [that Mary is innocent].
 (18) [That Jenny is a good hostess] is self-evident.
 (19) The Case-Resistance Principle (CRP)
 Case may not be assigned to a category bearing a Case-assigning feature.
 (= Stowell 1981: 146, (66))

According to Stowell (1981), the finite tensed clause CP is analyzed as a category bearing a Case-assigning feature based on the [+tense] feature of the T head within it. Although attractive, such an approach has been attacked in the literature (cf. Safir 1985 and Kuwabara and Matsuyama 2001 among others). On top of that, in the current probe-goal system of Chomsky (2000, 2001a,b), structural Case is taken to be a reflex of an uninterpretable phi-set (ϕ), which is originally due to George and Kornfilt (1981), and the uninterpretable (or unvalued) Case-feature of the goal in a DP gets valued and erased by the operation *Agree* between the probe in T/v and the goal in the DP with respect to the phi-sets. Under this assumption, it does not seem to be unreasonable to hold that, unlike the DP, the CP does not possess any uninterpretable Case-feature, contra Stowell (1981) (although it may have an interpretable phi-set). In this system, the light verb v of *believe* in (17) and the matrix T in (18) do not have any uninterpretable Case-features at all, and the uninterpretable phi-set in v of *believe* in (17) and the one in the matrix T in (18) will be erased under *Agree* to the extent that the CP has some uninterpretable formal feature(s).⁷ Hence, the CP in (17) and (18) does not have to move by extraposition or topicalization as analyzed by Stowell (1981).

In Japanese, the CP headed by the typical complementizer *to* is never Case-marked, as illustrated in (20):

- (20) John-wa [[Mary-ga muzitu da] to](*-o) sinziteiru.
John-Top Mary-Nom innocent Cop Comp(-Acc) believe
'John believes that Mary is innocent.'

This fact seems to be in line with the consideration above concerning the CP in English. In this connection, notice that unlike the complementizer *to*, the apparent “CP” headed by the putative complementizer *no* must always be Case-marked, as shown in (21):

- (21) John-wa [[Mary-ga muzitu na] no]*(-o) sinziteiru.
John-Top Mary-Nom innocent Cop Comp(-Acc) believe
'John believes that Mary is innocent.'

Therefore, there remains a puzzle as to why only this putative CP requires overt Case-marking in Japanese. I will account for this puzzle in the next section.

In summary, I have demonstrated that the relevant formative *no* in Japanese behaves quite differently from both the pro-nominal *one* and the complementizer *that* in English. In the next section, I will put forth a new proposal which can solve these mysteries in a principled fashion.

3. Proposal

3.1. The Potential Licenser of Null Nominal Complements

Zushi (1996) takes the so-called genitive Case marker *no* as being situated at the D head of a whole DP, as illustrated in (22)–(23) below (see also Whitman 1998, 1999 for the same view as Zushi’s):

- (22) [DP Chomsky_i [_D no] [_{t_i} [hon]]]
 Chomsky ’s book
 ‘Chomsky’s book’

- (23) [_{DP} Chomsky_i [_D no] [_{t_i} [pro]]]
 Chomsky ’s one
 ‘the one of Chomsky’s’

Note that under this analysis the DP-genitive Case marker sequence *Chomsky no* is not a constituent. Zushi claims that the non-constituency can account for the impossibility of extraction of a genitive Case-marked element in Japanese in general, as illustrated below (see also Saito 1985):

- (24) a. John-ga kinou [Chomsky no hon]-o yonda.
 -Nom yesterday -Gen book-Acc read
 ‘John read Chomsky’s book yesterday.’
 b. *[Chomsky no]_i John-ga kinou [_{t_i} hon]-o yonda.
 -Gen -Nom yesterday book-Acc read
- (25) a. John-ga [keikaku no zikkou]-o meireisita.
 -Nom plan-Gen execution-Acc ordered
 ‘John ordered the execution of the plan.’
 b. *[keikaku no]_i John-ga [_{t_i} zikkou]-o meireisita.
 Plan-Gen -Nom execution-Acc ordered

In (24b) and (25b), the possessor genitive DP and the theme genitive DP are extracted out of a DP by scrambling, respectively, resulting in ungrammaticality.

In addition, Zushi alludes to another piece of evidence for the structure in (22)–(23) in connection with anaphor binding, as illustrated below:

- (26) a. John-ga [Mary_i no syasin]-o [kanozyozisin_i no heya]-de
 -Nom -Gen picture-Acc herself-Gen room in
 totta.
 took
 ‘John took Mary’s picture in the room of herself.’
 b. John-ga [[Mary to Peter]_i no syasin]-o [otagai_i no ryoosin]-ni
 -Nom and -Gen picture-Acc each other-Gen parents to
 watasita.
 gave
 ‘John gave Mary and Peter’s pictures to each other’s parents.’

Since the genitive Case-marked DP is located at the [Spec,DP], the antecedent DP can successfully bind an anaphor in (26a,b), given Kayne’s (1994) system of phrase structure and his definition of c-command, which Zushi assumes.⁸⁾

However, there is a piece of empirical evidence from some dialects of Japanese in favor of treating the genitive Case marker *no* separately from the relevant D head in (22)–(23). Consider the following paradigms in (27)–(28), adapted from Murasugi (1991) (cf. also Takeda (1999) for some discussion on this issue based on various dialects of Japanese, Old Japanese, and Korean):

(27) Standard Japanese/Tokyo Dialect

- a. John-no hon
 John-Gen book
 ‘John’s book’
 b. John-no
 John-No
 ‘the one of John’s’
 c. *John-no-no
 John-Gen –No
 ‘the one of John’s’

- d. Arizona-kara-no tegami
Arizona-kara-Gen letter
'the letter from Arizona'
 - e. Arizona-kara-no
Arizona-from-No
'the one from Arizona'
 - f. *Arizona-kara-no-no
Arizona-from-Gen-No
'the one from Arizona'
- (28) Toyama Dialect
- a. John-no hon
John-Gen book
'John's book'
 - b. *John-no
John-No
'the one of John's'
 - c. John-no-ga
John-Gen – Ga
'the one of John's'
 - d. Arizona-kara-no tegami
Arizona-from-Gen letter
'the letter from Arizona'
 - e. *Arizona-kara-no
Arizona-from-No
'the one from Arizona'
 - f. Arizona-kara-no-ga
Arizona-from-Gen-Ga
'the one from Arizona'

Notice that, in standard Japanese/Tokyo dialect, regardless of the phonological presence or absence of the nominal lexical head, only one instance of the particle *no* appears. On the other hand, in the case of Toyama dialect (spoken in the northern part of the central region of the island of Honshu of Japan), although the surface form is the same as standard Japanese/Tokyo dialect when the nominal lexical head is overtly present, as in (28a,d), another particle *ga* must follow the genitive Case marker *no* if the nominal head is phonologically null. Given this fact, suppose that the particle *ga* in Toyama dialect is an overt realization of the D head in the DP structure.⁹⁾

Then, how should the lack of the analogue of *ga* at the D head in standard Japanese/Tokyo dialect be made sense of?

It is well-known in the literature that the reason why standard Japanese/Tokyo dialect does not allow the double-occurrence of the particle *no* is related to the deletion/coalescence rule in (29) (cf. Okutsu 1974, Poser 1984 *inter alia*):

(29) *no-no haplology

no → Ø: __ no

(adapted from Takeda 1999: 42)

In (29), the first instance of the particle *no* is deleted (or the two instances of *no* coalesce into one *no*). Thus, if the underlying second instance of *no* could be taken as the D head on a par with *ga* in Toyama dialect, the relevant underlying structure for (27b) and (28c) is to be represented as (30) and (31) below, respectively, before the rule in (29) applies:

(30) [_{DP} [John-no] [_D D (= **no**) [_{NP} pro]]] (= Standard Japanese/Tokyo Dialect)
John-Gen

(31) [_{DP} [John-no] [_D D (= **ga**) [_{NP} pro]]] (= Toyama Dialect)
John-Gen

In the case of standard Japanese/Tokyo dialect, (30) will surface as *John no* as in (27b) due to the application of (29), while in the case of Toyama dialect, (31) will surface as it is because of the non-application of (29).

Recall from the discussion on the status of the formative *no* in section 2. It was observed that the element *no* at hand behaves quite differently from the pronominal *one* in English. Thus, treating *no* or *ga* as an element located at the functional D head rather than as a pronominal element seems to be not off the mark.^{10, 11)}

In fact, Saito and Murasugi (1990) argue for the presence of D in Japanese, proposing to analyze the so-called N'-deletion/ellipsis in Japanese as an instance of NP-deletion/ellipsis under DP hypothesis, as illustrated below:

- (32) [_{DP} Taro-no_i [D [_{NP} t_i kenkyuu-ni taisuru taido]]]-wa
 Taro-Gen research-toward attitude-Top
 [_{DP} Hanako-no [D [_{NP} e]]] yorimo yoi.
 Hanako-Gen than good
 ‘Taro’s attitude toward research is better than Hanako’s’

In (32), it is assumed that the genitive phrase *Taroo-no* ‘Taro’s’ has been moved from within NP to [Spec, DP]. Crucially, unlike Zushi (1996) and Whitman (1998, 1999), Saito and Murasugi (1990) takes the genitive Case marker *no* as attached to the moved DP and separate from the deletion/ellipsis-licensing functional head D in (32). If this line of analysis is basically on the right track and can be extended to cover the cases such as (30) and (31), they should be represented as follows prior to the *no-no* haplology in (29) takes place at PF:^{12), 13), 14), 15)}

- (33) [_{DP} [John-no]_i [D (= **no/ga**) [_{NP} t_i . . .]]]
 John-Gen

Notice, however, that ,unlike Saito and Murasugi (1990), my analysis in (33) involves the underlying element *no/ga* at the functional D head. In (33), since the NP complement of the D head is phonologically null or deleted/elided, the genitive Case marker *no* surfaces as null (or the two instances of *no* is amalgamated into one *no*) due to the process in (29) in standard Japanese/Tokyo dialect, while the particle *ga* in the D head remains as it is alongside the genitive Case marker *no* in Toyama dialect.

In contrast, when the NP complement of the D head is non-null, as in (27a) and (28a), both in standard Japanese/Tokyo dialect and in Toyama dialect, the D head will be realized as phonologically null, as shown in (34) below:

- (34) [_{DP} [John-no][_{DP} [_D D (= Ø) [_{NP} hon]]]]]
 John-Gen book
 ‘John’s book’

Recall that Zushi (1996) hypothesizes that the genitive Case marker *no* and its preceding DP/NP do not make up a constituent (see also Whitman 1998, 1999), and accounts for the paradigms in (24)–(25) and (26), repeated here as (35)–(36) and (37) below on the basis of that assumption:

- (35) a. John-ga kinou [Chomsky no hon]-o yonda.
 -Nom yesterday -Gen book-Acc read
 ‘John read Chomsky’s book yesterday.’
 b. *[Chomsky no]_i John-ga kinou [t_i hon]-o yonda.
 -Gen -Nom yesterday book-Acc read
- (36) a. John-ga [keikaku no zikkou]-o meireisita.
 -Nom plan-Gen execution-Acc ordered
 ‘John ordered the execution of the plan.’
 b. *[keikaku no]_i John-ga [t_i zikkou]-o meireisita.
 Plan-Gen -Nom execution-Acc ordered
- (37) a. John-ga [Mary_i no syasin]-o [kanozyozisin_i no heya]-de
 -Nom -Gen picture-Acc herself-Gen room in
 totta.
 took
 ‘John took Mary’s picture in the room of herself.’
 b. John-ga [[Mary to Peter]_i no syasin]-o [otagai_i no ryoosin]-ni
 -Nom and -Gen picture-Acc each other-Gen parents to
 watasita.
 gave
 ‘John gave Mary and Peter’s pictures to each other’s parents.’

Now, how can my analysis of the DP accommodate the cases containing the genitive Case marked DP in (35)–(36) and (37)?

Assuming that the genitive Case marker *no* occupies a different functional head D under the theory of phrase structure in Kayne (1994), I will postulate the following derivation for *John-no hon* ‘John’s book’:^{16), 17)}

- (38) a. [_{DP} [D(= Ø) [_{NP} [_{DP} [_{DP} John]_i [_{D'} [D(= no) t_i]]] hon]]]
 b. [_{DP} [_{DP} [_{DP} John]_i [_{D'} [D(= no) t_i]]]_j [D(= Ø) [_{NP} t_j hon]]]

Note that in (38) the genitive Case marker *no* itself is a D element, whose Spec is occupied by a DP *John*, which has been moved from the complement of the genitive Case marker *no* (cf. Kayne 1994). Further, the topmost D, which is not the locus of the genitive Case marker, but that of the “potential licenser of a null nominal complement,” is also a kind of suffixal elements whether it is overt or covert, so it naturally requires an overt element at its Spec at PF. I take this PF “adjacency” requirement to be responsible for the impossibility of movement from the left-branch position in

(35)–(36) (see Pesetsky (1995) and Bošković and Lasnik (2003) on the property of zero-affixes).

Also, notice that the DP *John* is at the Spec of the Spec element of the whole DP [*John-no hon*] in (38). Thus, given the definition of c-command in Kayne (1994) or in Chomsky (1995), it is expected that the DP antecedent within a DP can successfully bind an anaphor in (37a,b). Therefore, my analysis can also deal with the relevant data in Zushi (1996).¹⁸⁾

At this point, one might wonder why it is necessary for the particle *no/ga* to appear at the D head when its complement is phonologically null (or deleted/elided). It should not have to do with LF, since the *no/ga* in the D head does not seem to play any significant LF role due to its lack of semantic content, and the overt vs. covert nature of the D head does not affect the relevant interpretation in the first place. Thus, it is more likely to be related to the PF side.

I assume that the morphological Case markers such as *-ga* ‘nominative’ and *-o* ‘accusative’, topic marker ‘*-wa*’, and various focus markers like *mo* ‘also’ in Japanese are required to be suffixed to an overt “nominal” element in general, and I speculate that the “nominal” status of the target of the relevant markers can be overtly guaranteed by the presence of the particle *no/ga* at the D head as a “nominal word marker.”¹⁹⁾

I will propose the following PF licensing condition imposed upon the licit DP structure in Japanese:²⁰⁾

(39) PF Licensing Condition on the DP Structure:

The D head of the DP structure must be overtly realized if and only if its complement is phonologically completely null.

Note that the presence of *no/ga* at the D head makes the nominal status of the whole DP visible when its complement is phonologically null (or deleted/elided). However, the presence of *no/ga* at the D is redundant if the complement of the D is either completely or partially phonologically overt, making the nominal status of the whole DP visible already.²¹⁾ In fact, the formulation in (39) implies that if the nominal complement is not phonologically completely null, the D head of the whole DP could be overtly expressed. However, under this circumstance, the overt presence of *no/ga* is usually not necessary and so should not be overtly realized by a version of the principle of economy of representation as follows:

(40) PF Principle of Economy of Lexical Realization:

Unless necessary, suppress lexical realization of an element as much as possible.

Therefore, in reality, the economy principle in (40) will suppress the unnecessary realization of *no/ga* in adult Japanese grammar.²²⁾ From this perspective, children's overgeneration of *no/ga* as discussed in section 2 might be ascribed to the fact that the relevant economy principle in (40) is somehow still not at work to the full at that stage of language acquisition. Further investigation on this matter is definitely required for understanding the truth, though.

Finally, let me mention the possibility of parametrization of the economy principle in (40). It is well-known that the element *no* in Japanese has a limited distribution in nominal modification context, while the Chinese correspondent *de* does not show such a skewed distribution in the same context (Kitagawa and Ross 1982).

If my analysis of the relevant formative *no* in Japanese is on the right track, the alleged Chinese counterpart *de* might have to be analyzed as belonging to a class different from the functional D head. Alternatively, one could still maintain the position that the element *de* in Chinese is indeed the Chinese analogue of the functional D head in question, under the assumption that the economy principle in (40) can be parameterized along the lines of Kitagawa and Ross (1982).

While the SOV word order in Japanese makes the overt presence of *no/ga* in the relevant configuration economically redundant, the SVO word order in Chinese does not render the overt presence of *de* in the relevant structure economically redundant (see Kitagawa and Ross 1982:27 for details). Hence, the applicability difference of the economy principle in (40) and the resultant distributional differences between the two languages with prenominal modification. If this line of analysis is tenable at all, it might be still possible to treat *de* in Chinese as an instance of the functional D head at stake as in Japanese. Although Kitagawa and Ross (1982) treat the particle *de* in Chinese on a par with the particle *no* in Japanese, I will leave the full investigation of the analysis of *de* in Chinese to future research. Notice also that although Kitagawa and Ross (1982) do not provide any reason why the relevant particle *no* is required in the first place, my hypothesis embodied in (39)–(49) can suggest a PF-related morphological reason for its overt existence.

3.2. Solutions to the Puzzles in Section 2

In this section, I will demonstrate that my approach sketched in the previous section can provide natural solutions to the puzzles pointed out in section 2. The puzzles in question can be summarized as follows:

- (41) a. The putative pronominal *no* in Japanese is incompatible with “pluralization” unlike the pronominal *one* in English.
 b. The apparent “CP” headed by the putative complementizer *no* in Japanese must be Case-marked unlike in the cases of the typical complementizer *to* in Japanese and *that* in English.

For ease of reference, I will reproduce (15)–(16) as (42)–(43) below:

- (42) [mazimeni sigoto-o yatta] **gakusei(-tati)** to
 hard work-Acc did student(-s) and
 [mazimeni sigoto-o yaranakatta] **no(*-tati)**
 hard work-Acc did not one(-s)
 ‘the student(-s) who worked hard and the one(-s) who did not worked hard’
- (43) [mazimeni sigoto-o yatta] **yatu(-ra)** to
 hard work-Acc did guy(-s) and
 [mazimeni sigoto-o yaranakatta] **no(*-ra)**
 hard work-Acc did not one(-s)
 ‘the guy(-s) who worked hard and the one(-s) who did not worked hard’

Under my analysis here, the ungrammaticality of (42)–(43) in Japanese can be attributed to two factors. First, such “pluralizing” suffixal bound morphemes are incapable of being morphologically attached to the phonologically null nominal projection selected by the D head *no*, as represented in (44). Second, (44) runs afoul of the condition of economy of representation in (40). Notice that the D head is overtly realized as *no* in (44) in spite of the fact that its complement is not completely phonologically null.

- (44) *_{[DP [XP . . .] [D' [D(= no) [_{NP/DP} [Ø]-tati/-ra]]]]}

Under a natural assumption, the D head element *no* is not specified as [+human] due to its non-lexical/functional nature, which also accounts for the incompatibility with the “pluralizing” suffixes *-tati/-ra*.²³⁾

Next, let me repeat (21) as (45) below just for ease of reference:

- (45) John-wa [[Mary-ga muzitu na] no]*(-o) sinziteiru.
 John-Top Mary-Nom innocent Cop Comp(-Acc) believe
 ‘John believes that Mary is innocent.’

Notice that under my analysis the commonly assumed “nominalizing complementizer” nature of *no* in (45) can be naturally captured, given the assumption that the *no*-phrase in (45) is in fact a DP headed by *no* as the D head taking a CP headed by a null C, with the IP being moved to [Spec,DP] a la Kayne (1994). Therefore, the DP status of the whole expression guarantees the overt morphological Case marking in (45).

4. Some Consequences

In this section, I will address some of the consequences derived from the PF conditions in (39)–(40) in connection with various constructions in Japanese as they pertain to the D head *no* (or *ga*).

4.1. Two Types of Complementizer C

Consider the following Kaynean (underlying) D-CP structure and Kaynean regular CP structure for Japanese in (46) and (47), respectively, below:

(46) $[_{DP} [_{IP} \dots]_i [_{DP} D [_{CP} C \ t_i]]]$

(47) $[_{CP} [_{IP} \dots]_i [_{CP} C \ t_i]]$

If my hypothesis embodied in (39)–(40) and my analysis of the particle *no/ga* as the D head in this paper are correct, the C in (46) must be phonologically null all the time, in contrast to the C in (47), which is realized as *to*, in standard Japanese/Tokyo dialect.

Interestingly, however, there is a piece of empirical evidence that shows overt different realizations of the C in (46) and (47), which stems from Nagasaki dialect. Look at the following paradigm from Nagasaki dialect:

- (48) Taroo-wa [[basu-no kita] **to**]-ba siranyatta.
Taroo-Top bus-Gen came C-Acc did not know
‘Taroo did not know that a bus came.’
(= Tomohiro Fujii p.c. 2004)

← D-CP structure

- (49) Taroo-wa [[basu-no kitat] **te**] yuuta.
Taroo-Top bus-Gen came C said
‘Taroo said that a bus came.’
(= Tomohiro Fujii p.c. 2004)
← CP structure, not D-CP structure

Note that in Nagasaki dialect the regular quotative complement clause such as in (49) employs a different morpheme *te* instead of *to*, while the accusative Case marked complement clause such as in (48) contains the element *to* (recall the discussion of the regular quotative complement clause and the Case marked complement clause in section 2. Although it is possible to take the element *to* of Nagasaki dialect in (48) to be an overt realization of the functional head D, its apparent surface similarity of phonetic shapes with *te* in (49) seems to suggest the more plausible assumption that *to* in (48) is a complementizer. Notice that since the nominal complement of the functional head D contains the overt element C, the PF conditions in (39)–(40) predict the non-occurrence of any overt D in (48), which is indeed the case. Hence, this dialect clearly demonstrates two possible realizations of C in Japanese dependent upon the structural differences in question.

4.2. Related Constructions

Note that the PF conditions in (39)–(40) predict that to the extent that the post-D complement is phonologically completely null, the relevant element of the D head, viz. *no*, appears in standard Japanese/Tokyo dialect, regardless of the structural make-up of the complement. This particular prediction leads me to analyze various constructions related to the relevant particle *no* as enumerated in (50) as in (51) (see also Tsubomoto 1981 for an attempt at unifying the function of the particle *no* in Japanese from a different perspective):^{24), 25)}

(50) a. Head-internal relative construction:

John-wa [[Mary-ga keeki-o yaitekureta] no]-o tabeta.
 John-Top Mary-Nom cake-Acc baked D-Acc ate
 ‘John ate the cake that Mary baked for him.’

b. Free relative construction:

John-wa [[Mary-ga yaitekureta] no]-o tabeta.
 John-Top Mary-Nom baked D-Acc ate
 ‘John ate what Mary baked for him.’

Pseudo-cleft construction:

[[John-ga tabeta] no]-wa keeki da/desu/dearu.
 John-Nom ate D-Top cake Cop
 ‘What John ate is cake.’

c. Case-marked regular complement construction:

John-wa [[Mary-ga keeki-o yaitekureta] no]-o sitteita.
 John-Top Mary-Nom cake-Acc baked D-Acc knew
 ‘John knew that Mary baked cake for him.’

d. “No da/no desu/no dearu” construction:

[[Mary-ga John-ni keeki-o yaitekureta] no] da/desu/dearu
 Mary-Nom John-for cake-Acc baked D Cop
 ‘It is that Mary baked cake for John.’

e. Cleft construction:

[[Mary-ga John-ni yaitekureta] no]-wa keeki-o da/desu/dearu.
 Mary-Nom John-for baked D-Top cake-Acc Cop
 ‘It is cake that Mary baked for John.’

- (51) a. $[_{DP} [_{IP} \dots DP_i \dots]_j [_{DP} [D(= \text{no}) [_{CP} \overline{DP}_i [_{CP} [C \ t_j]]]]]]$
 (= head-internal relative construction)
 b. $[_{DP} [_{IP} \dots \overline{DP}_i \dots]_j [_{DP} [D(= \text{no}) [_{CP} DP_i (= \emptyset) [_{CP} [C \ t_j]]]]]]$
 (= free relative construction/pseudo-cleft construction)
 c. $[_{DP} [_{IP} \dots]_i [_{DP} [D(= \text{no}) [_{NP} [N(= \emptyset) [_{CP} [C \ t_i]]]]]]]]$
 (= case-marked regular complement construction)
 d. $[_{DP} [_{IP} \dots]_i [_{DP} [D(= \text{no}) [_{CP} [C \ t_i]]]]] \text{ cop.V}$
 (= “no da/no desu/no dearu” construction)
 e. $[_{TopP} [_{DP} [_{IP} \dots t_k \dots]_i [_{DP} [D(= \text{no}) [_{CP} [C \ t_i]]]]]_j [_{Top} (= \text{wa})$
 $[_{FocP} DP\text{-case}_k/PP_k [_{Foc} [\ t_j \text{ cop.V}]]]]]$
 (= cleft construction)

(51a) and (51b) show the derivations of the head-internal relative and the free relative/pseudo-cleft in Japanese, respectively. A DP within the IP moves to [Spec,CP], followed by the IP movement to [Spec,DP] in both cases, but the DP copy at [Spec,CP] gets deleted in the former (see Kayne 1994 for details), while the moved DP is phonologically null from the start in the latter.^{26), 27)} Next, (51c) corresponds to the derivation of the Case marked regular complement, in which there is a null N between the DP and the CP roughly on a par with its overt analogue *koto* ‘fact/thing’. Finally, (51d) and (51e) represent the derivations of the “no da/no desu/no dearu” construction and the cleft construction.²⁸⁾ In the former, only the IP moves to [Spec,DP] without any DP moving to [Spec,CP]. On the other hand, in the case of the latter, there are additional functional layers such as TopP and FocF above the underlying structure for the former (cf. Kuwabara 1997, 2000, 2001; Sakai 2000; Hiraiwa and Ishihara 2002; and Watanabe 2003 *inter alia*).²⁹⁾ First, a Case marked DP or a PP moves to [Spec,FocP]. After that,

the remnant DP is raised to [Spec,TopP]. Notice that in all the cases in (51) since the complement of the head D is completely null, the D is realized as *no* overtly due to the PF conditions in (39)–(40). Note that in the derivation of the cleft the *no*-phrase is a DP containing no lexical overt N(P) element. I suspect that this fact is responsible for the possibility of extracting the focus element DP-case/PP from inside the *no*-phrase without being blocked by any barrier(s).

In this connection, it is interesting to consider Kuwabara’s (2001) proposal to analyze the matrix question with the final particle *no* in Japanese as involving a null copular verb and a null interrogative complementizer. Given the assumption in the text so far, it seems plausible to extend the analysis in (51d) into such a construction, taking the formative *no* at hand to be an instance of the relevant functional head D. My analysis predicts that the particle *no* (or *ga*) at the functional D head and the complementizer particle *to* at the C in the Kaynean D-CP structure are “mutually exclusive” due to the PF conditions in (39)–(40) and that there may well be some dialects of Japanese which employ particles other than *no* (or *ga*) in the “*no da/no desu/no dearu*” construction. According to Tomohiro Fujii (p.c. 2004), Nagasaki dialect makes use of the particle *to* in the “*no da/no desu/no dearu*” construction, as illustrated below:

- (52) [Taroo-wa moo kaetta] **to** (ka)?
 Taroo-Top yet have left C Q
 ‘Has Taroo left yet?’

- (53) [Taroo-ba mita] **to** sa/yo/bai.
 Taroo-Acc saw C Cop
 ‘It is Taroo that I saw.’

In (52) and (53), since the complementizer *to* is overtly realized, the D head in the (underlying) Kaynean D-CP structure has surfaced as null, as predicted. Thus, although I will relegate a full-fledged investigation of this interesting issue to another occasion, my analysis in the text seems to be plausible in light of Nagasaki dialect data.

By the same token, a certain kind of cleft constructions in Yashiro dialect of Japanese discussed by Yoshimura (2000) provides another case in point, as illustrated in (54)–(55) below (cf. Yoshimura 2000):

- (54) a. Taroo-wa [[musuko-no kooen-de asondoru]-**to**]-ba mitorasita.
 Taroo-Top son-Gen park-in is palying C –Acc was watching
 ‘Taroo was watching his son playing in the park.’

- b. hahaoya-wa [[kodomo-no ima-de piano-ba hiita]-**to**]-ba kiitotta.
 mother-Top child-Gen living room-in piano-Acc played C-Acc was hearing
 ‘The mother was hearing her child play the piano in the living room.’
 (= Yoshimura 2000, 71,(10))

- (55) a. Taroo-wa [[Hanako-no uso-ba tukasita]-**to**] iwasita.
 Taroo-Top Hanako-Gen lie-Acc told C said
 ‘Taroo said that Hanako told a lie.’
 b. hahaoya-wa [[musuko-no siken-ni otiru]-**to**] omottorasu.
 mother-Top son-Gen exam-at fail C think
 ‘The mother thinks that her son will fail the exam.’
 (= Yoshimura 2000,71,(11))

Note that in (54) the apparent “CP” headed by *to* is attached by the accusative Case marker *ba* in Yashiro dialect; while in (55) it is used without such accusative Case marking. Apparently, this seems to indicate that, unlike the *to* in standard Japanese/Tokyo dialect, the *to* in Yashiro dialect has two types: either the head projecting a pure complementizer phrase or the one projecting a nominal phrase. But, this puzzling observation can be more naturally captured by my analysis as follows:

- (56) a. [_{CP} [_{IP}...]_i] [_{CP} [C(= to) t_i]] (= (55))
 b. [_{DP} [_{IP}...]_i] [_{DP} [D [_{CP} [C(= to) t_i]]]] (= (54))

(56a) represents a case for the regular CP complementation just like the case in standard Japanese/Tokyo dialect and the (56b) contains the Kaynean underlying D-CP structure with IP movement to [Spec, CP] with the null D head. As predicted by the PF conditions in (39)–(40), the overt element *to* within the complement of the D head renders the overt occurrence of the latter unnecessary. Thus, in a sense, the structure in (56a) is embedded in a DP in (56b). Hence, the presence or lack of Case marking in (54) and (55), respectively, follows from the different structures in (56a, b).³⁰⁾

Furthermore, note that the PF conditions in (39)–(49) will lead to a particular analysis of the so-called *tokoro*-clause in Japanese, which has been extensively discussed in the literature (see Kuroda 1999b and references cited there for a full discussion on this construction). Consider the following example in (57):

- (57) John-wa [[Mary-ga ginkoo-kara detekita] tokoro]-o yobitometa.
 John-Top Mary-Nom bank-from came out -Acc called to stop
 ‘John called Mary to stop as she came out of the bank’

The bracketed part in (57) can be analyzed as follows under the adopted assumptions in this paper:

- (58) ... [_{DP} [_{IP} ...]_i [_{DP} D [_{NP} tokoro [_{CP} C t_i]]]-case ...

In (58) the N is overtly realized as *tokoro*, which explains the non-appearance of the particle *no/ga* in the D head by the PF conditions in (39)–(40).

Interestingly, it is predicted by the PF conditions in (39)–(40) that if the nominal head *tokoro* is null, the D will be realized as *no/ga*, as follows:

- (59) ... [_{DP} [_{IP} ...]_i [_{DP} D–no/ga [_{NP} Ø [_{CP} C t_i]]]-case ...

Indeed, the counterpart of (57) can be found as in (60) below:

- (60) John-wa [[Mary-ga ginkoo-kara detekita] no]-o yobitometa.
 John-Top Mary-Nom bank-from came out D-Acc called to stop
 ‘John called Mary to stop as she came out of the bank’

As Kuroda (1999a) correctly points out, at surface, the distinction between the head-internal relative clause and the *tokoro*-clause is sometimes rather difficult to discern, which has been responsible for confusion observed in the literature of Japanese syntax (cf. Tsubomoto 1991, Miyagawa 1992, Matsuda 1993, Mihara 1994, Murasugi 1993, 1994, 1996, and Hoshi 1996 among others. See Kuroda (1999a) and references therein for details of this construction in Japanese.).

Furthermore, I will follow Hiraiwa and Ishihara (2002) in extending the focus movement analysis of cleft to that of sluicing in Japanese. They argue that sluicing in Japanese is derived from the underlying “*no da/no desu/no dearu*” construction. If my analysis of the “*no da/no desu/no dearu*” construction is correct, Japanese sluicing has the following derivation:³¹⁾

- (61) John-ga nanika-o tabeta rasii ga,
 John-Nom something-Acc ate seem but
 boku-wa [_{FocP} nani-o_i [_{DP} ~~John-ga~~_{t_i} ~~tabeta~~]-no] (da)] ka siranai.
 I-Nom what-Acc John-Nom ate D Cop Q know-not
 ‘It seems that John ate something, but I do not know what (John ate).’

In (61), the *wh*-phrase has been extracted by focus movement to [Spec, FocP] from within the DP (= D-CP) structure followed by “DP-ellipsis” rather than CP ellipsis. Note incidentally that the reason for lack of case-marking on the DP (= *no*-phrase) in (61) is due to the status of the DP as a nominal predicate before the copula in Japanese.

Finally, it seems plausible to extend my DP analysis of the *no*-phrase to the domain of the so-called stripping construction in Japanese as follows (see Fukaya and Hoji 1999 and references cited therein for detailed discussion on this construction and related matters):

- (62) John-wa zibun-no zitensya-o migaita.
 John-Top self-Gen bicycle-Acc polished
 ‘John polished his bicycle.’
 [Bill-mo da].
 Bill-also Cop
 ‘Bill, too.’

The bracketed part in (62) illustrates a stripping construction, and it could be analyzed as involving the following derivation:

- (63) Bill-mo [_{DP} [_{DP} ~~zibun-no zitensya-o migaita~~]-no] da.
 Bill-also self-Gen bicycle-Acc polished D Cop
 ‘Bill, too.’

In (63), the *no*-phrase DP in the *no-da* construction is deleted/elided to give rise to the form in (62). There is good reason to believe that the stripping construction in Japanese is derived from the underlying structure in (63) rather than from an underlying cleft construction. Consider the following paradigms in (64)–(65):

(64) A: Toyota-ga [soko-no [roodoo kumiai]]-o hihansita.
 Toyota-Nom it-Gen labor union -Acc criticized
 ‘Toyota criticized its labor union.’

B: Iya. Nissan-ga da.
 No Nissan-Nom Cop
 ‘No. It is Nissan.’

(= adapted from Fukaya and Hoji 1999: 149, (10))

- (65) a. *[saikin uriage-o nobasiteiru no]-wa Nissan-ga da.
 recently sales-Acc increasing -Top Nissan-Nom Cop
 ‘It is Nissan that has been increasing their sales recently.’
 b. Nissan-ga [saikin uriage-o nobasiteiru no] da.
 Nissan-Nom recently sales-Acc increasing D Cop
 ‘It is that Nissan has been increasing their sales.’

(64) shows that stripping in Japanese allows for the nominative Case marked DP as the pre-copula element. Interestingly, as illustrated in (65a), it is impossible for the nominative Case marked DP to undergo clefting, while the nominative Case marked DP can occur in the *no-da* construction, as represented in (65b). This contrast clearly shows that the cleft construction cannot be the underlying source for stripping in Japanese and that more likely than not the *no-da* construction is a plausible candidate. If my analysis in this paper is on the right track, strictly speaking, treating sluicing as a subcase of stripping in Japanese is not correct, contra Fukaya and Hoji (1999), in spite of the fact that both sluicing and stripping involve an underlying *no-da* construction.

5. Concluding Remarks

In this paper, I argued that there is in fact a functional element *no/ga* in Japanese, which is located at the D head in the DP structure and is distinct from the genitive Case marker *no*. It was proposed that the functional head D *no/ga* in question serves as the potential null nominal complement licenser, and the relevant PF conditions regulating the distribution of the D element *no/ga* at surface were identified. It was also demonstrated that the PF conditions at hand shed new light on the possibility of two types of complementizer C and the internal structures of various constructions in Japanese related to the particle *no* (or its equivalents).

If this move is not off the mark, it might well provide a partial answer to the question why certain instances of the particle *no* disappear while others do not in

the process of acquiring Japanese. Furthermore, to the extent that my analysis of the relevant particle *no/ga* in Japanese is valid, it would rescue Kayne's (1994) original analysis of N-final relatives in Japanese from Murasugi's (2000a,b) criticism of it.

Notes

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1) Murasugi (1991, 2000a,b) attempts to account for the lack of the complementizer *no* in adult Japanese nominal modification contexts analogous to (1)–(3) on the basis of ECP along the lines of Kayne (1981) and Stowell (1981), concluding that the categorial status of the prenominal modifier will change from CP to IP in the course of acquiring Japanese. But, see Ogawa (2001) for a view that such an ECP-based explanation is empirically and theoretically not desirable.

2) On the other hand, Harada (1980) and Clancy (1985) analyze the particle *no* observed in (1)–(3) as the genitive Case marker in Japanese.

3) Although, in Kayne's (1994) original structure for the N-final relative in Japanese, the raised relative head is taken to be an NP (or QP), I will assume that it is a DP at least in the case of Japanese. See Hoshi (2004) for arguments in favor of a DP rather than an NP as the raised relative head in Japanese.

4) It is often the case, however, that the cases in (8) and (9) are collapsed into the use of *no* as a "nominalizing complementizer." For the "pronominal/pronoun" or "nominal pro-form" *no*, see Kamio (1983), Murasugi (1991) and Takeda (1999) among others. For the use of *no* as a nominalizer/formal noun/complementizer, see Nakau (1973), Kuno (1973), Okutsu (1974), Murasugi (1991) and Takeda (1999) among others.

5) In the previous generative grammatical treatments of *no*, roughly, there have been proposed three types of analyses, as summarized below:

- (i) a. A Uniform Analysis: Kitagawa and Ross (1982)
- b. A Two-way Distinction Analysis: Bedell (1972), Zushi (1996), Takeda (1999)
- c. A Three-way Distinction Analysis: Murasugi (1991)

Kitagawa and Ross (1982) takes *no* as the prenominal modification marker *Mod*, which accounts for diverse distributions of the particle. On the other hand, Bedell (1972) and Takeda (1999) draw a line between the genitive Case marker and the rest, with the latter being identified as a nominal head *N*; whereas, Zushi (1996) distinguishes between the interrogative complementizer and the rest. Finally, Murasugi (1991) classifies the uses of *no* under three categories of the genitive Case marker, the pronominal/nominal pro-form, and the complementizer. Strictly speaking, Takeda (1999) does not discuss the uses of *no* as the sentence-final particle and as the "attributive form" of the copula *da* attached to an adjectival noun or a prepositional phrase (see Nishiyama 1998 among others for *no* as the attributive form of the copula *da*). I assume that the sentence-final particle *no* is also the functional D head in question and that the *na* attached to an adjectival noun like *kirei* 'pretty' is the result of phonological spell-out of a sequence of adjectival noun-copular verb *de aru/da* in the relative clause construction with a null D.

In what follows, I will claim that there is no such elements as a pronominal *no* or a nominalizing complementizer *no* in Japanese and for that matter all the instances of the element *no* in Japanese, except for the genitive Case marker *no*, is to be considered as an instance of the functional category D, which serves

as the “potential licenser of null nominal complements,” contra the standard analysis in Japanese generative literature. Thus, in the above classification, my approach falls into the class of a two-way distinction approach such as Bedell (1972) and Takeda (1999).

6) See Nakanishi and Tomioka (2004) for a semantic analysis of morphological plurals with the suffix *-tati* in Japanese.

7) One possibility is that the C head of the CP has a set of uninterpretable phi-features, which serves as the activated goal to induce *Agree* and that the values of the uninterpretable phi-features of the C head will be supplied by default, such as [singular], [3rd person], and [non-human]. Alternatively, this might possibly suggest that the applicability of *Agree* does not necessarily depend on the availability of any uninterpretable features on the goal, contra Chomsky (2000, 2001a,b). (But, see Chomsky 2001a:48,n.56 for reference to the latter possibility.) Still another possibility is that the uninterpretable phi-features in v or T will be provided with default values [singular], [3rd person], and [non-human] somehow without any *Agree* operation, since the C head of the CP in general lacks any phi-features (cf. Radford 2004:292).

8) Kayne (1994:16) defines the notion of c-command as follows:

- (i) X c-commands Y iff X and Y are categories and X excludes Y and every category that dominates X dominates Y.

Under Kayne’s (1994) system of phrase structure incorporating the definition of c-command in (i), a specifier c-commands out of the phrase that it is the specifier of. Thus, the genitive phrase in [Spec,DP] can c-command out of the containing DP, licensing the proper anaphor binding relation in (26).

9) In this connection, it is interesting to note that the so-called complementizer *no* postulated in the cleft construction in standard Japanese/Tokyo dialect is also realized as *ga* in Toyama dialect, as illustrated below:

- (i) a. [[doroboo-ga kane-o nusunda] **no**]-wa koko-kara da.
Thief-Nom money-Acc stole Comp-Top here-from is
‘It is from here that the thief stole money.’
- b. [[doroboo-ga kane-o nusunda] **ga**]-wa koko-kara da.
Thief-Nom money-Acc stole Comp -Top here-from is
‘It is from here that the thief stole money.’
(adapted from Murasugi 2000b: 221, (34))

Murasugi (2000b: 221–222) also reports that children acquiring Toyama dialect overgenerate *ga* not *no* in the context of nominal modification under the assumption that the particle *ga* in question is a complementizer, as illustrated below:

- (ii) a. *akai **ga** boosi [K: 2;11]
red is cap
‘the cap that is red’
- b. *anpanman tuitoru **ga** koppu [K: 2;11]
(a character) attaching-is cup
‘the cup that is pictured with “anpanman” ’
(Lit. the cup that “anpanman” is attaching)

As a null hypothesis, it is highly plausible to consider the three instances of *ga* in (28c,f), (ib) and (ii) to be the same, i.e., the D head in the DP (= D-CP) structure in Japanese. Otherwise, the reason why the same

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morpheme *ga* is used in those contexts in Toyama dialect must be explained somehow diachronically or synchronically.

10) I will assume that (29) is a kind of subrules to be applied in the phonological component in Japanese. Strictly speaking, the usual case to which the rule in (29) applies is concerned with the sequence [the genitive Case marker *no*-the D head *no*], as observed in the text. As the following paradigm shows, the opposite order is not subject to the deletion/coalescence rule in (29):

- (i) akai no-no motinusi (cf. *akai no motinusi)
red D-Gen owner
'the owner of the one that is red/the owner of the red one'
(= adapted from Murasugi 2000b:222,(36b))

Note that if the lexical head noun *motinusi* 'owner' is replaced with a zero pronoun, the following sequence would be produced before application of the rule in (29), given the text proposal:

- (ii) akai no-no-no
red D-Gen-D
'the one of the one that is red/the one of the red one'

Since the rule in (29) will apply to the sequence [the genitive Case marker *no*-the D head *no*], (ii) would be changed to the following form as a consequence:

- (iii) akai no-no
red D-Gen
'the one of the one that is red/the one of the red one'

Thus, the surface form in (iii) is not a counterexample to the phonological rule in (29).

11 Sachiko Aoshima (p.c.) points out that Yaizu-Fujieda dialect in Shizuoka displays a pattern different from the one observed in standard Japanese/Tokyo dialect, as illustrated in (i) below (cf. also Takeda 1999):

- (i) John-no no 'John's one'
-Gen D

See Hoshi (2004) for a possible syntactic solution to the gap between standard Japanese/Tokyo dialect and Yaizu-Fujieda dialect in Shizuoka.

12) In connection with the so-called pronominal/nominal pro-form *no* in Japanese, Kuroda (1965: 121) states:

"...*no* in this instance can probably be explained as one case of a more general morphophonemic process that inserts *no* as an empty carrier of a modifying clause when the noun to be modified is removed from its ordinary position. ... Whatever syntactic and semantic processes are involved here, it seems fair to assume that *no* is inserted automatically after the removal of the noun from its original position."

Thus, the line of analysis to be developed in this paper can be regarded as a way of substantiating Kuroda's

(1965) insight within the framework of current generative grammar. Furthermore, if Panagiotidis's (2003) claim that the English pronominal element *one* is in fact an N^0 element (= lexical) and my analysis of the "potential null nominal complement licenser" D *no/ga* (= functional) in Japanese is on the right track, it can also be counted as another argument against identifying the two elements in question.

13) If the zero pronoun *pro* in Japanese is in fact a case of NP-deletion/ellipsis in general, as argued in Hoji (1998), Kim (1999), and Tomioka (2003) *inter alia*, (33) makes more sense as a proper underlying representation.

14) Kitagawa and Ross (1982) and Murasugi (2000b) among others note a peculiar property of *no* in Japanese: *no* cannot occur independently, but must be accompanied by an element to its immediate left, as illustrated in (i):

- (i) a. **no-o mottekite kudasai.*
 No-Acc bring please
 'Please bring the one.'
- b. *atarasii no-o mottekite kudasai.*
 new No-Acc bring please
 'Please bring the new one.'

This can be explained if the *no* is a suffixal element in D, which requires an element in its Spec.

15) Zushi (1996) attempts to accommodate the case of *ga-no* (nominative-genitive) conversion under the analysis of *no* as D. However, if Watanabe (1996) is on the right track, the "genitive case-marker" *no* in this instance is a realization of nominative Case (see also Ochi 2001 and Hiraiwa 2000 among others for recent treatments of the phenomenon in question). I will distinguish between the genitive Case marker *no* in the regular DP and the one in the context of *ga-no* (nominative-genitive) conversion in Japanese. I will follow Watanabe (1996) in assuming that the genitive Case marker *no* in the latter is a realization of nominative Case, although I will not commit myself to his specific analysis of the relevant phenomenon. Thus, the structural analysis in (33) does not apply to such a case. Departing from Watanabe (1996), it might be possible to assume that the genitive case-marker is a kind of inherent Case markers in Japanese rather than structural Case markers, although I will not pursue this issue in this paper.

16) The same result will obtain even in the bare phrase structure theory of Chomsky (1995).

17) The genitive Case marker *no* in Japanese is to be preceded by not only a DP but also a PP, as illustrated below:

- (i) [_{PP} Kanada-kara]-no tegami
 Canada-from-Gen letter
 'a letter from Canada'

I will assume the following derivation for (i) (cf. Kayne 1994):

- (ii) a. [_{DP} [D(= Ø) [_{NP} [_{DP} [_{PP} [_{DP} Kanada]_i] [_P[P(= kara) t_i]]]_j] [_{D'} [D(= no) t_j]]] tegami]]
- b. [_{DP} [_{DP} [_{PP} [_{DP} Kanada]_i] [_P[P(= kara) t_i]]]_j] [_{D'} [D(= no) t_j]]]_k
 [D(= Ø) [NP t_k tegami]]]

18) One might wonder how the multiple-genitive construction as in (i) below should be handled under the present approach:

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- (i) sensyuu-no MIT-de-no Chomsky-no Minimalist Program-nituite-no koogi
 last week-Gen MIT-at-Gen Chomsky-Gen Minimalist Program-on-Gen lecture
 ‘Chomsky’s lecture on Minimalist Program at MIT last week’

One possibility for dealing with the case such as (i) is to appeal to Whitman’s (1999) “split-nominal projection” analysis of the multiple-genitive construction in Japanese, with some modifications in accord with my analysis. Unlike Whitman (1999), I am assuming that there exists a functional D head serving as the potential licensor of null nominal complements in Japanese, independently of the genitive Case marker *no*. Under this assumption, (i) could be provided with the following derivation along the lines of Whitman (1999):

- (ii) $[_{DP} [_{DP} [_{DP} \text{sensyuu}]_i [_{D} -\text{no } t_i]] [_{DP} [_{DP} [_{PP} \text{MIT-de}]_j [_{D} -\text{no } t_j]] [_{DP} [_{DP} [_{DP} \text{Chomsky}]_k [_{D} -\text{no } t_k]] [_{D}(=\emptyset) [_{nP} t_i [n' [n [_{DP} [_{DP} [_{PP} \text{Minimalist Program-nituite}]_m [_{D} -\text{no } t_m]]_o [_{D}(=\emptyset) [NP \text{ } t_o [N(=\text{koogi})]]]]]]]]]]]]]]$
 (= for the sake of simplicity, traces of within the PPs are omitted.)

In (ii), the two adjuncts *[sensyuu-no]* and *[MIT-de-no]* are Pair-Merged to the DP projection, whereas the theta-related elements *[Chomsky-no]* and *[Minimalist Program-nituite-no]* are Set-Merged to the nP projection and the NP projection, respectively, and are moved to the Spec of the upper null D and the Spec of the lower null D, respectively. (But, see Takano 2003 for a different claim that Japanese nominals are not theta-markers in general.)

19) In the case of Old Japanese, this requirement does not apply, since the attributive form of a predicate is different from its conclusive form unlike Modern Japanese, which clearly helps in “overtly” marking the “nominal” status in the former case for attachment of various particles in Japanese.

20) Although the PF condition in (39) is not limited to the context of ellipsis (within the DP), it is reminiscent of the relevant licensing condition for VP-ellipsis to the effect that the ellided VP must be the complement of a lexically/morphologically realized head (cf. Lobeck 1987, 1995; Chao 1988; Zagana 1988, Potsdam 1996, 1997 *inter alia*). Thus, if my analysis in the text is on the right track, such a licensing condition seems to be more general and not necessarily restricted to ellipsis. I would like to thank Kazuki Kuwabara for bringing my attention to this point. Furthermore, Bernstein (1993) discusses the syntactic role of word markers in null nominal constructions in Spanish and Italian. Whether such word markers and the “potential null nominal complement licensor” D in Japanese are of the same nature remains to be seen.

21) Zushi (1996) analyzes the *no* after a sentential modifier/complement of a head noun as in (i) (originally due to Soga and Fujimura 1978) on a par with the D in (22)–(23):

- (i) [sekai-o odorokasu] no [enzetu]
 world-Acc astonish -Gen speech
 ‘the speech that it will astonish the world’

If my hypothesis expressed in (39)–(40) is correct, the relevant particle *no* and the bracketed portion *[sekai-o odorokasu]* in (i) are forced to be analyzed as the genitive case marker *no* rather than the potential null nominal complement licensor D *no* and a nominalized quotation substantive, respectively.

22 Consider the following (i) and (ii):

- (i) $[_{DP} [_{IP} \dots t_j \dots]_i [_{DP} [_{D}(=\text{no/ga}) [_{CP} NP_j [C \text{ } t_i]]]]]$ (= relative clause)
 (cf. $[_{DP} [_{IP} \dots t_j \dots]_i [_{DP} [_{D}(=\text{no/ga}) [_{CP} NP(=\emptyset)_j [C \text{ } t_i]]]]]$)

- (ii) $[_{DP} [_{IP} \dots]_i [_{DP} [D(= no/ga) [_{NP} [N [_{CP} [C t_i]]]]]]]$ (= noun-complement)
 (cf. $[_{DP} [_{IP} \dots]_i [_{DP} [D(= no/ga) [_{NP} [N(= \emptyset) [_{CP} [C t_i]]]]]]]$)

(i) and (ii) can be taken as representing the cases of overgeneration of the particle *no/ga* in Japanese-acquiring children's speech as observed in section 2. This makes sense under the assumption that somehow at that stage of the language acquisition the relevant economy principle in (40) for regulating the lexical realization of the particle *no/ga* is not at work as in adults' grammar. Although it might be plausible to assume at first blush that such an overgeneration of the particle *no/ga* is on a par with a typical case of overextension of a "regular" rule in English, such as overuse of the regular past tense form *-ed* in English-speaking children, it remains to be seen whether the two phenomena in Japanese and English are really of the same nature. I will leave this issue to future research, though.

23) Although the putative pro-form *no* cannot be used to refer to a person to be honored due to its derogatory implication, it can be used given an appropriate context as in (41)–(42) (= (15)–(16)). McGloin (1985) points out that the semantic/pragmatic notion of "concreteness" plays a pivotal role in the occurrence of the element *no* as both "a pronominal" and "a complementizer" in Japanese. If my analysis of the null nominal complement construction in Japanese in this paper is on the right track, the null nominal NP/DP head rather than the D head element *no* in question must be specified as [+concrete].

24) See Kuroda (1999a) for the distinction between the cleft and the pseudo-cleft in Japanese.

25) Murasugi (1991: 100–101, fn.49) points out that the *no* in the head-internal relative clause and the sentence-final interrogative particle *no* in standard Japanese/Tokyo dialect are realized as the element *ga* in Toyama dialect, tentatively concluding that they are both instances of C just as in the cleft sentence. Moreover, she notices the fact that *ga-no* conversion does not take place in the construction headed by the "interrogative particle" *no*, as illustrated below:

- (i) a. * $[[\text{Taroo-no nani-o katta}]\text{-no}]$
 -Gen what-Acc bought Q
 'What did Taro buy?'
 b. * $[[\text{Taroo-no kaetta}]\text{-no}]$
 -Gen went back Q
 'Did Taro go back?'

Consider the following structures in (ii) below:

- (ii) a. $[_{CP} [_{IP} \dots]_i [_{CP} [C(= no) t_i]]]$
 b. $[_{DP} [_{IP} \dots]_i [_{DP} [D(= no) [_{CP} [C(= \emptyset) t_i]]]]]$ (= Kaynean D-CP underlying structure)

The more familiar analysis consistent with Murasugi's data might be the one in (iia), but another possibility suggests itself within my approach, as represented in (iib). Recall that my analysis does not allow *no* to function as a complementizer. Since the D in (iib) does not c-command any phonologically overt element in the complement, it is realized overtly there as *no* with the zero complementizer at C. Suppose that in order for *ga-no* conversion to be successfully triggered, at least an NP/DP (overt or covert) must be in the structure, making the whole DP "nominal enough." Since the structure in (iib) does not contain any NP/DP, it cannot induce *ga-no* conversion.

Furthermore, notice that the structure in (iib) is compatible with Kuwabara (1977, 2000, 2001) if the structure in (iib) is considered to be embedded under the ellipsis context of the copular verb plus the interrogative C, since it is plausible to take that the pre-copular element in the nominal predicate construction

is of a nominal category DP rather than CP. I will not pursue this issue in this paper, though. See Kuwabara (ibid.) for details on this matter.

26) Notice that under my analysis the complementizer C in both head-external and head-internal relatives is a phonologically null C and the particle *no* in head-internal relatives is identified as the functional head D rather than a complementizer. If there is a complementizer *no* in Japanese, as is assumed in the past literature (see Murasugi 1991, 2000a,b; Kaplan and Whitman 1995 *inter alia*), there remains a mystery as to why there is a difference between head-external relatives and head-internal ones with respect to the occurrence of the complementizer *no* in the first place.

27) Unlike standard Japanese/Tokyo dialect, the C in (51b) surfaces overly as the morpheme *to* in dialects such as Yashiro dialect and Nagasaki dialect, as illustrated below (cf. Yoshimura 2000 for discussion of Yatsushiro dialect):

- (i) [[Taroo-no kuwasita] to]-ba susi bai. (= Yashiro Dialect)
Taroo-Gen ate C-Top sushi Cop
'What Taro ate is sushi.'
(= Yoshimura 2000, 77, (24b))
- (ii) [[an doroboo-no uti-kara nusundeitta] to]-wa okane bai. (= Nagasaki Dialect)
that thief-Gen my house-from stole C-Top money Cop
'What that thief stole from my house is money.'
(= Tomohiro Fujii p.c. 2004)

The topic phrase involves a free relative in (i) and (ii), and the free relative can be analyzed as involving movement of a null nominal element to [Spec,CP] from within the IP, which in turn is raised to [Spec,DP], as suggested in the text. Thus, the morpheme *to* in (i) and (ii) can be identified as an overt realization of the C in (51b) above. Notice that the overt occurrence of the C renders the overt appearance of the functional D head impossible in (i) and (ii) in accordance with the PF conditions in (39)–(40). This fact from the two dialects confirms the validity of the Kaynean D-CP structure move directly than in the case of standard Japanese/Tokyo dialect.

28) Here, I will disregard the exact position of the copular verb in (51d) and (51e) just for the sake of simplicity.

29) Although there are differences among their analyses, Kuwabara (2000), Sakai (2000), Hiraiwa and Ishihara (2002), and Watanabe (2003) propose a unified treatment of the “*no da/no desu/no dearu*” construction and the cleft construction, but crucially they assume that the formative *no* is a complementizer projecting a CP in Japanese in both constructions at hand, unlike my analysis in this paper.

30) Yoshimura (2000) reports the following cleft construction in Yashiro dialect as a grammatical one:

- (i) [[Taroo-no kuwasita] to]-ba susi-ba bai.
Taroo-Gen ate C-Top sushi-Acc Cop
'It is sushi that Taro ate.'
(= Yoshimura 2000,77,(24b))

On the other hand, Tomohiro Fujii (p.c.) gives the following cleft construction in (northern) Nagasaki dialect as ungrammatical:

- (ii) *[[an doroboo-no uti-kara nusundeitta] to]-wa okane-ba bai.
 that thief-Gen my house-from stole C-Top money-Acc Cop
 'It is money that that thief stole from my house.'

Unfortunately, I have no idea at all at this point as to the real source of this difference. I will leave a full investigation into this issue to future research.

31) See Ross (1969) for English Sluicing and Takahashi (1994) for Japanese Sluicing (cf. also Nishiyama et al. 1995 and Kuwabara 1997, 2000, 2001).

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