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1 Introduction

In this paper I argue that Japanese, an articleless language, projects a determiner phrase (DP). In particular, I demonstrate the tenability of the DP hypothesis for Japanese bare noun phrases that have definite/discourse anaphoric interpretations.

An important consequence of this analysis is that the lack of the article is due to morphological reasons in the determiner system, rather than being due to syntactic or semantic parametric differences. Thus, there should not be a functional category parameter, as proposed by Fukui and Sakai (2003), or a semantic parameter which determines definiteness/definiteness, as proposed by Chierchia (1998), because the locus of the semantic variation of bare nouns is in morphosyntax.

The article is structured in the following way. In the next section, I will present basic data regarding Japanese noun phrases, along with previous analyses of Japanese noun phrases (including personal pronouns) that argue against the DP hypothesis for Japanese. I will also offer observations that show that common noun phrases and personal pronouns do not always behave in the same way. In section 3.1, I will replicate Japanese pronoun-noun constructions following Postal’s (1969) analysis of their English counterparts and show that Postal’s argument for pronouns as determiners is not applicable to Japanese. After proposing a new analysis of the constructions that argues in favor of the DP hypothesis in 3.2, I offer two pieces of new evidence for the hypothesis in 3.3, and conclude that Japanese projects DP in the syntax in the last section.

2 Previous Approaches and Problems

Fukui (1986) observes that not only common nouns but also personal pronouns freely allow adjectives and demonstratives to precede them in Japanese (see also Noguchi 1997).

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(1) Watasi-wa [tiisai kodomo(-ra)/kare/karera]-o sikatta.
I-Top small child-Pl/him/them-Acc scolded
‘(Lit.) I scolded the small child(ren)/him/them.’
(2) Watasi-wa [sono (tiisai) kodomo(-ra)/kare/karera]-o sikatta.
I-Top that small child-Pl/him/them-Acc scolded
‘(Lit.) I scolded that (small) child(ren)/him/them.’

The above data suggest that Japanese personal pronouns behave like common noun phrases. Moreover, bare common noun phrases appear to have definite/discourse anaphoric interpretations like personal pronouns in a given context.

(3) A: Hannin-wa [kodom(-ra)]-o saratta to kiita.
criminal-Top child-Pl-Acc kidnapped that heard
‘I heard that the criminal kidnapped (a) child(ren).’
a. Sonogo keisatu-wa buji [kodomo(-ra)]-o hogosita.
later police-Top safely child-Pl-Acc protected
‘Later, the police protected the child(ren) safely.’
b. Sonogo keisatu-wa buji [kare/karera]-o hogosita.
later police-Top safely him/them-Pl-Acc protected
‘Later, the police protected him/them safely.’

Given the context in (3A), the common noun phrase and the personal pronoun refer to the same individuals that are previously introduced in (3a,b). These data imply that common noun phrases may behave like personal pronouns in distribution in terms of definiteness/discourse anaphoric interpretation. There appear to be no differences between common noun phrases and personal pronouns.

Chierchia (1998) argues that languages vary in terms of what they allow NPs to denote. If a language involves the following properties, it allows bare NPs to denote kinds as well as properties, unlike languages that need an overt determiner for noun phrases: (i) the absence of (in)definite determiners, (ii) the absence of plural morphology, and (iii) the obligatory use of a classifier in the presence of a numeral. According to Fukui and Sakai (2003) and Tomioka (2003), Japanese satisfies all three properties. Thus, Japanese bare noun phrases are all NPs in syntax and enter into semantic operations for definiteness/specificity. If they are correct, Japanese noun phrases are all NPs in syntax.

Further observations will show, however, that the identical treatment of personal pronouns and common nouns with definite/discourse anaphoric interpretations is problematic. Consider example (4):
Given the context in (4A), both nominal collocations are grammatical in (4a,b). 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 comes from the pitch accent:

(5) a. dansei + kanzya \[\rightarrow\] dansei.kanzya (lexical compound)
   man    patient          man.patient
b. karera + kanzya \[\rightarrow\] karera kanzya
   they     patient         them     patient

The combination of the two nouns unifies the accents and possesses a single accent on the right hand side of the arrow in (5a). This is the typical accentuation pattern for lexical compounds (see Shihata and Kageyama 1988 for more on compounds). On the other hand, in (5b), each item keeps its own accent. The difference in accentuation tells us 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 between common nouns and personal pronouns stems from the treatment of partial modification (see Bresnan and Mchombo 1995, Horiuchi 2006 for detailed criteria for compounds.)

(6) 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 (6a) while the pronoun-noun construction in (6b) allows the operation. The treatment of partial modification entails that the second common noun in (6b) is a phrasal category whereas the one in (6a) is not.

The last difference is the insertion of the plural morpheme onto the first
noun in the combination. The first noun in the combination of two common nouns cannot host the plural morpheme in (7) below, unlike the personal pronoun in (4b) above.

(7) *Hai. [Dansei-ra kanzya]-wa (mina) kusuri-o nomimasita.
     yes man-Pl patient-Top all medicine-Acc drank
     ‘Yes. The male patients all took medicine.’

These data entail that personal pronouns in complex noun phrases are different in their distribution from common noun phrases, as illustrated in (8) (see Kageyama 1993 for the structure of lexical compounds):

(8) a. personal pronoun (adjective) common NP
    b. *common NP(-Pl) (adjective) common NP    (cf. N-N compounds)

In the next section, we will examine the combination of a personal pronoun and a common noun phrase in more detail.

3 The DP Hypothesis for Japanese

3.1 Are “So-called Japanese Pronouns” Determiners?

Postal (1969) observes that English pronouns followed by noun phrases can function like the definite article the in (9), and proposes that “so-called pronouns” are determiners (see Pesetsky 1978 for further arguments).

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

Abney (1987) 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. Not only the third person pronoun observed in (4b) above, but also the first and second person pronouns combine with common noun phrases (Noguchi 1997, Furuya 2004).

(11) watasi/tati/kanzya
     ‘we/you Pl’ patient
     ‘we/you patients’
These nominal collocation data show that personal pronouns and common noun phrases are different in distribution both in Japanese and in English. Moreover, the constructions in both languages have a common restriction. Consider example (12):

(12) *watasi/*anata/*kare kanzya
    I/you/he patient
    ‘*I/*you/*he patient’

The singular counterparts are ungrammatical, while plural counterparts are grammatical in both languages. If the structure in (10) proposed by Abney is correct for English, Japanese is also predicted to have DPs. However, there is a clear difference between Japanese and English. Consider the next example.

(13) Sensei-wa [sono watasi/anatattiti/anatatatiti gakusei]-o suisensimasita.
    teacher-Top those us/you(Pl) student-Acc recommended
    ‘(Lit.) The teacher recommended those us/you students.’

Japanese pronoun-noun constructions allow demonstratives to appear at the left periphery, unlike their English counterparts in (13). Moreover, if Abney’s structure in (10) is applicable to Japanese in that a personal pronoun in D takes an NP as its complement, the Japanese equivalent should have the following word order, due to the head-finality of Japanese.

(14) a. *common NP-pronoun
    b. *[DP [D’ [NP common NP] pronoun]]

The word order in (14) is not correct. These facts suggest that Japanese personal pronouns are lower than the head or Spec of DP, and also that Abney’s argument for English pronouns as determiners cannot be applied to Japanese complex nominal constructions.

3.2 New Proposal for Pronoun-noun Constructions

Campbell (1996, 1998) proposes a small clause analysis for English definite noun phrases, based on the assumption that common noun phrases are always predicative in syntax (see also den Dikken 1998 for a small clause analysis). Let us look at two English examples.

(15) a. the boy
    b. [DP null Operator [D’ the [SC pro boy]]] (Campbell 1996:165)
(16) a. those boys  
   b. [DP those [D' (null head D) [SC pro boys]]]  (Campbell 1996:167)

(15b) and (16b) are the structures of the nominal expressions, where the pros are predicated of the common noun phrases. As for DP, a null operator appears in Spec of DP in (15b) and the determiner occurs in D in (16b). Note that the co-occurrence of a demonstrative and a definite article is possible in some languages (Giusti 1992).

Following Campbell, I assume the following structure for Japanese pronoun-noun constructions:

(17) [DP demonstrative/null Operator [D' (null head D) [SC pronoun NP]]]

The structure captures the fact that the position of personal pronouns in question is the subject position of a nominal predication relation, below DP.

How does the nominal predication hypothesis support the DP hypothesis for Japanese? In the next section, I will attempt to give an answer to this question.

3.3 Two Pieces of New Evidence for the DP Hypothesis for Japanese

3.3.1 Definiteness/Specificity Effects

The first piece of evidence involves movement. Assuming, with Stowell 1989, that Spec of DP is needed as an escape hatch for movement out of DP, definite DPs are well documented as islands (Bošković 2005)

(18) a. *Who did Fred read [the story about [e]]?  
   b. *Who did Mary steal [that picture of [e]]?  
   (Fiengo and Higginbotham 1981)

Campbell (1996) analyzes the ungrammaticality of (18a,b) in the following way.

(19) a. *[WHi … [DP demonstrative [D' D [NP … ti ]]  (18b)  
   b. *[WHi … [DP null Operator [D' the [NP … ti ]]  (18a)

1Not all definite expressions show the definiteness/specificity effect in English, as shown below.

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

Thus, the argument of definiteness/specificity effects here supports the presence of DP to the extent that a definite DP is an island for movement.
The ungrammaticality results from a violation of the Minimal Link Condition (MLC).

I will replicate Campbell’s argument regarding the definiteness/specificity effects by using numeral quantifiers (NQ). Beforehand, let us look at the basic behavior of numeral quantifiers.

(20) (3-nin) Suzuki sensei-wa [gakusei (3-nin)]-o sikatta.

Cl  S  teacher-Nom  student  Cl-Acc  scolded

‘Prof. Suzuki scolded (3) students.’

NQs can stay within the associated noun phrase or float out of the associated noun phrase in (20), as Kakegawa (2003) argues, a.o. (cf. Kobuchi-Philip 2003). Kakegawa notes that when a numeral classifier is outside the associated noun phrase, the noun phrase in (20) can only have an indefinite reading.

Against this background of NQs, consider the next examples.

(21) a. Sensei-wa [(sono) karera 3-nin]-o sikatta.

teacher-Top those  them  Cl-Acc  scolded

‘(Lit.) the professor scolded (those) them three.’

b. *[3-nin], sensei-wa [(sono) karera ti]-o sikatta.

Cl  teacher-Top  those  them-Acc  scolded

Once the expressions have definite interpretations in (21), NQ cannot float outside the associated noun phrase in (21b) while it can stay within the noun phrase in (21a). I claim that the ungrammaticality of (21b) stems from the definiteness/specificity effect and propose the following structure.

(22) *[NQ . . . [DP sono/ null Operator [D [ SC watasitati ti ]]]] (21b)

Some native speakers of Japanese appear to accept (21b). Kiyoko Ito (personal communication) suggested to me that the acceptability of (21b) may result from pragmatic reasons, e.g. 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 the pronouns in (21) 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 (21b) on par with (21a). Alternatively, some informants appear to treat floating quantifiers as adverbs, as Kobuchi-Philip (2003) argues. If so, however, there is no movement involved and hence no definiteness effect should be observed in (21), and also in (25) below. Moreover, as will be shown in (27b), the obligatory indefinite interpretation of the associate noun phrase in the NP-Case-Q order cannot be accounted for by an adverbial analysis of numeral quantifiers.
In (22), the numeral quantifiers cannot float outside the associated noun phrases, due to the presence of a demonstrative or a null operator in the Spec of DP. Note that demonstratives crosslinguistically appear at various positions within noun phrases (e.g. Giusti 1992, Brugè 1996). Basing my proposal of the structure in (22) on Wolter’s (2004) semantic analysis of demonstratives as operators along with Campbell’s (1996) structures in (15) and (16) above, I assume the position of Japanese demonstratives in DP.

If this argument is on the right track, one can predict that ‘bare’ noun phrases that involve definite/discourse anaphoric interpretations show definiteness/specificity effects. That is, even when the subject position is occupied by a pro in the nominal predication constructions and the referential null ‘operator’ occurs in the Spec of DP, the definiteness/specificity effect should be observed in (23).

(23) * [NQ, ... [DP null Operator [sc pro t]]]

The next examples show that the prediction is borne out. First, let us look at the following examples that do not allow floating quantifiers.

(24) A: Watasi-wa [[hannin 3-nin], -ga nigeta] to kiita.
       I-Top criminal Cl-Nom ran.away that heard
       ‘I heard that (the) three criminals ran away.’
   a. Sonogo keisatu-wa [(sono) hannin 3-nin]-o tukamaeta.
      later police-Top those criminal Cl-Acc caught
      ‘Later, the police caught those/the three criminals.’

Given the context in (24A), the noun phrase in the brackets refers to the same individuals as previously introduced, regardless of the presence/absence of the demonstrative sono in (24a).

In comparison with the example in (24a), the next examples with floating quantifiers are ungrammatical.

(25) *3-nin, sonogo keisatu-wa [(sono) hainnin t] -o tukamaeta.
       Cl later police-Top those criminal-Acc caught
       ‘(Intended) Later, the police caught those three criminals.’

Given the same context in (24A), the noun phrase in the brackets has a definite/discourse anaphoric interpretation whether it has a demonstrative or not, and refers to the individuals previously introduced as the English translation

\[3\text{Like the example in (24a), some native speakers of Japanese seem to accept the sentence in (25). See footnote 2 for possible accounts.}\]
shows in (25). This noun phrase with the definite interpretation does not allow a quantifier to float out of the associated noun phrase, like in the pronoun-noun constructions of (21b). I propose the following structure for the ungrammaticality of (25):

(26) *[ NQi ... [DP null Operator/demonstrative [sc pro [NP ti]]]]

We have observed that numeral quantifiers can stay in the vicinity of definite noun phrases, as was observed in (21a) and (24a). However, they cannot move outside the associated definite noun phrases in (21b) and (25), because the movement of numeral quantifiers outside the associate noun phrases violates the minimal link condition. The argument of definiteness/specificity effects supports the DP hypothesis for Japanese if Spec of DP is the only the escape hatch for movement for definite noun phrases.

It has been observed since Kamio (1977) that the NP-Case-Numeral Quantifier order forces the non-specific interpretation (see Tateishi 1989, Ishii 1991, Fujita 1994, Watanabe 2006 for further relevant data).

(27) a. John-wa {piano 2-dai/2-dai-no piano}-o kai-tagatta.
   J-Top piano Cl/ Cl-Gen piano-Acc buy-wanted
   ‘John wanted to buy (the) two pianos.’

   J-Top piano-Acc Cl buy-wanted
   ‘John wanted to buy (*the) two pianos.’

(Watanabe 2006:298)

While (27a) is ambiguous, the object in (27b) must be interpreted as a non-specific indefinite, as the translations indicate.

Kakegawa (2003) further offers the observation that the quantifiers in the NP-Case-Numeral Quantifier order cannot quantify the associated noun phrases once the noun phrases carry demonstratives.

(28) John-ga kono hon-o 3-satu katta.
   J-Nom this/these book-Acc Cl bought
   ‘John bought three copies of this book.’
   *‘John bought these three books.’

These two sorts of data show that the associate noun phrase in the NP-Case-Numeral Quantifier order must be (non-specific) indefinite.

Vermeulen (2006) argues that the numeral quantifier in the NP-Case-Numeral Quantifier order is outside the associated noun phrase and does not stay within the noun phrase, based on the insertion of adverbs (Fujita 1994,
(29) a. Mary-ga Bob-ni [banana (*kyoo) 3-bon]-o ageta.
   M-Nom Bob-to banana today Cl-Acc gave
   ‘Mary gave three bananas to Bob (*today).’
   b. Mary-ga Bob-ni banana-o (kyoo) 3-bon ageta.
   M-Nom Bob-to banana today Cl gave
   ‘Mary gave three bananas to Bob (today).’

In (29a), 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 (29b), an adverb can appear between the associated noun bearing a case marker and the quantifier. The possibility of adverbial insertion shows that the associate noun phrase and quantifier in the NP-Case-Numeral Quantifier order do not constitute a constituent in (29b), unlike the combination in (29a).

Vermeulen’s second argument for the non-constituency analysis of NP-Case-Numeral Quantifier involves coordination constructions.

(30) a. [[Ringo 2-tu]-to [banana 3-bon]-o Mary-ga katta.
   apple Cl-and banana Cl-Acc M-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 M-Nom bought

The data in (30) are simplified examples from Vermeulen (2006:424), and their structures are as follows.

(31) a. [[NP-NQ]-and [NP-NQ]-Case], [… t₁ …]  
   b. *[[NP-Case NQ]-and [NP-NQ]-Case], [… t₁ …]

The coordination of the combinations of the associated noun phrase and the quantifier can be scrambled to the left periphery of the sentence in (31a), whereas in (31b), the coordination cannot be scrambled. Vermeulen attributes the ungrammaticality of (31b) to the difference in the syntactic category of each conjunct in (32).

(32) a. NP-Case…NQ  
   b. [NP NQ]-Case

The numeral quantifier in (32b) stays within the associated noun phrase...
while the one in (32a) is outside the noun phrase.

With the structure in (32a) in mind, let us go back to the example in (27b), which is repeated below:

    J-Top piano-Acc Cl buy-wa nted
    ‘John wanted to buy (*the) two pianos.’

As was observed, the associated noun phrase in the NP-Case-Numeral Quantifier order cannot have a definite interpretation in (27b). Furthermore, if Vermeulen’s argument is correct, the numeral quantifier 2-dai is outside the associate noun phrase piano-o. I propose that the obligatory indefinite interpretation of the object noun phrase in (27b) comes from the restriction on definiteness/specificity. That is, a numeral quantifier cannot float outside the associated noun phrase when the noun phrase has a definite/discourse anaphoric interpretation, due to the blocking of an element in Spec of DP, as was argued in (21b) and (25) (see Watanabe 2006 for a different account). If the current analysis of the definiteness/specificity effects for noun phrases with numeral quantifiers is right, it supports the DP hypothesis for Japanese if Spec of DP is the only the escape hatch for movement for definite noun phrases. In the next subjection, we will look at one more piece of evidence in favor of the DP hypothesis for Japanese.

3.3.2 Coordination Constructions

The second piece of supporting evidence for the DP hypothesis comes from Nishiyama’s (2003) observations concerning the conjunction particle -to. The connector -to combines referential argument nominals (Nishiyama 2003). Consider the next example:

(33) *karera-to anata gakusei
    them-TO you(Sg.) student

(At least) two logical structures can be assigned to the ungrammatical expression in (34):

(34) a. *[karera to [anata gakusei]]
    b. *[karera to anata] gakusei

The ungrammaticality of (34a) can follow from the restriction on number as was observed in (12) above. That is, the singular pronoun-noun construction is ungrammatical in Japanese.
But, why is the structure in (34b) ungrammatical? Noguchi (1997) argues that Japanese personal pronouns project NP and DP (Cardinaletti 1994). Based on Noguchi’s argument, I assign two possible structures for (34b):

(34) a. *[[NP karera] to [NP anata]] gakusei]  
b. *[[DP karera] to [DP anata]] gakusei]

Under the assumption that a DP does not permit a full-DP within a smaller noun phrase, following Kayne (1994) and den Dikken (1998), the structure in (34b) violates the size restriction.

Why is the structure in (34a) ungrammatical? I assume that -to cannot coordinate bare NPs when they refer to different individuals (see Schmitt and Munn 1999 for an analysis of coordination constructions in Brazilian Portuguese). If the analysis of the connector -to is correct, it supports the DP hypothesis for Japanese (cf. Kasai and Takahashi 2001).

4 Conclusion

I have argued that the restrictions on floating of numeral quantifiers and coordination constructions should be stated in terms of the DP hypothesis for Japanese. Based on the fact that quantifier floating is impossible from definite noun phrases, I derived this definiteness/specificity effect from the assumption that only Spec of DP (and not other A-bar positions) is an escape hatch for movement. Thus, the current analysis supports the DP hypothesis for Japanese. Moreover, the analysis of coordination constructions exploits the assumption that -to is a connector of DPs and not a P (Kasai and Takahashi 2002). If the current argument is on the right track, the lack of an article is due to morphological reasons in the determiner system rather than being due to a syntactic or semantic parametric difference.

References


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