Specificity effects for Japanese, an articleless language*

Kaori Furuya  
Grand Valley State University  
furuyak@gvsu.edu

The Japanese language does not possess articles. Demonstratives do not obligatorily appear in the left periphery of noun phrases (NPs). Bare NPs can be definite and indefinite in a given context. However, when NPs combine with numeral classifiers (NCs), NPs encounter restrictions on interpretation. I account for them in the vein of specificity effects for this article-less language, in support of the phase DP theory (Chomsky 2004, 2008). The lack of an article is due to lexical reasons in the determiner system rather than due to a syntactic or semantic parametric difference in the Japanese language.

1. Introduction

The Japanese language does not have a determiner such as a and the as English does. Japanese demonstratives do not seem to obligatorily appear to the far left of NPs. Moreover, personal pronouns allow prenominal modifiers such as common NPs. Since no article exists and no other overt evidence for the determiner hypothesis has been found, some linguists argue that Japanese noun phrases only project noun phrases (Fukui 1986 and subsequent work). Other linguists propose Japanese case markers are a morphological representation of the determiner head or a determiner (D) (Tateishi 1989). Although I defend the determiner hypothesis for Japanese, I will not pursue this line of argument here, because according to the standard minimalist theory, a structural Case is an uninterpretable feature and does not project a phrase in syntax. After critically reviewing three extant analyses for the Determiner Phrase (DP) hypothesis, I will employ Campbell’s (1996) argument for Japanese NPs. I will argue that specificity effects are observable for Japanese, despite the lack of articles and will support the DP hypothesis for Japanese definite NPs. My argument comes from the comparison of Japanese personal pronouns and common noun phrases in relation to floating NCs.

In section 2, I will review Fukui’s NP hypothesis and will present empirical problems in his analysis. In section 3, I will offer three alternative analyses, one of which supports the phase DP hypothesis for Japanese, and the conclusion of the current paper is in section 4.

* An earlier version of this paper was presented at ILLS 3 (2012), University of Illinois at Urbana-Champaign.

Copyright © 2012 Kaori Furuya
2 NP hypothesis for Japanese

I will review Fukui’s two arguments for his NP hypothesis in 2.1 and discuss some empirical problems in 2.2.

2.1 Fukui’s (1986) NP hypothesis

Fukui offers the following examples with demonstratives in (1a) and personal pronouns in (1b).

(1) a. John-no kono/sono/ano hon John’s this/that/that book (Fukui 1986:205)
    b. [Kinou-no kodomo/kare-wa yousu-ga hendat-ta yesterday-Gen child/he-Top state-Nom strange-Past ‘(Lit.) yesterday’s child/*he was strange.’ (Fukui 1986: 233 with slight modifications)

In (1a), demonstratives do not appear in the left periphery of the NPs and in (1b) the personal pronoun allows a prenominal modifier such as the common NP. Based on these examples, Fukui argues that Japanese only projects NPs in (2) since the language does not have any closing phrase such as a DP for NPs.

(2) [NP possessive [NP demonstrative [NP personal pronouns/common nouns]]]

According to Fukui, Japanese demonstratives are adjuncts since they do not need to appear in the left periphery. He also claims that Japanese personal pronouns behave like common noun phrases.

Fukui’s structure in (2) predicts that movement from within a NP should not be prevented regardless of (in)definiteness since no element such as a DP blocks this kind of movement. Put differently, specificity effects should not be observable. However, this prediction is shown to be incorrect in the following subsection.

2.2 Problems to Fukui’s analysis

I will show two empirical problems to Fukui’s NP hypothesis in (2). Fukui argues Japanese noun phrases project only NPs; therefore, demonstratives behave as adjuncts. However, Fukui’s NP hypothesis cannot account for the difference in grammaticality between NPs with and without demonstratives. First, consider NPs without demonstratives in (3).
Although Fukui does not analyze NPs with NCs, under Fukui’s NP hypothesis, one can assume the following schemas for (3a,b).

(4)  a.   \[ \text{NP adjective} \ [\text{NP NC} \ [\text{NP NP}]] \]

b.   NC … \[ \text{NP adjective} \ [\text{NP NP}]] \]

In (4a,b), a NC can be located within the associated NP or float outside the NP respectively. It seems that the relation between a NC and the associated NP is unrelated to the position of the NC. However, the following example shows that the positions of a NC put a restriction on the interpretations of the associated NP.

(5)  a.   \[ \text{Kono 3-satsu-no hon}-o honya-de katta.} \]
these book in bought
“\(\text{I bought these three books in a bookstore.}\)”

b.   \#\[ \text{Kono hon}-o honya-de 3-satsu katta.} \]
this book in bought
* \(\text{I bought these three books in a bookstore.}\)”

In (5a), when a NC is located within the NP, it has a non-partitive reading. On the other hand in (5b), the NP with a NC outside of it “loses” a non-partitive reading. Under Fukui’s NP analysis, one can assume the schemas in (6a,b) for the bracketed NPs with a non-partitive interpretation in (5a,b).

(6)  a.   \[ \text{NP demonstrative} \ [\text{NP NC} \ [\text{NP NP}]] \]

b.   *\[ \text{NC …} \ [\text{NP demonstrative} \ [\text{NP NP}]] \]

Under the movement analysis of NCs following Lee (1999) and Watanabe (2006) among others,\(^2\) the movement of a NC outside the NP appears to be blocked by a

---

1 The example in (5b) allows for a non-partitive interpretation in (i).

(i) ‘I bought three copies of this book in a bookstore.’

An analysis of NPs with partitive interpretations is beyond the current work. (See Furuya 2011 for an analysis of NPs with partitive interpretations).

2 In the well-studied literature of NCs, the analyses of NCs can be divided into two lines of argument: an adverbial analysis and a floating analysis. Watanabe (2006) and Furuya (2006)
demonstrative in (6b). However, if a demonstrative is an adjunct as Fukui claims, it is not clear why a demonstrative blocks the movement of a NC outside the NP in (6b), unlike in the case of an adjectival modifier in (4b). One may argue that the restriction on the (non-partitive interpretations in (6a,b) comes from the semantics of demonstratives rather than their syntax. However, this line of argument cannot account for the difference in grammaticality in (7) and (8).

(7)  a. [Henna hito 3-nin]-o honya-de mita.
    strange people Cl-Acc bookstore-in saw
    ‘I saw three strange people in a bookstore.’

    b. [Henna hito]-o honya-de 3-nin mita.
    strange people-Acc bookstore-in Cl saw
    ‘I saw three strange people in a bookstore.’

(8)  a. [Karera 3-nin]-o honya-de mita.
    them Cl-Acc bookstore-in saw
    ‘I saw them 3.’

    b. *[Karera]-o honya-de 3-nin mita.
    them-Acc bookstore-in Cl saw

The examples in (7a,b) show that the NPs with an indefinite interpretation are only grammatical, regardless of the positions of the NCs in (7a,b). In contrast, the position of the NCs in (8a,b) changes the grammaticality of the NPs. This time the pronominal NPs do not involve a demonstrative in (8b) and yet the separation of a NC from its associated NP causes the expression to be ungrammatical. This indicates that the ungrammatical schema in (6b) for NPs with non-partitive interpretations does not come from the semantics of demonstratives. I argue that the impossibility of the NP with a non-partitive interpretation in (5b) should be accounted for in syntax.

Moreover, the same syntactic treatment of common NPs and personal pronouns by Fukui’s NP hypothesis cannot account for the ungrammaticality of (8b) since both nominals project the same NP structure and nothing should block the movement of a NC outside of the associated NP in (8b) as in the case of (7b).

In this section, after having reviewed Fukui’s NP hypothesis in 2.1, I critically examined his NP hypothesis by applying his analysis to NPs with floating NCs in 2.2. I showed that Fukui’s treatment of demonstratives as a adjunct like adjectival modifiers is incorrect. I also demonstrated that the same syntactic treatment of common NPs and personal pronouns as NPs under Fukui’s NP hypothesis cannot account for the ungrammaticality of (8b). Put differently, Fukui’s NP hypothesis disputed an analysis of NCs as adverbs. In the current work, I assume that floating NCs that stay outside the associated NPs move outside of the NPs.
cannot account for the fact that definite NPs prohibit the associated NCs from floating outside them for non-partitive interpretations.

In the following section, I will examine three extant analyses and by employing one of them, I will offer an analysis for the impossibility of the NP with a non-partitive reading in (5b) and (8b).

3. Phase DP for Japanese

I will examine three extant analyses of NPs for the analysis of (5b) and (8b): (a) Postal’s (1969) analysis of English personal pronouns in 3.1; (b) Watanabe’s (2006) checking analysis in 3.2; (c) Campbell’s (1996) analysis of English definite NPs in 3.3. After critically examining them, I will employ Campbell’s analysis for the Japanese noun phrases, and support the DP hypothesis for the Japanese language.

3.1 “So-called Japanese pronouns” are not determiners

Postal (1969) argues “so-called English pronouns are determiners” in (9), and Abney (1986) updates Postal’s proposal in (10).

(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.  
   (Déchaine & Wiltschko 2002: 422)

(10) [DP pronouns [ NP ]]

Like English personal pronouns, Japanese counterparts also combine with common NPs (Noguchi 1997, Furuya 2004). However, they also allow for prenominal modifiers in (11) (which is not permitted in English).

(11)  
a. (Isogasii) anatatati gakusei-wa genki da. 
   busy you(Pl) student-Top energetic Cop  
   ‘(Lit.) Busy you students are energetic.’

b. (Isogasii) watasitati sensei-wa genki da. 
   busy we teachers-Top energetic Cop  
   ‘(Lit.) busy we teachers’
(Isogasii) karera dansei-wa genki da.
busy them men-Top energetic Cop
‘(Lit.) busy them men’

Given the general ban on adjunction to an argument NP (Chomsky 1986), the NPs in (11) show that Japanese personal pronouns are located within a DP; otherwise, they violate the general ban. Thus, the schema for the NPs in (11) should be in (12b) rather than in (12a).

(12)  a. *[DP adjective [DP pronoun NP]]

b. [XP adjective [XP pronoun NP]]

(12b) shows that the personal pronoun is located at a lower position within the DP and does not function as a determiner for Japanese, unlike English pronouns proposed by Postal. Japanese personal pronouns are not “so-called determiners.” Postal’s analysis does not offer further help to analyze the Japanese noun phrases in (11), however. Without pursuing his analysis further, I will examine Watanabe’s analysis to see whether it is useful to examine the examples in (5b) and (8b) in the next subsection.

3.2 Watanabe’s (2006) checking relation is not sufficient

Under the DP hypothesis for Japanese, Watanabe argues that the associated NP moves to the Spec of a DP in (13a), and proposes the schema in (13b).

(13)  a. [Hon-o] (isoide) 3-satsu katta.
book-Acc quickly Cl bought

b. Honi-o [DP t’ [ D [t’ 3-satsu]]] katta.
book-Acc Cl bought
(Watanabe 2006: 257 with a slight modification)

According to Watanabe, the NP checks features against the D on the way to floating outside of the NP and this creates the non-definite interpretation of NPs. This captures the correct word order in (13a).

However, Rose (1967/1986) proposes the Left Branch Condition (LBC), which blocks extraction of determiners out of the NP in (14).

---

3 The assumption of the movement of the associated NP (rather than a NC) is different from the current assumption. Even when this kind of movement is applied to the examples in (5b) and (8b), Fukui’s NP hypothesis cannot account for their ungrammaticality.
(14)  * That you see [\( t_i \) car]

Given the LBC, the NP in a DP cannot move out of the NP in (14). One may object to this analysis and claim that the movement of the NP in (13b) should be grammatical because the NP checks an uninterpretable Case feature against D for indefiniteness.

However, Watanabe’s analysis not only makes wrong predictions.\(^4\) Consider the structure in (16) for the indefinite NP in (3a), repeated below.

(16)  * DP

\[
\begin{array}{c}
\text{QP} \\
\text{NC} \\
3\text{-satsu-no} \quad \text{CaseP} \\
\uparrow \\
\text{NP} \\
\text{zasshi-o}
\end{array}
\]

Under the general ban on adjunction to a DP, the adjectival modifier is located within a DP in (3a). If the adjectival modifier is adjoined to the Quantifier Phrase (QP) in Watanabe’s framework, the QP (which is the complement of the D head) needs to be raised to Spec of a DP for indefiniteness in (16) under Watanabe’s analysis. Yet, the complement of a phrase is prohibited from being raised to the Spec of the next higher phrase as an anti-locality condition (Bošković and Lasnik 2006). Put differently, the movement of the complement of the DP to its Spec is illegitimate. If this movement is prohibited, it is predicted that the bracketed NP in (3a) should not have an indefinite interpretation, which is incorrect.

If Watanabe’s analysis is modified and the checking between the NP and the D head is optionally conducted for indefiniteness without the NP’s movement to the Spec of the DP in (16), it does not violate the anti-locality condition and correctly predicts the grammaticality of (3a). However, this modification weakens the argument for indefiniteness in (13b) since the NP in (13b) may also be able to receive an indefiniteness interpretation before moving to the Spec of the DP. Moreover, Watanabe does not address an analysis of NPs for a definite

---

\(^4\) Watanabe (2006) does not analyze indefinite NPs with prenominal modifiers.

\(^5\) It cannot be lower than the QP in (16) since a NC is in the Spec of a QP in Watanabe’s framework and the adjectival modifier is left to the NC. Thus, the natural assumption is that the modifier is adjoined to the QP in (16).
interpretation. Thus, one cannot employ his analysis for the ungrammaticality of the NP with a non-partitive interpretation in (5b) and (8b). Thus, I will not pursue Watanabe’s checking analysis further.

In this subsection, I will present the third extant analysis for NPs argued by Campbell (1996). After reviewing his analysis, I will demonstrate that it successfully accounts for the ungrammatical expressions in question.

3.3 Campbell’s (1996) Referential Operator in DP

Campbell proposes a demonstrative or a null referential Operator in (17b) and (18b) for definite expressions as in (17a) and (18a).

(17) a. those boys
    b. [DP those [D’ (null head D) [PredP pro boys]]]
       (Campbell 1996,167)

(18) a. the boy
    b. [DP null Operator [D’ the [PredP pro boy]]]
       (Campbell 1996,165)

According to Campbell, in the same line with wh-phrases that have the feature [+wh] in CP, English demonstratives have a morphosyntactic feature [+th] that heads the definite article in D and thus occurs only in DP in (17b), (Brugè 1996). Even when a demonstrative does not appear as in (18b), Campbell assumes a phonologically null referential operator that binds the pro in the subject position of a small clause in the Spec of DP.

This structure readily accounts for specificity effects for the following English examples in (19).

(19) a. Who did you see [a picture of ti]?
    b. *Who did you see [the picture of ti]?
    c. *Who did Mary steal [that picture of ti]?
    d. *Who did Mary steal [that picture of [ti]]?  
       (Fiengo and Higginbotham 1981)
    e. *Who did Fred read [the story about [ti]]? 
       (Fiengo and Higginbotham 1981)
The structure for the ungrammatical examples is as follows in (20):

\[(20) \quad *[\text{WH}] \ldots [\text{DP demonstrative/null Operator} \ [D' \ D \ [\text{NP} \ldots [t_l]]]] \]

When a NP is definite, a demonstrative or a null Operator is located in the Spec of DP and blocks a wh-word from moving outside since the Spec of DP is occupied by a demonstrative or a null Operator. To update this analysis in (20), given the assumption that a DP is a phase, the movement of a wh-phase is subject to the Phase Impenetrability Condition (PIC) in (21) (Chomsky 2004, 2008).

\[(21) \quad \text{The Phase Impenetrability Condition (PIC)}
\]

Material within a phase XP is not accessible to operations at ZP (the next phase) unless it is within the edge domain of XP.

Given the PIC, the movement of a wh-word in (22) is a violation of the PIC since the wh-phrase does not move through the Spec of the DP, due to the presence of a demonstrative or a null Operator in the Spec of the DP.

Combining Campbell’s analysis for specificity and the DP phase theory, I account for the ungrammaticality of (5b) and (8b). Consider the schema of (5b) in (22) first.

\[(5) \quad \text{b.} \quad #[\text{Kono hon]-o honya-de 3-satsu katta.} \quad \text{this book-Acc bookstore-in Cl bought}
\quad \text{* ‘I bought these three books in a bookstore.’} \]

\[(22) \quad *\text{NC}_i \ldots [\text{DP demonstrative} \ [D' \ D \ [\text{NP} \ldots [t_l]]]] \]

In (22), I assume that a demonstrative is located in the Spec of the DP and thus a NC cannot move through that Spec. This violates the PIC. Thus, the definite NP in (5b) cannot have a non-partitive interpretation.

This analysis successfully accounts for an example in which a demonstrative is located somewhere at a lower position within a NP in (23).

\[(23) \quad \text{a.} \quad [\text{Chomsky-no kono 3-satsu-no hon]-o kata.} \quad \text{C-Gen this Cl-Gen book-Acc bought}
\quad \text{‘I bought these three books of Chomsky.’} \]

\[(23) \quad \text{b.} \quad # [\text{Chomsky-no kono hon]-o 3-satsu kata.} \quad \text{C-Gen this book-Acc Cl bought}
\quad \text{* ‘I bought these three books of Chomsky.’} \]

\[6\] The NP in (23b) cannot have a non-partitive reading, though it can have a partitive interpretation in (i), like in the case of (5b) (see Footnote 1).

\[\text{(i) ‘I bought three copies of this book of Chomsky.’} \]
In (23a, b) a demonstrative is not located in the left periphery of the NPs. However, the NP in (23b) shows a specificity effect, which prohibits an element from moving outside a definite NP. I propose the schema in (24) for the ungrammatical NP in (23b).

24) * NCi ... [DP null Operator [ demonstrative [ ... ti ] ]

In (24), a null referential Operator is located in the DP, due to definiteness, while a demonstrative is located within the DP in (23b). The presence of the Operator in the DP prohibits the NC from being extracted out of the associated NP, due to the PIC in (21). That is, a violation of the PIC by the NC results in the ungrammaticality.

The presence of a referential Operator in a DP also explains the ungrammaticality of (8b), repeated below, whose schema is in (25).

8) b. *[Karera]-o honya-de 3-nin mita. them-Acc bookstore-in Cl saw

25) *NCi ... [DP null Operator [NP ... pronoun ti ] ]

As observed in (11), Japanese personal pronouns allow for prenominal modifiers in the left periphery and thus are located within a DP. Given the assumption that they are always located within a DP, the schema in (25) is ungrammatical since movement of the NC without stepping through the Spec of the DP, violating the PIC.

The referential null Operator analysis offers an account for the obligatoriness of indefiniteness for the associated NP when a NC is floated outside of the NP as in (3b) and (7b). Consider the two schema in (26a,b) for the NP in (3b).

3) b. [Omoshiroi zasshi]-o 3-satsu katta. interesting magazine-Acc Cl bought

26) a. NCi ... [DP [NP ... NP ti ] ] (indefinite)
   b. *NCi ... [DP null Operator [NP ... NP ti ] ] (definite)

---

7 One reviewer says that an alternative assumption of a NC for the prenominal position as its base-generated position is problematic to the assumption in (25). However, Lee (1999), Watanabe (2006) and Furuya (2009) assume that the postnominal position is the base-generated position of a NC. Furuya (2009) argues that the NP and the associated NC is in nominal predication relation. I follow this argument in this work.

8 The same reviewer points out that movement of a floating quantifier from the right to the associated NP cannot account for the ungrammaticality of the presence of a prenominal NC attached by the genitive marker –no (e.g., *3-nin-no karera [3-Cl-Gen-they]). According to him/her, this ungrammaticality hinders my assumption for movement of a floating NC in (25). However, the ungrammaticality of this example comes from an independent reason (see Furuya 2009 for a detailed argument).
In (26a), a NC can move outside the indefinite NP by stepping through the Spec of the DP because the Spec is not occupied by any element. In contrast, in (26b), a NC violates the PIC, due to the presence of a null referential Operator in DP. If the current analysis is on the right track, the obligatory indefiniteness of the NPs (whose associated NC is apart from them) comes from a referential Operator.

4. Conclusion

I examined Japanese definite NPs (including personal pronouns) in relation to floating NCs which are apart from the associated NPs by assimilating the impossibility of separation of NCs from definite NPs with specificity effects. I argued that the restrictions on the distribution of numeral quantifiers in (5b), (8b) and (23b) should be stated in terms of the phase DP hypothesis for Japanese: a NC cannot move out of definite DPs because of the presence of a demonstrative or a referential Operator in the phase DPs. If this is correct, the universality of DP hypothesis is defended particularly for definite NPs. Moreover, a DP functions as a phase for Japanese (Chomsky 2004, 2008). Thus, the lack of an article is due to lexical reasons in the determiner system rather than being due to a syntactic or semantic parametric difference for Japanese. Japanese definite NPs syntactically project a DP, which is semantically related to definiteness. But the DP may be phonologically null since it lacks determiners in the lexicon for Japanese.

REFERENCES