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Bare and Not-So-Bare Small Clauses: Evidence from Japanese[*]

1 Introduction

In English, a small clause contains neither a finite nor infinitival verb preceded by *to* (Stowell 1981, 1983, among many others). For example, the following example is considered to be the 'canonical' epistemic small clause. The noun *a genius* is analyzed as the predicate nominal which is predicated of *Mary* in the nominal small clause *Mary a genius* in (1).

(1)   John considers [Mary a genius].

Originally, Stowell (1981, 1983) proposed that small clauses are bare lexical projections. Chomsky (1995) has made a similar suggestion recently. For example, (1) would have the following representation in (2).

(2)   ... [$_{SC=NP}$ Subj [$_{N'}$ N]]

However, this view of small clauses is challenged in the literature. It is argued that there should be an additional functional projection in the small clause (Kitagawa 1985, Hornstein and Lightfoot 1987, among others), according to which the representation of (1) would be (3), in which a functional predicative head X is projected. (3) can be regarded as a 'not-so-bare small clause'. In this paper, the predicative head is called 'T', which is merely a temporary convenience.

(3)   ... [$_{SC=XP}$ Subj [$_{X'}$ X NP]]

The purpose of this paper is twofold. First of all, I will establish that both bare small clauses and not-so-bare small clauses exist in natural language by using the data from Japanese. After showing the existence of two types of small clauses, I propose a condition on movement to account for the possibility of predicate fronting in various small clause constructions in Japanese.

The organization of this paper is the following. I first present the characteristics of adjectival small clauses in Japanese in section 2. Using adjectival small clauses as the paradigm of bare small clauses, in section 3 I explore the characteristics of nominal and adjectival nominal small clauses and classify them into bare small clauses (*ni*-SC) and not-so-bare small clauses (*to*-SC). In section 4, I examine the possibility of predicate fronting in epistemic small clause constructions and resultatives. To account for the facts, I hypothesize that lexical maximal projections cannot undergo movement.

2 Characteristics of adjectival small clauses in Japanese

In Japanese, there are two types of adjectival elements: adjectives, such as *kasiko-i* 'intelligent' and *kawai-i* 'cute', and adjectival nouns, such as *kirei* 'pretty' and *hogaraka* 'cheerful'. Both of the two types can enter small clauses. The predicate of the 'adjectival small clauses' is an adjective whereas the predicate of the 'adjectival nominal small clauses' is an adjectival noun. Let us examine the characteristics of the adjectival small clauses first.

The embedded clause in the sentence in (4) is treated as the adjectival small clause, in which the adjective *kasikoku* 'intelligent' is predicated of the small clause subject *Mary* and the tense morpheme is missing.

(4)　　John-wa [Mary-o　　kasikoku] omotta.
　　　　John-Top Mary-Acc intelligent considered
　　　　'John considered Mary intelligent.'

Though *Mary* in (4) has the accusative marker, honorification shows that *Mary* is the subject of the small clause predicate. When an adjective has the honorific prefix, it has to refer to the subject that is socially superior to the speaker (Harada 1976). As pointed out by Kikuchi and Takahashi (1991), the honorific form of the small clause predicate

must refer to the small clause subject. In (5), the small clause predicate *utukusiku* 'pretty' is marked with the honorific prefix *o-*, which refers to *watasi* 'I'. In (6), the honorific form of the adjective cannot refer to the matrix subject *Suzuki-sensei* 'Prof. Suzuki'. These examples strongly show that the accusative nominal should be the subject of the small clause.

(5)   Watasi-wa Suzuki sensei-o   o-utukusiku omotta.
        I-Top   Suzuki teacher-Acc Hon-pretty   considered
        'I considered Prof. Suzuki pretty.'

(6)   *Suzuki sensei-wa   watasi-o o-utukusiku omotta.
         Suzuki teacher-Top I-Acc   Hon-pretty   considered
         'Prof. Suzuki considered me pretty.'

Furthermore, the negative polarity item (NPI) test further supports the claim that the accusative phrase and the embedded predicate form a small clause. In Japanese an indefinite *wh*-word constructs an NPI with a Q-morpheme *-mo* and the NPI must be in the scope, i.e. in the c-command domain, of *-mo*. In (7) and (8), *-mo* is attached to the embedded predicate *kasikoku* 'intelligent'. There is a clear contrast between these two examples, which strongly suggests that the accusative *wh*-word and the predicate form a clause in (7).[1] Though (7) may sound unnatural (see footnote 1), there is a contrast between (7) and (9).[2]

(7)   (?)John-wa [dare-o   kasikoku]-mo omotte-inai.
            John-Top anyone-Acc intelligent-Q consider-not
        'John considers nobody intelligent.'

(8)   *Dare-wa   [Mary-o   kasikoku]-mo omotte-inai.
          anyone-Top Mary-Acc intelligent-Q consider-not
        'Nobody considers Mary intelligent.'

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[1] The NPI test manipulated here is inspired by Sakai (1996), who uses the test to examine the position of the embedded accusative phrase in raising to object constructions. Notice that (7) may sound slightly unnatural without any special intonation, as pointed out by Naomi Harada (personal communication), who suggested that the special intonation makes the wh-phrase and the predicate followed by *-mo* one single prosodic unit and the scopal domain of *-mo* is one single prosodic unit.

[2] Thanks to Akira Watanabe for drawing my attention to (9).

(9) ??Dare-o   [John-wa kasikoku]-mo omotte-inai.
     anyone-acc John-top intelligent-Q consider-not
     'John considers nobody intelligent.'

Notice that the adjectival predicate in (4) is marked with the suffix -ku, According to the traditional Japanese grammarians, the adjective in (4) is in the so-called 'adverbial form' or nonfinite form (renyoo-kei). When the adjectival predicate is in the so-called 'conclusive form' (syuusi-kei), which is marked with the non-past tense suffix -i, I assume that the embedded clause is no longer a small clause, as exemplified in (10). For the ease of presentation, (10) is called the 'ECM construction'.

(10) John-wa [Mary-o   kasiko-i-to]   omotta.
      John-Top Mary-Acc intelligent-Present-C considered
      'John considered Mary to be intelligent.'

The small clause construction and the ECM construction in Japanese differ in the following ways. Firstly, the complementizer to cannot occur in the small clause construction (=(11)) whereas it cannot be omitted in the ECM construction (=(12)).

(11) *John-wa [Mary-o   kasikoku-to] omotta.
       John-Top Mary-Acc intelligent-C considered
       'John considered Mary intelligent.'

(12) *John-wa [Mary-o   kasiko-i]   omotta.
       John-Top Mary-Acc intelligent-Present considered
       'John considered Mary to be intelligent.'

Secondly, as pointed out by Takezawa (1987:74), the small clause subject cannot have the nominative Case (=(13)) whereas the subject of the conclusive adjectival predicate may have the nominative Case (=(14)).

(13) *John-wa [Mary-ga   kasikoku] omotta.
       John-Top Mary-Nom intelligent considered
       'John considered Mary intelligent.'

(14)   John-wa [Mary-ga   kasiko-i-to]   omotta.
       John-Top Mary-Nom intelligent-Present-C considered
       'John considered that Mary was intelligent.'

Thirdly, the sentential adverbs, such as the epistemic adverb *tabun* 'probably', cannot enter the small clause construction (=(15)). However, the ECM construction does not have this restriction (=(16)).

(15)   *John-wa [Mary-o   tabun   kasikoku] omotta.
       John-Top Mary-Acc probably intelligent considered
       'John considered Mary probably intelligent.'

(16)   John-wa [Mary-o   tabun   kasiko-i-to]   omotta.
       John-Top Mary-Acc probably intelligent-Present-C considered
       'John considered that Mary probably was intelligent.'

Fourthly, fronting of the small clause predicate is ungrammatical (=(17)), as observed by Kikuchi and Takahashi (1991).[3] On the other hand, the adjectival predicate in the ECM construction can be fronted (=(18)).

(17)   *[Kasikoku] John-wa Mary-o *t* omotta.
        intelligent John-Top Mary-Acc considered
       'John considered Mary intelligent.'

(18)   [Kasiko-i-to]   John-wa Mary-o *t* omotta.
       intelligent-Present-C John-Top Mary-Acc considered
       'John considered that Mary was intelligent.'

The differences between the adjectival small clause construction and the ECM construction can be summarized in table (19).

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[3] As pointed out to me by Hide Hoshi (personal communication), (i) may sound slightly better than (17). I do not know why there is such a contrast.
(i)   ??Donokurai kasikoku John-wa Mary-o   omotta-no?
        how   intelligent John-Top Mary-Acc considered-Q
        'How intelligent did John consider Mary?'

(19)   Differences between the adjectival SC construction and the ECM
        construction

	adjectival SC	ECM
complementizer	*	OK
nominative Case marker	*	OK
epistemic adverbs	*	OK
predicate fronting	*	OK

To account for the above differences, I assume with Kikuchi and Takahashi (1991) that the adjectival small clauses are bare lexical projections, à la Stowell (1981, 1983). I further assume that the embedded clause in the ECM construction has functional projections. For the ease of presentation, the functional projections are called 'TP' and 'CP' in this paper. The non-past tense morpheme -i and the complementizer -to are the overt realizations of T and C, respectively.

Given that adjectival small clauses in Japanese lack TP, let us revisit the differences listed in table (19). First of all, the complementizer to occurs only in the ECM construction but not in the adjectival small clause because TP has its extended projection CP whereas CP is not the extended projection of AP, in the sense of Grimshaw (1991).

Secondly, if T is responsible for the nominative Case assignment in Japanese (Takezawa 1987), it is not surprising that the subject in the small clause construction cannot have the nominative Case.

Thirdly, assuming that epistemic adverbs are licensed by functional categories, à la Travis (1988), those adverbs cannot enter small clauses because functional categories are missing.

Fourthly, as suggested by Kikuchi and Takahashi (1991), fronting of the adjectival predicate is ungrammatical in small clauses because what is fronted is an A' element and movement of X' categories is not permitted in general (Williams 1983, Kitagawa 1985, Chomsky 1986). On the contrary, the fronted predicate in the ECM construction is in fact AP. Hence, fronting is permitted.[4]

If my analysis of adjectival small clauses in Japanese presented here is correct, Universal Grammar does allow bare small clauses. Let us regard the adjectival small clause as the paradigm of bare small clauses in Japanese and examine the structure of adjectival nominal and nominal small clauses in Japanese in the next section.

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[4] Kikuchi and Takahashi's suggestion will be scrutinized and I will provide an alternative explanation for predicate fronting in small clauses in section 4.

3 Characteristics of adjectival nominal small clauses in Japanese

I have already examined adjectival small clauses in section 2. Regarding adjectival nominal small clauses in Japanese, apparently, there are two types. One type of adjectival nominal small clauses is that the predicate is in the adverbial form (*renyoo-kei*) which is marked with the suffix *-ni* and the other type is that the adjectival noun is predicated of the subject directly without any copula. For the ease of presentation, the former is called the '*ni*-small clause' and the latter is called the '*to*-small clause', as exemplified in (20) and (21), respectively. (22) is the ECM construction which has the copula *da* 'be'.[5]

(20)　(?)John-wa [Mary-o　　kirei-ni] omotta.　　　　　　　(*ni*-SC)
　　　　　John-Top Mary-Acc pretty　considered
　　　　'John considered Mary pretty.'

(21)　John-wa [Mary-o　　kirei-to] omotta.　　　　　　　　(*to*-SC)
　　　　John-Top Mary-Acc pretty-C considered
　　　　'John considered Mary pretty.'

(22)　John-wa [Mary-o　　kirei-da-to] omotta.　　　　　　　(ECM)
　　　　John-Top Mary-Acc pretty-be-C considered
　　　　'John considered Mary to be pretty.'

Notice that to some speakers I consulted with (20) may sound unnatural. One possibility is that the adjectival noun could have a manner interpretation modifying the matrix verb. If such reading is excluded in some context, such as (23), the judgment improves.[6]

(23)　John-wa [zyookyoo-o　mizime-ni] omotta.
　　　　John-Top situation-Acc miserable considered
　　　　'John considered the situation miserable.'

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[5] In the literature, *da* is treated as a copula in Japanese. If Nakayama (1988) and Urushibara (1993) are right, the so-called copula *da* is a contracted form of *de-ar-u* in which *de* is a predicate Case particle, *ar* is the copula, and *u* is the non-past morpheme. Due to phonological reasons, *ar* may be realized as *at*.

[6] (23) is due to Kazue Takeda (personal communication). For further examples, see Tang 1998.

Though the status of *-ni* in Japanese is quite controversial, I assume that *-ni* is not a copula. It is only a suffix attached to nominals similar to the function of the adverbial form *-ku*. I will come back to this issue in our later discussion. For the purpose of discussion, let us assume that *-ni* is not a copula.

Japanese could have nominal small clauses. Kitagawa (1985) suggests that the *da*-deletion construction, such as (25), is a small clause, in which the predicate nominal is predicated of *Mary* directly without any copula.

(24)   *John-wa [Mary-o   orokamono-ni] omotta.   (*ni*-SC)
         John-Top Mary-Acc fool   considered
         'John considered Mary a fool.'

(25)   John-wa [Mary-o   orokamono-to] omotta.   (*to*-SC)
         John-Top Mary-Acc fool-C   considered
         'John considered Mary a fool.'

(26)   John-wa [Mary-o   orokamono-da-to] omotta.   (ECM)
         John-Top Mary-Acc fool-be-C   considered
         'John considered Mary to be a fool.'

As we can see, nouns behave similar to adjectival nouns with respect to the acceptability of small clauses. Putting nominal *ni*-small clauses aside, I notice that nominal small clauses and adjectival nominal small clauses share so many similarities. In what follows, I just focus on adjectival nominal small clauses. The analysis of the adjectival nominal small clauses presented here may be extended to nominal small clauses.

What are the differences between *ni*-small clauses and *to*-small clauses? Let us examine the characteristics of adjectival nominal small clauses by using the tests I used in section 2.[7]

(non)existence of the complementizer
(27)   *John-wa [Mary-o   kirei-ni-to] omotta.   (*ni*-SC)
         John-Top Mary-Acc pretty-C   considered
         'John considered Mary pretty.'

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[7] Notice that the grammaticality judgment of (31) seems to be subject to idiosyncratic variation. To some speakers I consulted with, it is perfect. To some speakers, it is somewhat unnatural. See our discussion below.

(28) *John-wa [Mary-o kirei] omotta.   (*to*-SC)
   John-Top Mary-Acc pretty considered
   'John considered Mary pretty.'

(29) *John-wa [Mary-o kirei-da] omotta.   (ECM)
   John-Top Mary-Acc pretty-be considered
   'John considered Mary to be pretty.'

nominative subject in the embedded clause
(30) *John-wa [Mary-ga kirei-ni] omotta.   (*ni*-SC)
   John-Top Mary-Nom pretty considered
   'John considered Mary pretty.'

(31) (?~??)John-wa [Mary-ga kirei-to] omotta. (*to*-SC)
    John-Top Mary-Nom pretty-C considered
   'John considered Mary pretty.'

(32) John-wa [Mary-ga kirei-da-to] omotta.   (ECM)
   John-Top Mary-Nom pretty-be-C considered
   'John considered Mary to be pretty.'

placement of epistemic adverbs
(33) ??John-wa [Mary-o tabun kirei-ni] omotta. (*ni*-SC)
    John-Top Mary-Acc probably pretty considered
   'John considered Mary probably pretty.'

(34) John-wa [Mary-o tabun kirei-to] omotta. (*to*-SC)
   John-Top Mary-Acc probably pretty-C considered
   'John considered Mary probably pretty.'

(35) John-wa [Mary-o tabun kirei-da-to] omotta. (ECM)
   John-Top Mary-Acc probably pretty-be-C considered
   'John considered Mary probably to be pretty.'

predicate fronting
(36) ??[Kirei-ni] John-wa Mary-o *t* omotta.   (*ni*-SC)
    pretty John-Top Mary-Acc considered
   'John considered Mary pretty.'

(37) [Kirei-to] John-wa Mary-o *t* omotta.   (*to*-SC)
      pretty-C John-Top Mary-Acc considered
      'John considered Mary pretty.'

(38) [Kirei-da-to] John-wa Mary-o *t* omotta.   (ECM)
      pretty-be-C John-Top Mary-Acc considered
      'John considered Mary to be pretty.'

As we can see from the data presented here, the so-called adjectival nominal small clauses are heterogeneous. The findings of the test in this section are summarized in table (39).

(39) Differences among the *ni*-SC, *to*-SC, and the ECM construction

	ni-SC	*to*-SC	ECM
complementizer	*	OK	OK
nominative Case marker	*	OK/?~??	OK
epistemic adverbs	*	OK	OK
predicate fronting	*	OK	OK

The behaviors of the *ni*-small clauses are exactly the same as those of adjectival small clauses. It is safe to conclude that *ni*-small clauses are also bare lexical projections.

Regarding *to*-small clauses, they look very much like the ECM construction and for that reason I assume that *to*-small clauses are not bare lexical projections. They are 'not-so-bare' small clauses. There are two possibilities to derive *to*-small clauses. One possibility is that they are derived from the ECM construction by deleting the copula *da* 'be' in the phonological component, à la Kitagawa (1985). As pointed out by Naoki Fukui (personal communication), it is not surprising to assume that PF deletion may affect Case assignment if Case system in Japanese is 'phonological' in nature. See Takano 1996 for the phonological nature of Case system in Japanese and Chomsky 1998 for a speculation that structural Case can be associated with phonetic features within the phonological component.

Another possibility is to assume that T in *to*-small clauses is phonetically empty, which cannot assign nominative Case to the subject, on a par with the infinitival T in English. These two options could be subject to idiosyncratic variation. See Tang 1998 for detailed discussion.

In these two sections, I have shown that both bare small clauses and not-so-bare small clauses exist in Japanese. The analysis presented

here has a very interesting implication: Universal Grammar allows both bare small clauses and not-so-bare small clauses. Data from Japanese indicate that these two types of small clauses may occur even in the same language. Due to limited space, I cannot explain why some categories allow certain type of small clauses in Japanese. I refer the reader to Tang 1998 for detailed discussion on this issue.

In the next section, I am going to investigate one of the characteristics of small clauses in Japanese I have shown before: predicate fronting, and revisit Kikuchi and Takahashi's analysis.

4 Predicate fronting and structure of small clauses

4.1 Condition on maximal projection movement: functional vs. lexical

I have shown that predicate fronting is ungrammatical in bare small clauses in Japanese, for instance, (36), as repeated in (40). According to Kikuchi and Takahashi's (1991) explanation, the predicate of bare small clauses cannot be fronted because it is an X' element (=A' in (41)) and movement of X' elements is prohibited. The derivation is demonstrated in (41). If the predicate is fronted, the embedded subject has to be fronted along with the predicate, as shown in (42).

(40) ??[Kirei-ni] John-wa Mary-o t omotta.
        pretty   John-Top Mary-Acc considered
      'John considered Mary pretty.'   (=(36))

(41) *[$_{A'}$ A] ... [$_{SC=AP}$ Subj $t_{A'}$]

(42) [Mary-o   kasikoku] John-wa t omotta.
       Mary-Acc intelligent John-Top considered
      'John considered Mary intelligent.'

Kuno (1976) argues that in the ECM construction in Japanese the accusative subject raises from the embedded clause to the matrix object position, i.e. raising to object. Using the tests manipulated by Kuno, let us examine whether the embedded accusative subject in small clauses raises to the matrix clause. The following examples show that the accusative subject can be followed by a manner adverb in the matrix clause (e.g. (43)), can be fronted (e.g. (44)), can have a wide scope reading (e.g. (45)),

and cannot be a pronoun bound by the matrix subject violating the binding condition B (e.g. (46)). Based on these facts, I conclude that the accusative subject raises to the matrix clause in both bare small clauses and not-so-bare small clauses. If this observation is correct, the small clause predicate is expected to be able to move along with the trace of the accusative subject, i.e. AP with a trace of the subject, and thus predicate fronting in bare small clauses should be allowed. However, this predication is not borne out. Hence, Kikuchi and Takahashi's explanation does not hold any more.

adverb placement
(43)   John-wa Mary-o   orokanimo kasikoku/kirei-ni omotta.
        John-Top Mary-Acc stupidly   intelligent/pretty considered
        'Stupidly, John considered Mary intelligent/pretty.'

word order inversion
(44)   [Mary-o]   John-wa *t* kasikoku/kirei-ni omotta.
        Mary-Acc John-Top intelligent/pretty considered
        'Stupidly, John considered Mary intelligent/pretty.'

quantifier scope
(45)   Dareka-ga   minna-o kasikoku/kirei-ni omotta.
        someone-Nom all-Acc intelligent/pretty considered
        'Someone considered all intelligent/pretty.'   ($\exists > \forall$, $\forall > \exists$)

reflexivization
(46)   Mary-wa   zibun/*kanozyo-o kasikoku/kirei-ni omotta.
        Mary-Top self/her-Acc   intelligent/pretty considered
        'Mary considered herself intelligent/pretty.'

I have shown that predicate fronting is grammatical in not-so-bare small clauses in Japanese, for instance, (47) (=(37)). Nevertheless, this is only a partial picture of the facts. Consider other not-so-bare small clauses in (48) and (49).[8]
(47)   [Kirei-to] John-wa Mary-o *t*   omotta.
        pretty-C John-Top Mary-Acc considered
        'John considered Mary pretty.'

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[8] Notice that the acceptability of (49) is subject to idiosyncratic variation. See footnote 7. Some speakers find (49) to be somewhat marginal but there is still a contrast between (48) and (49).

(48)   *[Kirei-to] John-wa Mary-ga *t*   omotta.
         pretty-C John-Top Mary-Nom considered
       'John considered Mary pretty.'

(49)   [Mary-ga   kirei-to] John-wa *t* omotta.
        Mary-Nom pretty-C John-Top considered

It seems that predicate fronting is possible only if the small clause subject has the accusative Case (cf. (47)). If the small clause subject is marked with the nominative Case marker -*ga*, the small clause predicate cannot be fronted by itself. The generalization can be stated in (50).
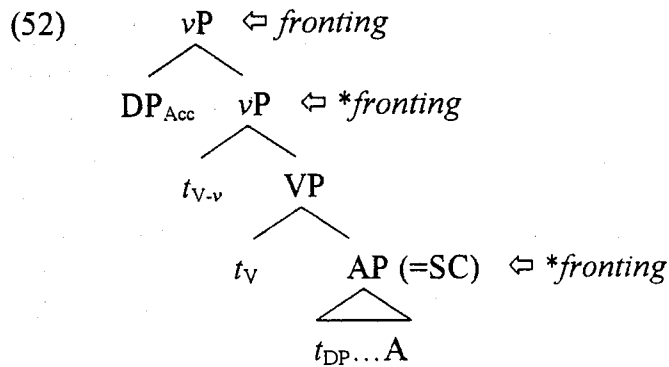
(50)   In Japanese bare small clauses, the predicate cannot be fronted unless it is fronted along with the subject. In not-so-bare small clauses, the predicate can be fronted only if the subject is marked with the accusative Case marker -*o*. If the subject is marked with the nominative Case marker -*ga*, the predicate cannot be fronted unless it is fronted along with the subject.

To account for the facts of predicate fronting in Japanese small clauses, I hypothesize a condition on movement in (51), according to which lexical maximal projections cannot move. There is a dichotomy between lexical categories and functional categories with respect to movement of maximal projections.

(51)   Condition on Movement (CM)
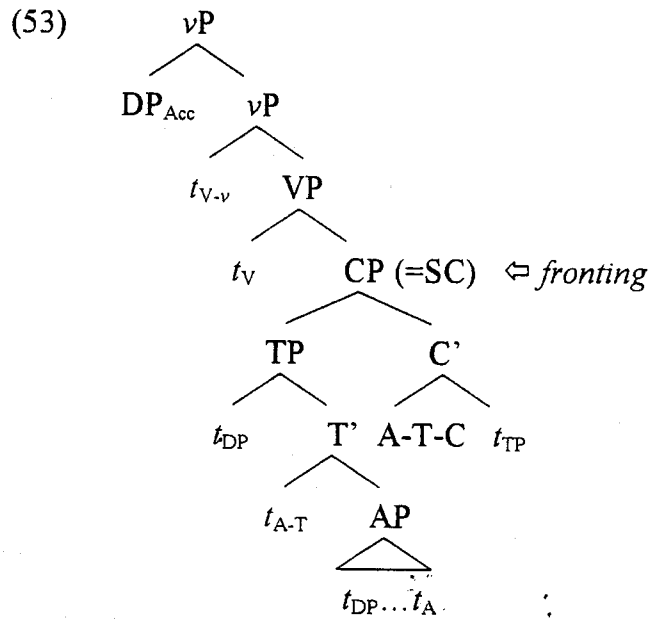   A moved maximal projection must not be lexical.

Given that the accusative small clause subject raises to the matrix clause, the bare small clause construction can be partially represented in (52). Let us assume with Kayne (1994) that 'specifier-head-complement' is the universal word order and with Koizumi (1995) and Tang (1998) that there is V-to-C raising in Japanese. In (52) the matrix verb V raises out of vP along with v and the accusative small clause subject raises out of the bare embedded clause AP to vP, assuming that vP is associated with the accusative Case (Chomsky 1995).

(52)   *v*P   ⇦ *fronting*

            ⟋\

DP$_{Acc}$ *v*P   ⇦ *fronting

             ⟋\

$t_{V\text{-}v}$ VP

               ⟋\

t_V AP (=SC)   ⇦ *fronting
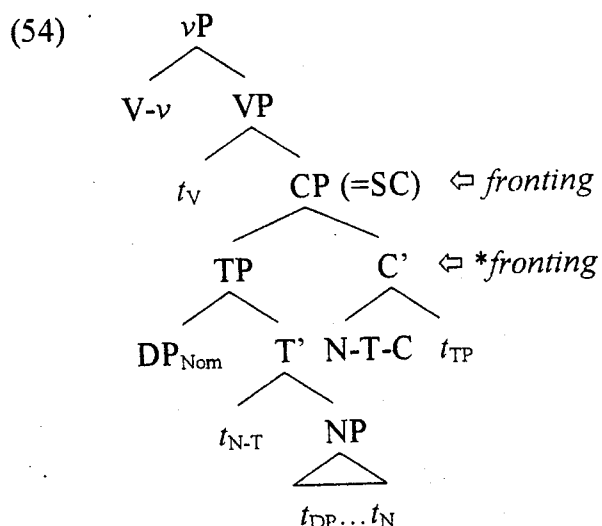
           △

t_{DP}...A

     In the above configuration, if the lexical maximal projection AP is fronted, CM is violated and thus the judgment is deviant. Though movement of the lower *v*P in (52) does not violate CM, the lower *v*P is regarded as a segment and movement of segments and intermediate projections is banned because they are 'invisible' in the computation (Chomsky 1995). In any event, the predicate in bare small clauses cannot be fronted. On the other hand, it is grammatical if the predicate is fronted along with the small clause subject, for instance (42). As shown in (52), if the predicate moves along with the accusative subject, it is a functional maximal projection, namely *v*P, that undergoes movement. CM is satisfied.

     On the other hand, if a small clause has some functional projections, as in (53), predicate fronting is grammatical because it is a functional projection, namely CP, that is fronted. In not-so-bare small clauses in Japanese, the predicate adjectival A raises to the embedded C via T and the accusative small clause subject raises from the embedded clause to *v*P overtly. To derive the right word order, TP further undergoes movement to the specifier of the embedded CP, in the sense of Tang (1998).

(53)

```
              vP
             /\
        DPAcc   vP
               /\
          tV-v   VP
                /\
             tV   CP (=SC)  ⇐ fronting
                 /\
               TP   C'
              /\    /\
          tDP   T'  A-T-C  tTP
               /\
            tA-T  AP
                 /‾\
              tDP...tA
```

Recall that the predicate of not-so-bare small clauses cannot be fronted if the small clause subject is marked with the nominative Case. Kuno (1976) convincingly argues that the nominative embedded subject does not raise out of the embedded clause, contra the accusative embedded subject. Given that the small clause predicate has raised to the embedded C, in predicate fronting everything dominated by the embedded CP must raise in the pied-piping fashion lest CM is violated. On the other hand, C' cannot undergo movement because movement of intermediate projections is banned. The partial representation of a not-so-bare small clause is schematized in (54), in which the small clause predicate N is either a nominal or an adjectival nominal. As the nominative small clause subject does not raise out of the embedded clause, it must raise along with the raised small clause predicate. The generalization in (50) is thus derived.

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(54)

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              vP
             /  \
          V-v    VP
                /  \
              t_V    CP (=SC)   ⇦ fronting
                    /  \
                  TP    C'      ⇦ *fronting
                 /  \    /  \
           DP_Nom  T'  N-T-C  t_TP
                  /  \
               t_N-T   NP
                      / \
                   t_DP...t_N
```

4.2 A challenging question: predicate fronting in the resultatives

Kikuchi and Takahashi (1991) assume that *musuko* 'son' and *yuumei* 'famous' in (55) form a small clause. I notice that (56) and (57) may further support their claim. The NPI test in (56) shows that the accusative *wh*-word is under the scope of *-mo*. Furthermore, (57) shows that the honorific prefix attached to *kirei* 'pretty' can refer to the accusative phrase, which suggests that the accusative phrase is the 'subject' of the embedded predicate.

(55) John-wa [musuko-o yuumei-ni] suru tumori da.
      John-Top son-Acc   famous   make intend be
      'John intends to make his son famous.'

(56) John-wa dare-o   yuumei-ni-mo si-nai   tumori da.
      John-Top anyone-Acc famous-Q   make-not intend be
      'John intends to make nobody famous.'

(57) Watasi-wa Suzuki sensei-o   o-kirei-ni si-ta.
      I-Top   Suzuki teacher-Acc Hon-pretty make-Past
      'I made Prof. Suzuki pretty.'

However, the grammaticality judgment of the following examples is exactly the same as that of bare and not-so-bare small clauses with respect to raising to object (cf. (43)-(46)). This piece of evidence suggests

that the accusative subject should raise out of the small clause to the matrix clause.

adverb placement

(58)　John-wa　Mary-o　orokanimo yuumei-ni suru　tumori da
　　　John-Top Mary-Acc stupidly　famous　make intend be
　　　'Stupidly, John intends to make Mary famous.'

word order inversion

(59)　[Mary-o]　John-wa *t* yuumei-ni suru　tumori da
　　　Mary-Acc John-Top famous　　make intend be
　　　'John intends to make Mary famous.'

quantifier scope

(60)　Dareka-ga　　minna-o yuumei-ni suru　tumori da.
　　　someone-Nom all-Acc　famous　make intend be
　　　'Someone intends to make all famous.'　　　(∃>∀, ∀>∃)

reflexivization

(61)　Mary-wa　zibun/*kanozyo-o yuumei-ni suru　tumori da.
　　　Mary-Top self/her-Acc　　　famous　make intend be
　　　'Mary intends to make herself famous.'

Interestingly, Kikuchi and Takahashi (1991:31) notice that the small clause predicate in (55) can be fronted, as exemplified in (62). This observation is contrary to what we have seen in the *ni*-small clause, such as (63)(=(36)). The contrast between (62) and (63) poses a serious problem to my analysis.

(62)　[Yuumei-ni] John-wa　musuko-o *t* suru　tumori da.
　　　famous　　John-Top son-Acc　　make intend be
　　　'John intends to make his son famous.'

(63)　??[Kirei-ni] John-wa Mary-o *t*　omotta.
　　　pretty　John-Top Mary-Acc considered
　　　'John considered Mary pretty.'

Kikuchi and Takahashi (1991) assume that the accusative subject undergoes movement in (62) but not in (63) and thus the small clause predicate can undergo XP movement along with a trace of the subject in

(62). According to their analysis, the subject stays within the small clause in (63), therefore the predicate has to undergo X' movement in predicate fronting violating a constraint that X' cannot move. Nevertheless, I have argued that the embedded subject raises out of the small clause in both (62) and (63). Hence, their analysis does not hold any more.

The difference between these two sentences is that the so-called small clause in (62) is a resultative clause while the *ni*-small clause in (63) is an epistemic small clause. The structure of these two constructions should not be the same. I propose that the resultative clause RC is dominated by two functional projections, namely vP1 and vP2, as partially schematized in (64). RC is the complement of the light verb $v2$. vP2 is embedded under the light verb $v1$ that has a causative meaning. The light verb $v2$ is phonetically realized as *suru* in Japanese, in the sense of Grimshaw and Mester (1988), which can be interpreted as a stative predicate. The accusative phrase raises from the embedded clause to vP1. The motivation for moving the object to vP1 could be due to Case assuming that $v2$ is Case-less.[9] Eventually, $v2$ raises to C via $v1$.

(64)

vP1

  DP$_{Acc}$ vP1

    $v2$-$v1$ vP2   ⇐ *fronting*

      t_{v2} RC

        t_{DP} Pred
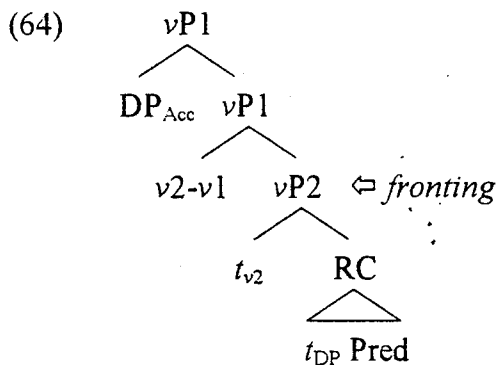
In my analysis, the difference between the resultative construction and the epistemic small clause construction crucially lies on their phrase structure. The grammaticality judgment of (62) can be accounted for by my analysis immediately. (64) illustrates that it is a functional projection, namely vP2, that is fronted. Hence, predicate fronting is possible in resultatives (=(62)) without violating CM.

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[9] Is object shift obligatory in (64)? The unnaturalness of (7) may suggest that the object raises out of the embedded clause obligatorily unless there is some special intonation (see footnote 1). Object shift in Japanese could also be associated with focalization, à la Tang (1998). An alternative possibility is that object shift in resultatives is to check off strong θ-features, à la Watanabe (1997).

Note that the predicate adjectival nominal is marked with *-ni*. Traditional Japanese grammarians treat *-ni* as a Case particle. On the contrary, Okutsu (1978) analyzes *-ni* as the infinitival form of the copula *da*. Kikuchi and Takahashi (1991) treat *-ni* as a 'hybrid' of a Case particle and a copula, which is base-generated as a copula and is attached to a noun or an adjectival noun becoming a Case particle.

If *-ni* were a copula, the *ni*-small clauses and the ECM construction in which the copula *da* is present would behave the same. Nevertheless, the tests given in section 3 whose results are summarized in table (39) strongly show that *-ni* should not be analyzed as a copula in small clauses.

I conclude that *-ni* in resultatives and that in epistemic small clauses have the same status, which should be analyzed as a Case particle.[10] RC is a bare lexical projection (bare small clause). The analysis of two *v*Ps in the resultatives advocated in this paper not only maintains the insight of the traditional Japanese grammarians that *-ni* is a Case particle but also avoids the problems that the analysis proposed by Kikuchi and Takahashi faces.

A consequence of the analysis of two *v*Ps in (64) is that the distinction between the causative *suru* and the non-causative *suru* can be explained. Notice that the light verb *suru* is interpreted as 'make' in (64) while *suru* in (65) and (66) has a non-causative meaning.

(65)   John-wa   benkyoo si-ta.
         John-Top study   do-Past
         'John studied.'

(66)   John-wa   hirou si-ta.
         John-Top tired be-Past
         'John was tired.'

When the light verb *suru* selects a verbal noun that denotes an action, such as *benkyoo* 'study' in (65), *suru* has a meaning of 'doing'. When *suru* selects a verbal noun that denotes a state, such as *hirou* 'tired' in (66), *suru* has a meaning of 'becoming, being'. Huang (1997) proposes that *suru* is an overt realization of an eventuality predicate DO (in (65)) or BECOME/BE (in (66)), which s-selects an eventuality as its complement.

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[10] I further argue in Tang 1998 that *-ni* is a marker that indicates categorial features.

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Under Huang's (1997) proposal, I assume that *suru* in (64) is an overt realization of BECOME/BE, i.e. *v2*, which s-selects a state, i.e. RC, as its complement. The causative meaning of *suru* in (64) is in fact derived from *v1* that is regarded as an eventuality predicate CAUSE. The event structure of (64) could be represented in (67), à la Dowty (1979), in which *x* is the subject, *y* is the object, and *z* is the resultative predicate.

(67) $[x$ CAUSE $[y$ BECOME $z]]$

Recall that I claim that the light verb *v2*, i.e. BECOME/BE, is Case-less. This claim is supported by the fact that the stative *suru* cannot assign accusative Case to its nominal complement *hirou* 'tired' in (69), unlike the *suru* that is an overt realization of the light verb DO in (68).[11]

(68)   John-wa   benkyoo-o si-ta.
        John-Top study-Acc do-Past
        'John did a study.'

(69)   *John-wa hirou-o   si-ta.
         John-Top tired-Acc be-Past
        'John was tired.'

As the light verb BECOME/BE is a one-place predicate that has no external argument and does not assign Case akin to *become* and *occur* in English, the verbal noun does not have Case (Huang 1997).

4.3 Deriving Condition on Movement: an echo

I have proposed a condition on movement (CM) that lexical maximal projections cannot undergo movement. CM successfully accounts for the grammaticality of predicate fronting in various types of Japanese small clauses. In addition, some interesting consequences may be derived from CM.

First of all, CM may shed some light on the nature of the so-called 'EPP feature'. Presumably, movement of the nominal category in

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[11] Uchida and Nakayama (1993) argue that whether *suru* can assign accusative Case is determined by the aspectual property of the verbal noun. They observe that only activity/accomplishment class nominals may be marked with the accusative Case marker in Japanese.

(70) is for the Extended Projection Principle (EPP). Chomsky (1995:233) points out that there could be three choices to satisfy the EPP: (i) requiring a DP, (ii) requiring an NP, and (iii) requiring a nominal category, whether NP or DP. The grammaticality judgment of (70a) immediately refutes the options (ii) and (iii). (70a) is ruled out because the raised nominal category *boy* is a lexical projection NP violating CM.

(70)   a.   *Boy seems the t_{boy} to be intelligent.

         b.   The boy seems $t_{the\ boy}$ to be intelligent.

Secondly, CM may shed some light on the structure of Japanese nominals. It is a well-known fact that scrambling without a Case marker in Japanese is ungrammatical. The contrast is shown in (71). As suggested by Naoki Fukui (personal communication), if *sono hon* 'that book' is regarded as a lexical projection, the ungrammaticality of (71a) is expected because CM is violated. On the other hand, under CM the grammaticality of (71b) suggests that the fronted nominal with the Case particle -*o* is a functional projection. The analysis of (71) may support the claim that Japanese demonstratives are not functional categories and the Case particle is the head of a functional projection KP (Fukui 1986).

(71)   a.   *[Sono hon] watasi-wa *t* o   yonda.
              that book I-Top   Acc read
              'I read that book.'

         b.   [Sono hon-o]   watasi-wa *t* yonda.
              that book-Acc I-Top   read

Thirdly, CM requires that the fronted predicate in so-called 'VP fronting' in (72) be a functional projection dominating VP rather than the VP itself, conforming to Huang (1993). Huang is concerned about licensing of the internal subject trace in the fronted predicate. Based on a suggestion by Chomsky, Huang assumes that the fronted phrase is AgrOP (or PrP) so that the internal subject trace can be properly head-governed by AgrO. CM may provide additional evidence for Huang's analysis.[12]

(72)   Criticize himself, John said Bill never will.

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[12] Naoki Fukui (personal communication) further suggests that under CM the lack of VP-fronting in Japanese could imply that AgrOP (or its counterpart) is missing in Japanese.

Can CM be derived? We may hypothesize that the categorial features that trigger maximal projection movement are restricted to functional categorial features. In other words, only functional categorial features are 'triggers' for maximal projection movement. For example, there is D-feature of T triggering movement but there is no N-feature of T triggering movement. An implication of this hypothesis is that cross-linguistic variation of maximal projection movement is subject to parametric variation of functional elements, conforming to the Functional Parametrization Hypothesis (Fukui 1988, et seq). Restricting the choices of features that trigger movement should be a desirable move in the Minimalist Program.

Notice that CM only applies to maximal projections (X^{MAX}, XP). Movement of minimal projections (X^{MIN}, X^0) seems not to be subject to CM, for example, V movement. Why is there an asymmetry between maximal projections and minimal projections with respect to movement? There could be two possibilities.

Assuming that category movement is required for PF convergence (Chomsky 1995), one possibility is that category movement is subject to phonological rules. Maximal projection movement is triggered by some phrasal rules whose application requires relatively rich information on grammatical context while minimal projection movement is triggered by some phrasal rules whose application requires only phonetic adjacency, analogous to the distinction between P1 and P2 postlexical rules proposed by Kaisse (1985 et seq). If movement of minimal projections is subject to some P2 postlexical rules, the fact that movement of minimal projections is not subject to CM could be a natural consequence of the claim that the P2 postlexical rules are not structure-sensitive.

An alternative possibility is to stamp out the asymmetry between these two types of projections with respect to movement and hypothesize that both movement of maximal projections and movement of minimal projections are subject to a condition that requires that a moved element must not be lexical. If this is right, there must be no lexical head movement. In other words, a lexical head cannot raise by 'head movement' in the traditional sense. The so-called lexical 'head movement' could involve pied-piping of a functional projection that dominates the lexical head, cf. Kayne (1998). For example, (73a) could have a derivation in (73b) in which the object first raises out of VP and then the whole functional projection XP that dominates *reads* raises.

(73) a. John reads novels.

b.   John [$_{DP}$ novels] reads t_{DP} $\Rightarrow$
        John [$_{XP}$ reads t_{DP}] novels t_{XP}

Though the alternative view is a very strong claim, it may open up a novel way to look at movement and the computational system of human language, from which many exciting consequences could be derived. Needless to say, cautious justifications for the hypothesis are necessary and await future research.

5 Conclusion

In this paper, I have established that Universal Grammar allows both bare small clauses and not-so-bare small clauses by using the data from Japanese. Bare small clauses are bare lexical projections while not-so-bare small clauses have TP as well as CP in Japanese. With respect to the variation of predicate fronting in epistemic small clause constructions and resultatives in Japanese, I have argued that these two constructions are different structurally. I have also hypothesized a condition on movement, according to which lexical maximal projections cannot undergo movement, and have shown some interesting consequences of the condition. While this paper mainly focuses on small clauses in Japanese, the findings should have much broader relevance, which I hope may shed some light on the theory of phrase structure and the theory of movement in general.

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