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# The Japanese Light Verb and Its Implications

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1. Introduction

This paper will present some pieces of evidence that the accusative Case assignment is attributed to the light verb v in Japanese and that the verb can be overtly realized as si (do). This analysis will provide support for the syntactically overt presence of the phonologically empty light verb v in natural language.

Larson (1988) proposes the shell for the ditransitive verb construction. Hale and Keyser (1993) and Chomsky (1995) generalize this analysis to the "agentive verb" construction (the v-VP frame analysis): the empty light verb v is the higher head of the shell. The head v has the θ-role (*Agent*) that is to be assigned to its Spec, and selects as its complement the maximal projection of an "agentive verb," which does not have external θ-role. Thus vP has the structure in (1).[1]

(1)
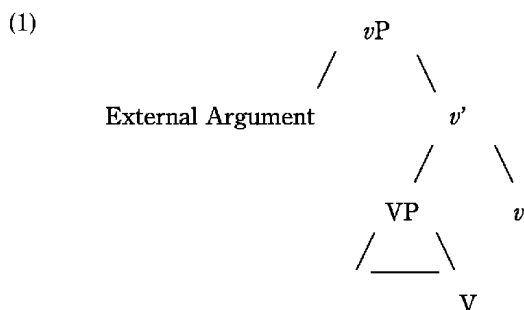
Chomsky (2000, 2001a) proposes as follows: uninterpretable features on a head enter the derivation "unvalued." A Case-assigning head contains unvalued φ-features, and nominals contain valued φ-features and an unvalued Case feature. The operation Agree provides values to unvalued features under appropriate conditions. Structural Case is not an interpretable feature

of the Case-assigning head. Case-assignment is a reflex of the Agree in φ-features holding of a Case-assigning head and a nominal (George and Kornflit's (1981) thesis). Manifestation of structural Case depends on the type of the Case-assigning head: finite T (nominative), v (accusative), or control T (null). Thus, the accusative Case assignment can be attributed to the light verb v.

In addition, Chomsky (2001b) advances his idea about the light verb v a step further. It merges syntactically with a category-neutral lexical root to produce a verbal unit. Suppose, for example, that √*see* is a category-neutral lexical root and Merge has constructed √*see Object*. At this stage we cannot know whether it is nominal or verbal. Then the next Merge is to yield (2), where α is the nominalizer n or the verbalizer v.

(2) α [√see [Object]]

If α is n, the lexical root will be nominalized as *sight*, and if α is v, it will be verbalized as *see*. Namely, Chomsky (2001b) regards the light verb v as a verbalizer, as in Marantz (1997).

Next, as discussed in Grimshaw and Mester (1988), Miyagawa (1989), and Saito and Hoshi (2000), among others, the Japanese verb *si* (do) can serve as a "light verb."

    (3) John-ga Mary-ni kisu-o   si-ta   (koto)
            -nom   -dat   kiss-acc do-past (fact)

        '(The fact that) John kissed Mary.'

As we will observe in the next section, in (3) the "light verb" *si* functions as a verbalizer of *kisu* (kiss). It assigns the external θ-role *agent* to *John*, and assigns accusative Case to *kisu*. Therefore, we can recognize certain similarities between the empty light verb v and the verb *si*. We can raise the following question: What function does *si* carry out in Japanese?

This paper will be organized as follows: Section 2 will observe that the verb *si* functions as a light verb as well as a main verb. Section 3 will show that the accusative Case assignment can be attributed to the light verb v in Japanese and that the empty light verb must be present in the complement of the "stative verb" *deki* (can). Section 4 will go over the distribution of the empty light verb and its overt counterpart *si*. Finally, we will summarize our discussion in section 5.

2. The light verb *si*

In this section, we will go over the verb *si* in some detail. First of all, let us consider the "agentive transitive verb" construction in (4).

    (4) Mary-ga   John-o   seme-ta   (koto)
            -nom   -acc blame-past (fact)

'(The fact that) Mary blamed John.'

The verb transitive *seme* (blame) has the internal θ-role (*theme*) that is to be assigned to its internal argument. In (4), the internal θ-role is assigned to its accusative-marked object. In (5), the verb *si* behaves as if it is an "agentive transitive verb."

    (5) John-ga   hasiri-takatobi-o   si-ta   (koto)

          -nom running high jump-acc do-past (fact)

    '(The fact that) John did the running high jump.'

The verb is not semantically vacuous in (5): it assigns the internal θ-role *Theme* to its accusative-marked object. Thus, example (5) means that there is a specific act of engaging in the running high jump and *John* performed it, as indicated in Saito and Hoshi (2000).

    Saito (1985) points out that when an accusative-marked object is adjacent to a verb, the accusative marker *o* can be omitted from it in colloquial Japanese, as shown in (6).

    (6) Mary-ga John seme-ta   (koto)

          -nom   blame-past (fact)

    '(The fact that) Mary blamed John.'

In (7), the object *hasiri-takatobi* (running high jump) is not accusative-marked.

    (7) John-ga   hasiri-takatobi   si-ta   (koto)

          -nom running high jump do-past (fact)

    '(The fact that) John did the running high jump.'

Because the accusative-marked object is adjacent to the verb *si*, the accusative marker can be omitted. Thus, (7) is acceptable as a colloquial expression.

    In these two respects, we conclude that the verb *si* can function as an "agentive transitive verb." Then, example (5) has the structure (8) in the course of its derivation under Chomsky's *v*-root analysis.

    (8) [$_{vP}$ John [hasiri-takatobi √si] *v*]

In (8), the subject *John* is assigned the θ-role *Agent* by *v*.

    The verb *si* can also occur as an expletive verb, as shown in (9).

    (9) John-ga Mary-ni kisu-si-ta   (koto)

          -nom   -dat kiss-do-past (fact)

    '(The fact that) John kissed Mary.'

That is, the verb acts as if it is a "category-changing" affix (Saito and Hoshi's (2000) term). In (9), *si* and *kisu* (kiss) form a verbal unit, which takes *Mary* as its argument. It is *kisu* that assigns the θ-role *Theme* to *Mary*, because *Mary* is interpreted as the person who was affected by the

dynamic event *kiss*: *si* does not assign an internal θ-role. Furthermore, *kisu* is not accusative-marked in (9). If it is the omission of the accusative marker *o* like in (7), the example must be used as a colloquial expression. As a matter of fact, it is acceptable, but not colloquial. That is, the verb *si* behaves differently from an "agentive transitive verb." Therefore, we conclude that *si* does not function as an "agentive transitive verb" in (9).

Suppose the verb *si* functions as an "agentive intransitive" verb. Then, *[Mary-ni kisu]* would be an adjunct, because the intransitive verb does not take an argument. In fact, it seems as if *kisu* raises out of the adjunct to form a verbal unit in (9). However, Baker (1988) argues that there is no incorporation (i.e., head raising) out of an adjunct. If Baker's argument is on the right track, *kisu* must not raise out of the putative adjunct. Without the raising, we cannot explain why the subject *John* is interpreted as the agent of the action denoted by the nominal *kisu* in the putative adjunct. Thus, we exclude the possibility that the verb *si* in (9) is an "agentive intransitive" verb, and conclude that it is not a main verb.

What function does *si* carry out in (9)? Suppose the verb is a verbalizer, that is, the overt counterpart of the light verb *v*. Then, (9) will have the structure (10) in the course of its derivation under Chomsky's *v*-root analysis.

(10) [$_{vP}$ John [Mary √kisu] si (= *v*)]

The light verb merges with the maximal projection of the category-neutral lexical root √*kisu* in order to form a verbal unit. It is the lexical root √*kisu*, not *si*, that assigns the θ-role *Theme* to *Mary*. The subject *John* bears the θ-role *Agent*. This analysis has reasonable consequences: due to the nature as a verbalizer, the lexical root √*kisu* is forced to raise to *si*, as shown in (11).

(11) [$_{vP}$ John [Mary t$_{√kisu}$] √kisu-si (= *v*)] [2]

Following Kageyama (1982), Terada (1990), and Tsujimura (1990), among others, we assume that the raising is obligatory before Spell-Out. The fact that *kisu* is not accusative-marked in (9) is due to the obligatory raising to a verbalizer rather than the omission of the accusative marker: there is no nominalizer here, and so *kisu* cannot be nominalized. Thus, (9) is an acceptable, but not colloquial, expression. Next, if *si* is a verbalizer, it must act as if it is a "category-changing" affix. Furthermore, the subject *John* is interpreted as the person who kissed Mary, since √*kisu* is verbalized by *si*, which assigns the θ-role *Agent* to *John*. Therefore, we claim that the verb *si* can function in the same way as the light verb *v* does.

In (12), the verb *si* also occurs as an "expletive" verb.

(12) John-ga   Mary-ni kisu-o   si-ta   (koto)

      -nom   -dat kiss-acc do-past (fact)

'(The fact that) John kissed Mary.'

In (12), *si* and *kisu* behave as if they form a verbal unit, which takes *Mary* as its argument. The lexical root √*kisu* assigns its θ-role *Theme* to *Mary*, because *Mary* is interpreted as the person who was affected by the dynamic event *kiss*. If *si* assigns the external θ-role *Agent* to *John* and if it verbalizes *kisu*, *John* will be interpreted as the agent of the action denoted by *kisu*. As a matter of fact, it is the only possible interpretation. Thus, the verb *si* in (12) must function as a verbalizer. We claim that *si* is a light verb in (12).

In (12), *kisu* must be a nominal because it is marked with accusative. The nominalizer *n* must merge with *[Mary √kisu]* to produce a nominal unit, with which *si* merges. Thus, (12) has the structure (13) in the course of its derivation.

(13) [$_{v}$P John [[Mary √kisu] *n*] si (= *v*)]

The lexical root √*kisu* is forced to raise to the nominalizer *n*, as shown (14).

(14) [$_{v}$P John [[Mary t$_{√kisu}$] √kisu-*n*] si (= *v*)]

In (14), the relation Agree holds between √*kisu-n* and *si*. Then φ-features of *si* are valued by √*kisu-n*, and structural Case of √*kisu-n* is assigned the value *accusative* as a reflex of the relation Agree in φ-features.[3] Following Saito and Hoshi (2000), we assume that the nominal unit √*kisu-n* raises to *si* after Spell-out.[4] Then, (12) will be derived.

When two nominals are marked with accusative in the "light verb" construction, the sentence containing them ends up as a marginal one, as shown in (15).

(15) ??John-ga   mondai-o   kaiketu-o   si-ta   (koto)

         -nom problem-acc solution-acc do-past (fact)

       '(The fact that) John solved the problem.'

This is because in (15) the two accusative-marked nominals lead to the Double-*o* Constraint violation[5], as pointed out in Saito and Hoshi (2000).

(16) The Double-*o* Constraint

       Two accusative-marked nominals are prohibited in a simple sentence.

Saito and Hoshi (2000) attribute the marginality in (15) to the *surface* Double-*o* Constraint violation: the nominal *kaiketu* (solution) raises to the overt light verb after Spell-Out. Basically following the proposal in Baker (1988), they argue that structural Case on *kaiketu* can be licensed by its post-Spell-Out incorporation (i.e., raising) to *si*. On the other hand, structural Case of the other nominal is to be valued as accusative by *si*. Thus, (15) results in the *surface* Double-*o* Constraint violation.

As shown in (17), however, when *kaiketu* raises to *si* before Spell-Out, the Double-*o* Con-

straint violation is circumvented.

    (17) John-ga   mondai-o   kaiketu-si-ta   (koto)[6]

          -nom problem-acc solution-do-past (fact)

     '(The fact that) John solved the problem.'

In such a case, the accusative-marked argument of the θ-role assigning lexical root does not induce the Double-*o* Constraint violation.

    Si occurs as an "expletive verb" in (17). If our argument is on the right track, then the verb will be a light verb and (17) will have the structure (18) in the course of its derivation.

    (18) [$_{v}$P John [mondai √kaiketu] si (= *v*)]

In (18), *si* merges with the maximal projection of the category-neutral lexical root √*kaiketu* to produce a verbal unit. The lexical root √*kaiketu* is forced to raise to the verbalizer *si* before Spell-Out, as shown in (19).

    (19) [$_{v}$P John [[mondai t$_{√kaiketu}$] √kaiketu-si (= *v*)]

In (19), the relation Agree holds between *si* and *mondai* (problem). Then φ-features of *si* are valued by *mondai*, and structural Case of *mondai* is assigned the value *accusative* as a reflex of the relation Agree in φ-features. Thus, (17) will be derived.

    In this section, we have claimed that the verb *si* can function as a light verb as well as a main verb. We have proposed derivations of examples containing the light verb *si* and the main verb *si*.

3. The presence of the empty light verb

    For the sake of argument, we will briefly review Case arrays in the Japanese "stative" predicate construction. As pointed out in Kuno (1973), the theme object must be marked with nominative and the experiencer subject can be marked with either nominative or dative.[7] That is, the object cannot be marked with accusative, as shown in (20).

    (20) a. Stative verb

       John-ga/ni   nihongo-ga/*o   *deki-ru*   (koto)

          -nom/dat Japanese-nom/acc can-pres (fact)

       '(The fact that) John can understand Japanese.'

     b. Stative adjective

       John-ga/ni   kaminari-ga/*o   *kowa-katta*   (koto)

          -nom/dat thunders-nom/acc fearful-pres (fact)

'(The fact that) John is fearful of thunders.'

   c. Stative nominal adjective[8]

     John-ga/ni   okane-ga/*o   *hituyoo-datta*

        -nom/dat money-nom/acc need-past

     '(The fact that)John needs money.'

Example (21) shows an intriguing fact:

(21) John-ga   mondai-o   kaiketu-deki-ta   (koto)

       -nom problem-acc solution-can-past (fact)

    '(The fact that) John could solve the problem.'

As shown in (20a), the nominal cannot be marked with accusative in the complement of the stative verb *deki* (can). Furthermore, the light verb *si* does not overtly appear in (21). However, the nominal *mondai* (problem) is marked with accusative. This fact leads us to expect that an empty light verb in fact occurs and values structural Case of the nominal as accusative in (21). In this section, we will go over the presence of such a light verb in Japanese.

    One might argue that the nominal *kaiketu* assigns inherent Case that is to be realized as accusative. Can we argue that an empty light verb values the nominal *mondai* as accusative in (21)? Here, let us consider the nominal adjective + "light verb" construction in order to confirm the presence of the empty light verb and its assignment of accusative Case.

    In (22), the verb *si* occurs as an expletive verb.

(22) John-ga   zimen-o   taira-ni si-ta   (koto)

       -nom ground-acc flat-inf [9] do-past (fact)

    '(The fact that) John flattened the ground.'

In (22), *si* and *taira-ni* (flat-inf) behave as if they form a verbal unit, as shown in the gloss: the verb *si* verbalizes the nominal adjective. The verbal unit *taira-ni si* takes the accusative-marked argument *zimen-o* (ground-acc). In addition, if *si* is a light verb, it will assign the θ-role *Agent* to *John*. Then, the nominative subject *John* must be interpreted as the agent of the action leading to the state denoted by the nominal adjective in (22). In fact, it is the only possible interpretation. Therefore, we claim that the verb *si* serves as a light verb in (22).

    In (22), one might argue that the verb *si* is a main verb and the nominal adjective in fact functions as an adverbial adjunct. However, we can reject this possibility: in general, an adverbial element can be freely omitted. Thus, we predict under the possibility that example (23) would be ruled in, even if the nominal adjective were omitted. As shown in (23), this prediction is not borne out.

(23) *John-ga   zimen-o   si-ta   (koto)

       -nom ground-acc do-past (fact)

    '(The fact that) John did the ground.'

Therefore, the verb *si* in (22) can be regarded as a light verb that verbalizes the nominal adjective.

    In (24), the nominal *zimen* is marked with accusative in the complement of the "stative" verb *deki*, like in (21).

(24) John-ga   zimen-o   taira-ni deki-ta   (koto)

       -nom ground-acc flat-inf can-past (fact)

    '(The fact that) John could flatten the ground.'

In (24), can the nominal adjective assign inherent Case that is to be realized as accusative? Is this kind of inherent Case assignment really possible?

    As pointed out above and shown in (25), the nominal must be marked with nominative in the complement of a "stative" predicate such as the nominal adjective *kanoo-da* (possible).

(25) John-ga   syusse-ga/*o   kanoo-datta (koto)

       -nom success in life-nom/acc possible-past (fact)

    '(The fact that) John was able to succeed in life.'

Namely, the nominal adjective cannot assign inherent Case that is to be realized as accusative.

    Example (26) shows that the nominal *syusse* (success in life) must be marked with accusative when the "stative" nominal adjective is verbalized by *si*.

(26) John-ga   syusse-o/*ga   kanoo-ni   si-ta   (koto)

       -nom success in life-acc/nom possible-inf do-past (fact)

    '(The fact that) John made his success in life possible.'

This fact indicates that *si* values structural Case of the nominal as accusative in (26). The same analysis must hold in (22).

    In addition, the nominal can be marked with accusative even when the "stative" predicate itself is in the complement of the "stative" verb *deki*, as shown in (27).

(27) John-ga   syusse-o   kanoo-ni   deki-ta. (koto)[10]

       -nom success-acc possible-inf can-past (fact)

    '(The fact that) John could make his success in life possible.'

In this case, we can claim that a light verb values structural Case of the nominal as accusative in (27), like in (26). Then, the light verb must be the empty counterpart of the overt light verb *si*, and really occurs in example (27).

The same argument also holds in the adjective + "light verb" construction . In (28), the verb *si* occurs as an expletive verb.

(28) John-ga heya-o kura-ku si-ta (koto)

   -nom room-acc dark-inf do-past (fact)

   '(The fact that) John darkened the room.'

In (28), *si* and *kura-ku* (dark-inf) behave as if they form a verbal unit, as shown in the gloss. The verbal unit *kukra-ku si* takes the accusative-marked argument *heya-o* (room-acc). In addition, if *si* is a light verb, it will assign the θ-role *Agent* to *John*, and the nominative subject *John* will be interpreted as the agent of the action leading to the state denoted by the adjective in (28). In fact, it is the one and only interpretation of *John* in (28). Thus, we claim that the verb *si* serves as a light verb in (28).

In (28), the verb *si* is not a main verb and the adjective does not function as an adverbial adjunct, because "*kura-ku*" cannot be freely omitted, as shown in (29).

(29) *John-ga heya-o si-ta (koto)

   -nom room-acc do-past (fact)

   '(The fact that) John did the room.'

Therefore, the verb *si* in (28) can be regarded as a light verb that verbalizes the nominal adjective.

In (30), the nominal *heya* is marked with accusative in the complement of the "stative" verb *deki*.

(30) John-ga heya-o kura-ku deki-ta (koto)

   -nom room-acc dark-inf can-past (fact)

   '(The fact that) John could darken the room.'

The adjective cannot assign inherent Case that is to be realized as accusative. As pointed out above and shown in (31), the nominal must be marked with nominative in the complement of a "stative" predicate such as the adjective *omosiroi-i* (interesting).

(31) John-ga kaigi-no fun-iki-ga/*o omosiro-katta (koto)

   -nom conference-gen atmosphere-nom/acc interesting-past (fact)

   '(The fact that) John was interested in the atmosphere at the conference.'

Example (32) shows that the nominal *kaigi-no fun-iki* (the atmosphere at the conference) must be marked with accusative when the "stative" adjective is verbalized by *si*.

(32) John-ga kaigi-no fun-iki-o/*ga omosiro-ku si-ta (koto)

   -nom conference-gen atmosphere-acc/nom interesting-inf do-past (fact)

'(The fact that) John made interesting the atmosphere at the conference.'

This fact indicates that *si* values structural Case of the nominal as accusative in (32). The same analysis will hold in (28).

In addition, the nominal can be marked with accusative even when the "stative" predicate itself is in the complement of the "stative" verb *deki*, as shown in (33).

    (33) John-ga   kaigi-no   fun-iki-o   omosiro-ku   deki-ta. (koto)

           -nom conference-gen atmosphere-acc interesting-inf can-past (fact)

       '(The fact that) John could make the motif of the movie interesting.'

In this case, we can also claim that a light verb values structural Case of the nominal as accusative in (33), like in (32). Then, the light verb must be the empty counterpart of the overt light verb *si*, and really occurs in example (33).

Therefore, we have no reason to deny the possibility that the empty light verb occurs in (21), which is repeated in (34).

    (34) John-ga   mondai-o   kaiketu-deki-ta (koto)

           -nom problem-acc solution-can-past (fact)

       '(The fact that) John could solve the problem.'

We conclude that the empty light verb v in fact occurs and values structural Case of *zimen* in (24), *heya* in (28), and *momdai* in (34) as accusative. The accusative Case assignment can be attributed to the light verb v in Japanese

4. The distribution of the empty light verb and the overt light verb

We have claimed that the verb *si* can be the overt counterpart of the empty light verb v. In this section, we will discuss the distribution of the empty light verb and the overt light verb. The overt light verb *si* never appears in the complement of *deki*, as shown in (35).

    (35) John-ga   mondai-o   kaiketu(-*si)-deki-ta (koto)

          -nom problem-acc solution(-do)-can-past (fact)

      '(The fact that) John could solve the problem.'

If *si* function as a light verb, why must it not appear in (35)? As a matter of fact, *si* must occur in (36). Otherwise, the example will be ruled out.

    (36) John-ga   mondai-o   kaiketu-*(si-)ta (koto)

          -nom problem-acc solution-do-past (fact)

      '(The fact that) John solved the problem.'

What determines the distribution of the overt light verb?

First, let us consider the examples in (37).

(37) a. Mary-ga John-o   hinan-si-ta   (koto)

         -nom   -acc blame-do-past (fact)

      '(The fact that) Mary blamed John.'

    b. Mary-ga John-o   seme-ta   (koto)

         -nom   -acc blame-past (fact)

      '(The fact that) John blamed Mary.'

The verbal unit *hihan-si* is semantically equivalent to the verbal unit *seme*. The former consists of the lexical root √*hihan* and *si*, and the latter consists of the lexical root √*seme* and *v*.

(38) a. *Mary-ga John-o   hinan-*v*-ta   (koto)

         -nom   -acc blame-past (fact)

      '(The fact that) Mary blamed John.'

    b. *Mary-ga John-o   seme-si-ta   (koto)

         -nom   -acc blame-do-past (fact)

      '(The fact that) John blamed Mary.'

As shown in (37) and (38), √*hihan* must occur with *si,* while √*seme* must not occur with it. No semantic requirement constrains the appearance of *si*, because both of the verbal units are semantically equivalent.

What constrains the distribution of *si* and *v*? There is a morphological difference between √*hihan-v* and √*seme-v*: the former cannot inflect for tense, but the latter can. Therefore, we propose that *v* must be overtly realized as *si* when a verbalized lexical root cannot bear tense. When it can bear tense, *v* is not required to be realized as *si*.

Because √*deki-*v_{exp} can bear tense, the overt light verb *si* must not occur in (44).

(38) John-ga   mondai-o   kaiketu-(*si-)deki-ta (koto)

        -nom problem-acc solution-can-past   (fact)

    '(The fact that) John could solve the problem.'

This indicates that the appearance of the overt light verb is the last resort to save the stranded tense. (Cf. Kishimoto (2001), Kuroda (1965), Miyagawa (1998), and Nishiyama and Cho (1998))

How can we apply our analysis to the case of the nominal adjective and the adjective?

(39) a. John-ga syusse-ga   kanoo-datta (koto)

        -nom success in life-nom possible-past (fact)

      '(The fact that) John was able to succeed in life.'

  b. John-ga kaigi-no   fun-iki-ga/*o   omosiro-katta (koto)

     -nom conference-gen atmosphere-nom/acc interesting-past (fact)

  '(The fact that) John was interested in the atmosphere at the conference.'

(40) a. John-ga syusse-o   kanoo-ni si-ta (koto)

     -nom success in life-acc possible-inf do-past (fact)

  '(The fact that) John made his success in life possible.'

  b. John-ga kaigi-no   fun-iki-o/*ga   omosiro-ku si-ta (koto)

     -nom conference-gen atmosphere-acc/nom interesting-inf do-past (fact)

  '(The fact that) John made interesting the atmosphere at the conference.'

As shown in (39), the nominal adjective *kanoo-da* and the adjective *omosiro-i* can inflect for tense. In (40), however, the overt light verb *si* occurs and bears tense . Why is *si* forced to occur in (40)? There is a semantic difference between (39) and (40). The subject *John* is assigned the θ-role *Experiencer* in (39), whereas it is assigned the θ-role *Agent* in (40). It is the light verb that assigns the θ-role *Agent*. Thus, the semantic difference must be attributed to the existence of the light verb: the light verb must occur in (40). In addition, the light verb requires the nominal adjective to be a kind of infinitival form called *renyookei*, which is the result from agreement between them. Therefore, the nominal adjective and the adjective cannot bear tense, and *si* must bear tense in (39).

  If our argument is on the right track, the empty light verb *v* should occur within the complement of √*deki* in (41).

(41) a. John-ga syusse-o kanoo-ni deki-ta (koto)

     -nom success-acc possible-inf can-past (fact)

  '(The fact that) John could make his success in life possible.'

  b. John-ga kaigi-no   fun-iki-o   omosiro-ku deki-ta. (koto)

     -nom conference-gen atmosphere-acc interesting-inf can-past (fact)

  '(The fact that) John could make the motif of the movie interesting.'

The verb unit √*deki-v_{exp}* can inflect for tense. Therefore, the light verb *v* is not forced to be realized as *si* in (41). The morphological requirement, not the syntactic/categorical one determines the distribution of the overt light verb and the empty light verb, because √*deki-v_{exp}* and T take *v*P as their complement in both (40) and (41).

  To conclude, the overt light verb *si* occurs as the last resort to save the stranded tense. In case a verbal unit can inflect for tense, the empty light verb *v* will occur.

5. Summary

In this paper, we have claimed that *si* is the overt realization of the empty light verb. In section 2, we have observed that the verb *si* functions as a light verb as well as a main verb, in order to motivate our analysis. We have shown that the light verb *v* and the overt light verb *si* function in the same way. In section 3, we have claimed that the accusative Case assignment can be attributed to the light verb *v* in Japanese and confirmed the presence of the empty light verb *v* as the counterpart of the overt light verb *si*. In section 4, we have claimed that the morphological requirement constrains the distribution of the overt light verb and the empty light verb: the empty light verb can be realized as the overt light verb *si*, in case the overt realization is the last resort to save the stranded tense. If our analysis is on the right track, the Japanese overt light verb *si* will provide support for the presence of the empty light verb in the "transitive verb" construction.

Notes

1. Although a head follows its complement in (1), the specific order of a head and its complement is irrelevant to our discussion.

2. In (11), the relation Agree holds between *Mary* and *si*. Then ϕ-features of *si* is valued by *Mary*, and structural Case of *Mary* is assigned the value *accusative* as a reflex of the relation Agree in ϕ-features. We assume that the dative marker *ni* in (11) is realization of θ-related inherent Case with an additional structural Case feature. (Cf. McGinnis (1998) and Chomsky (2000, 2001b))

3. Without the Merge of the verbalizer *si* with the nominal unit, *John* will not be assigned the θ-role *Agent*, for which the light verb is responsible. In addition, the nominal unit cannot bear tense. Without the Merge, the past tense will not be realized in (12). Therefore, *si* is required to merge with the nominal unit to realize it.

4. The driving force of the raising can be attributed to the nature of *si* as a verbalizer.

5. See Harada (1973), Shibatani (1973), Kuroda (1978), and Saito (1985) for the detailed discussion of this constraint.

   Harada (1973) and Kuroda (1978) indicate that there are actually two kinds of Double-*o* Constraint violations: the *abstract* Double-*o* Constraint and the *surface* Double-*o* Constraint. The former violation is induced when structural accusative Case features of two nominals have to be valued by a single verbal unit.

This type of violation results in strong deviance. The latter is induced when a structural accusative Case feature of one nominal is to be valued by a verbal unit, and the other's accusative Case can be licensed independently of the verbal element. This violation results in marginality.

6. The example (i) is also acceptable.

    (i) John-ga   [mondai-no   kaiketu]-o   si-ta   (koto)

        -nom problem-gen solution-acc do-past (fact)

   '(The fact that) John solved the problem.'

Following Grimshaw and Mester (1988) and Saito and Hoshi (2000), it will be assumed in this paper that the verb *si* functions as a main verb in (i).

7. See Ura (1999) with regard to the subjecthood of the dative-marked nominal and the non-subject properties of the nominative-marked nominal.

8. Japanese has two formally distinct classes of adjectives: adjectives and nominal adjectives. A large part of nominal adjectives are loan words from foreign languages that serve as adjectives.

9. The adjective and the nominal adjective in Japanese can inflect for tense, as in *omosioro-i/omosiro-katta* (interesting-pres./interesting-past) and *kirei-da/kirei-datta* (beautiful-pres/beautiful-past). In this paper, thus, we will call infinitival forms (inf) inflectional affixes of the adjective and the nominal adjective that do not bear tense.

10. Some Japanese speakers may judge this sentence as marginal. In this paper, however, I will pay attention to the fact that it is not ruled out. I will leave the account of their marginality for further research.

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