NON-SIMULTANEOUS TRANSFER, CASE DOMAIN FUSION AND THE LIGHT VERB CONSTRUCTION[*]

TORU ISHII
Meiji University

1. Introduction

This paper deals with the light verb construction in Japanese. The light verb construction involves the light verb *suru* 'do' and an argument-taking noun called a verbal noun (VN) or a complex event nominal in Grimshaw's (1990) term which is marked by the accusative case particle *-o* as shown in (1):

(1) John-ga   Bill-to   aiseki-o   site-iru
    John-Nom Bill-with table-sharing-Acc doing-be
    'John is sharing a table with Bill.'

In (1), the light verb *site-iru* 'doing-be', the present progressive form of *suru* 'do', is combined with the VN *aiseki* 'table-sharing', which is marked by the accusative case particle *-o*. The term "light verb" refers to a verb which is semantically/thematically empty.
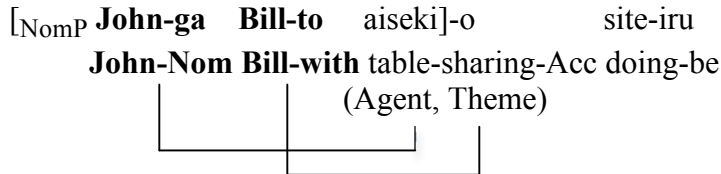
Since Grimshaw and Mester (1988), the light verb construction has drawn much attention in recent literature mainly due to a paradoxical PF-LF mismatch in argument linking it exhibits (see, among others, Grimshaw and Mester 1988, Sells 1989, Dubinsky 1990, Hasegawa 1991, Kageyama 1991, 1993, Uchida and Nakayama 1993, Matsumoto 1996, Huang 1997, and Saito and Hoshi 2000). In (1), for example, given that the light verb is semantically empty, the arguments *John* and *Bill* are assigned θ-roles, *i.e.* Agent and Theme, by the nominal head, *i.e.* the VN *aiseki* 'table-sharing'. These θ-markings take place within the nominal phrase given the
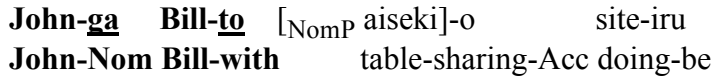
locality condition of θ-marking proposed by Chomsky (1981), which claims that θ-marking takes place within the maximal projection of a θ-role assigner. This suggests that the arguments *John* and *Bill* in (1) should be inside the nominal phrase as shown in (2a). Neither *John* nor *Bill*, however, is marked by the genitive case particle -*no*, *i.e.* the case marking of the nominal system. This suggests that *John* and *Bill* should be outside the nominal phrase as shown in (2b):

(2) PF-LF Mismatch
  a.   θ-marking = An LF phenomenon: *John* and *Bill* are inside the nominal phrase.
       [$_{NomP}$ **John-ga   Bill-to**   aiseki]-o   site-iru
            John-Nom Bill-with table-sharing-Acc doing-be
                                    (Agent, Theme)

  b.   Case marking = A PF phenomenon: *John* and *Bill* are outside the nominal phrase.
       John-ga   Bill-to   [$_{NomP}$ aiseki]-o   site-iru
       John-Nom Bill-with   table-sharing-Acc doing-be

It has been widely assumed that θ-marking is an LF-phenomenon. Case marking, on the other hand, is a PF-phenomenon; Case features are irrelevant for LF, but only read and morphologically realized in the PF-component. Hence, the light verb construction exhibits a PF-LF mismatch in argument linking.

This paper proposes a non-simultaneous Transfer analysis of the light verb construction. The organization of this paper is as follows. Section 2 reviews previous analyses of the light verb construction. Section 3 proposes a non-simultaneous Transfer analysis, arguing that the nominal phrase complement of a light verb functions only as an LF-phase but not as a PF-phase. It is shown that our non-simultaneous Transfer analysis accounts for the PF-LF mismatch. Section 4 presents further arguments for our analysis. Section 5 makes concluding remarks.

2.   Previous Analyses

Grimshaw and Mester (1988) propose an operation called Argument Transfer, which transfers the θ-roles of a VN to a light verb. Let us consider (1) again as an example. Under their analysis, the light verb *suru* 'do' and the VN *aiseki* 'table-sharing' would originally have the argument structures in (3). In (3a), the parentheses are used to indicate that *suru* 'do' has a skeletal or incomplete argument structure, and the notation <acc> indicates that *suru* 'do' assigns the accusative case particle -*o* to the VN *aiseki* 'table-sharing'. Argument Transfer applies to the arguments of the VN *aiseki* 'table-sharing' in (3b). This operation produces the argument structure of the combination of the VN and the light verb (4):

(3)   a.   *suru* 'do' (   ) <acc>
      b.   *aiseki* 'table-sharing' (Agent, Theme)
(4)   *aiseki* 'table-sharing' (   ) + *suru* 'do' (Agent, Theme) <acc>
                        Argument Transfer

The light verb *suru* 'do' assigns the transferred θ-roles to *John* and *Bill* as shown in (5):

(5)   John-ga   Bill-to   [NomP aiseki-o]   site-iru
        John-Nom Bill-with   table-sharing-Acc do-being
                                         (   )   (Agent, Theme) <acc>

Since *John* and *Bill* are outside the nominal phrase, they are not assigned the genitive case particle *-no*; this accounts for the PF-LF mismatch. Although Grimshaw and Meter's analysis describes the PF-LF mismatch, Argument Transfer is a special additional mechanism only for the light verb construction, which is theoretically undesirable.
    More recently, Hasegawa (1991), Kageyama (1991, 1993), and Saito and Hoshi (2000) analyze the light verb construction by making use of Incorporation, which is an independently motivated operation (see, among others, Baker 1988). Let us look at Saito and Hoshi's analysis as an illustration.   Saito and Hoshi assume the minimalist program and propose an LF incorporation analysis, where a VN is covertly incorporated into a light verb.   Under their analysis, (1) would be analyzed as shown in (6):

(6)   a.   John-ga   Bill-to   [NomP aiseki-o]   site-iru
                John-Nom Bill-with   table-sharing-Acc doing-be
                                              (Agent, Them)
        b.   John-ga   Bill-to   [NomP t_i-o]   **aiseki$_i$**-site-iru
                John-Nom Bill-with t_i-Acc **table-sharing$_i$**-doing-be
                                              (Agent, Theme)

Before Spell-Out (PF-Transfer), (1) is assigned (6a). In (6a), the arguments *John* and *Bill* are outside the nominal phrase and thus not assigned the genitive case particle *-no*. Then, as shown in (6b), the θ-role assigning VN *aiseki* 'table-sharing' incorporates into the light verb *suru* 'do' at LF and assigns its θ-roles, *i.e.* Agent and Theme, to *John* and *Bill* at this level. Note that such LF θ-markings are allowed under the minimalist assumption that the θ-criterion applies only at LF. Saito and Hoshi's incorporation analysis captures the PF-LF mismatch.
    As pointed out by Fukui and Sakai (2006), however, such incorporation analyses have trouble in accounting for examples like (7):

(7)   Taroo-ga kotosi-no   natu   [Amerika-ni **ryokoo**] to   [Doitu-ni
        Taro-Nom this year-Gen summer America-to **travel**   Conj Germany-to
        ryuugaku](-to)-o   sita
        study abroad(-Conj)-Acc did
        Lit. 'This summer, Taro did a travel to the United States and a study abroad in
        Germany.'   (Fukui and Sakai 2006: 328)

(7) involves coordination of a VN and its internal argument by the conjunction particle *to*; *Amerika-ni ryokoo* 'travel to America' and *Doitu-ni ryuugaku* 'study abroad to Germany' are coordinated. Under the incorporation analyses, the VNs *ryokoo* 'travel' and *ryuugaku* 'study abroad' would be incorporated into the light verb *suru* 'do'. This would violate the general constraint on movement (8); the incorporation analyses would wrongly rule out (7):[1]
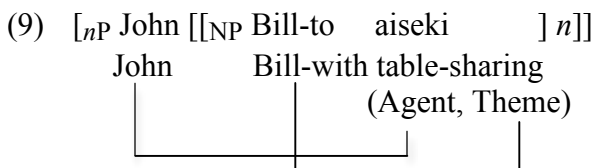
(8)   Constraint on an Across-the-Board Movement
      An across-the-board movement of different elements into a single landing site is prohibited.

3.   A Non-Simultaneous Transfer Analysis

Under the minimalist program proposed by Chomsky (1995) and further developed by, among others, Chomsky (2000, 2001, 2004, 2005, 2006), the syntactic component contains PF-Transfer and LF-Transfer operations, which transfer a syntactic object to the sensory-motor (S-M) and conceptual-intentional (C-I) interfaces, respectively. It is still an open question when PF-Transfer and LF-Transfer should apply during a derivation. Chomsky (2004, 2005, 2006) assumes that phases are the same for both Transfer operations, and PF-Transfer and LF-Transfer apply simultaneously when structure-building completes a phase, which is CP and *v*P in his system. Since PF-Transfer and LF-Transfer are independent operations, however, there is no a priori reason to assume that they should apply simultaneously in a derivation. The idea of non-simultaneous Transfers, where a syntactic object can be transferred to a single interface (either only to the S-M interface or only to the C-I interface) has been advocated by, among others, Nissenbaum (2000), Megerdoomian (2002), Cecchetto (2004, 2005), Felser (2004), Marušič (2005), Matushansky (2005), and Ishii (to appear). This section proposes a non-simultaneous Transfer analysis of the light verb construction, arguing that it accounts for the PF-LF mismatch. More specifically, I argue that the nominal phrase complement of a light verb functions only as an LF-phase but not as a PF-phase. I also propose "case domain fusion," arguing that when more than one "case domain" overlaps, "case domain fusion" must take place, where the notion of "case domain" is regulated by the Phase Impenetrability Condition.

    Let us consider (1) again as an example. During its derivation, our analysis constructs the nominal phrase (9):

(9)   [$_n$P John [[$_{NP}$ Bill-to   aiseki   ] *n*]]
         John   Bill-with table-sharing
                              (Agent, Theme)

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[1] Another problem with the incorporation analyses is that they employ special additional mechanisms for case marking of a VN. Hasegawa (1991) and Kageyama (1991) propose "reflexive case marking," where a VN "reflexively" assigns accusative Case to itself. Saito and Hoshi (2000) claim that the accusative Case on a VN is licensed by its incorporation to a light verb. Kageyama (1993), on the other hand, assumes that an external argument originates in the Spec of VP whose head is the light verb *suru* 'do'. It then follows from Burzio's generalization that the light verb assigns accusative Case to a VN. Kageyama's (1993) analysis, however, violates the locality condition on θ-marking, since an external argument appears outside the maximal projection of a θ-role assigning VN.

Essentially following, among others, Chomsky (2006), I assume that the nominal phrase contains *n*, which is analogous to *v*. The functional category *n* is a light noun taking NP as its complement. In (9), the external argument *John* appears in the Spec of *n*P whereas the internal argument *Bill* is within NP. This is parallel to the widely accepted view of clausal structure, where an external argument appears in the Spec of *v*P whereas an internal argument appears within VP. In (9), both *John* and *Bill* are assigned θ-roles by the VN *aiseki* 'table-sharing' within *n*P, which satisfies the locality condition on θ-marking. Following Chomsky's (1986) idea that inherent Case is licensed in connection with θ-marking, I claim that *Bill* is assigned the inherent case particle *-to* 'with' by its θ-role assigner, *i.e.* the VN *aiseki* 'table-sharing'. Note that given the diagnostic of an LF-phasehood (10), *n*P in (9) marks the completion of an argument structure (*i.e.* all the θ-roles are assigned within *n*P) and thus has the status of a "proposition" just like *v*P; it counts as an LF-phase:

(10) LF-phasehood (Chomsky 2000, 2001, 2004, 2005, 2006, Matushansky 2005)
        LF phases have the status of a "proposition"; either a phrase in which all θ-roles are assigned or a full clause including tense and force.

We then construct *v*P phase (11):

(11) *Clausal Case Domain*
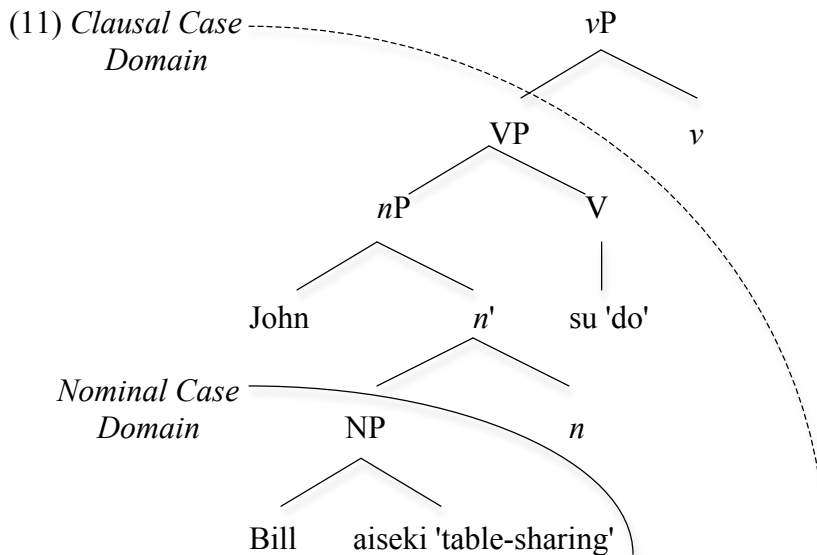
This paper basically adopts Miyagawa's (1991) view on Case. Miyagawa investigates the function of Case, arguing that Case of the clausal type including nominative and accusative has the function to identify an element as a member of a clause. For Case to license membership in the clause, Case itself must be licensed by a functional head INFL, which has the entire clause within its scope, *i.e.* its government domain in his analysis. Extending Miyagawa's idea, I argue that just as Case of the clausal type has the function to license membership in a clause, Case of the nominal type has the function to identify an element as a member of a nominal phrase. More specifically, I argue that there are two case marking systems in Japanese; the clausal case marking system, *i.e.* the lack of the genitive case particle *-no* including nominative and accusative, and the nominal case marking system, *i.e.* the presence of the genitive case particle

-no. The clausal case marking system has the function to license membership in a clause whereas the nominal case marking system has the function to license membership in a nominal phrase. In order for clausal case marking to identify an element as a member of a clause, clausal case marking itself must be licensed within "the clausal case domain." The notion of "the clausal case domain" is defined as the accessible domain of C or *v*, which is the functional head of a clause (more precisely, a "proposition" in the sense mentioned in (10)). Nominal case marking, on the other hand, must be licensed within "the nominal case domain" so that it can identify an element as a member of a nominal phrase. The notion of "the nominal case domain" is defined as the accessible domain of *n*, which is the functional head of a nominal phrase. The notion of accessible domain is regulated by c-command and the Phase Impenetrability Condition (PIC) (12) formulated in Chomsky (2001):

(12) The Phase Impenetrability Condition (PIC)
       In $[_{ZP}$ Z ... $[_{HP}$ α [H YP]]], the domain of H, *i.e.* YP, is not accessible to operations at ZP; only H and its edge are accessible, where ZP and HP are phases.
                                                                              (adapted from Chomsky 2001: 13)

In (11), the nominal case domain, *i.e.* the accessible domain of *n*, is indicated by the solid line whereas the clausal case domain, *i.e.* the accessible domain of *v*, is indicated by the dotted line. Given that the nominal phrase complement of a light verb, *i.e. n*P in (11), is not a PF-phase, *Bill* is within the accessible domain of *v* for PF-phenomena including case marking. *Bill* is within the clausal case domain; our analysis can account for the fact that *Bill-to* 'Bill-with' may appear without the genitive case particle *-no* as shown in (1). In (11), *Bill* is also within the nominal case domain, *i.e.* the accessible domain of *n*. Our analysis therefore predicts that *Bill-to* 'Bill-with' may also appear with the genitive case particle *-no*. This prediction is born out, contrary to what has been claimed by, among others, Grimshaw and Mester (1988) and Saito and Hoshi (2000).   As pointed out by Matsumoto (1996), although (13), where *Bill-to* 'Bill-with' is accompanied by the genitive case particle *-no*, sounds unnatural, its unnaturalness can be removed by some modification as shown in (14):[2]

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[2] Grimshaw and Mester (1988) and Saito and Hoshi (2000) claim that the light verb construction cannot have all of its internal argument(s) accompanied by the genitive case particle *-no*. They claim that examples like (14) involve the heave use of *suru* rather than the light use of *suru*. I argue, however, that *sita*, the past form of *suru*, in (14) is not a heavy verb but a light verb. As pointed out by, among others, Kageyama (1993), there are diagnostics to be used to distinguish between light and heavy uses of *suru*. First, while the light verb *suru* can overtly incorporate the head of a nominal phrase, the heavy verb *suru* cannot. As shown in (i), (14) may be converted into the overtly incorporated construction, which indicates that *suru* in (14) is a light verb:

(i)   John-ga   Bill-to   **aiseki-sita**   koto-ga   nai
       John-Nom Bill-with **table-sharing-did** Comp-Nom Neg
       'John has never shared a table with Bill.'

Second, the heavy verb *suru* can be replaced by transitive verbs like *okonau* 'do' and *zissisuru* 'carry out' whereas the light verb *suru* cannot. As shown in (ii), *suru* in (14) cannot be replaced by either *okonau* 'do' or *zissisuru* 'carry out', which also indicates *suru* in (14) is a light verb:

(ii) *?John-ga [Bill-to-no   aiseki]-o   **okonatta/zissisita** koto-ga   nai
        John-Nom Bill-with-Gen table-sharing-Acc **did/carried out**   Comp-Nom Neg
        'John has never shared a table with Bill.'

It should be noted that there are many nominals like those in (iii) which are used ambiguously as VNs (complex event nominals), which can be combined with the light use of *suru*, or action nouns (simple event nominals), which can be combined with the heavy use of *suru*:

(13)?John-ga   Bill-to-**no**   aiseki-o   site-iru
       John-Nom Bill-with-**Gen** table-sharing-Acc do-ing
       'John is sharing a table with Bill.'   (cf. Grimshaw and Mester 1988: 218)
(14) John-ga   Bill-to**(-no)**   aiseki-o   sita koto-ga   nai
       John-Nom Bill-with**(-Gen)** table-sharing-Acc did Comp-Nom Neg
       'John has never shared a table with Bill.'   (Matsumoto 1996: 116)

In (11), there is an overlap between the nominal and clausal case domains. I argue that when more than one case domain overlaps, "case domain fusion" must take place:

(15) Case Domain Fusion
       When more than one case domain overlaps, "case domain fusion" must take place.

I also argue that there is a constraint on "case domain fusion" (16):

(16) Constraint on Case Domain Fusion
       "Case domain fusion" only takes place when two domain-defining functional heads are
       of the same type, *i.e.* they are either of the transitive/experiencer (T/E) type or of the
       unaccusative/passive (UA/P) type.

In (11), the functional head *n*, which defines the nominal case domain, has the external argument *John*; it is a transitive/experiencer (T/E) type. It then follows from (16) that the functional head *v*, which defines the clausal case domain, must also be of the same type, as shown below:

(17) [$_v$P [$_{VP}$ [$_n$P John [[$_{NP}$ Bill-to   aiseki]   *n*]] su]   *v*]
              John   Bill-with table-sharing **<T/E>** do **<T/E>**

(iii) *tiyoo* 'treatment', *syuzyutu* 'operation', *hookoku* 'report', *kenkyuu* 'study', *soozi* 'cleaning', *sitami* 'preview',
       kaisei 'revision'

Note in passing that Grimshaw and Mester propose another constraint on Argument Transfer which states that an argument cannot be transferred unless all thematically higher arguments are transferred as well. Assuming that Goal is thematically higher than Theme, they claim that when the theme argument is realized outside the nominal phrase complement (*i.e.* when it is realized without the genitive case particle *-no*), the goal argument must also be realized outside the nominal phrase complement. Contrary to their observation, however, there is no restriction on the distribution of Goal and Theme arguments as shown in (iv) (see Matsumoto 1996: 118):

(iv) a.   Karera-wa **soko-e** [**sono bussi-no**   yusoo]-o   suru rasii
             they-Top **there-to the goods-Gen** transport-Acc do   seem
             'It seems that they will transport the goods there.'
       b.   Karera-wa **sono bussi-mo [soko-e-no**   yusoo]-o   suru rasii
             they-Top **the goods-even there-to-Gen** transport-Acc do   seem
             'It seems that they will transport the goods there, too.'

In (ivb), the theme argument *sono bussi-mo* 'the goods-even' is realized outside the nominal phrase complement, whereas the goal argument *soko-e-no* 'there-to-Gen' appears within the nominal phrase complement. The result is still acceptable, which is contrary to what Grimshaw and Mester's constraint claims.

Hence, *v* has the accusative Case feature, which is inherited by V as argued by Chomsky (2006). The nominal phrase complement *n*P moves to the Spec of VP, where it is assigned the accusative case particle *-o* by the light verb *suru* 'do' as shown in (18):

(18) [$_{v}$P [VP **[$_{nP}$ John Bill-to   aiseki]-o**   [t_{nP} su]] *v*]
          [John Bill-with table-sharing]-Acc   do

We then construct TP (19):

(19) [$_{TP}$ **John-ga**   [[$_{v}$P [VP [$_{nP}$ **t$_{John}$** Bill-to   aiseki]-o   [t_{nP} su]] *v*] T]]
          John-Nom   [**t$_{John}$** Bill-with table-sharing]-Acc   do

According to the PIC (12), *John*, which is the Spec of *n*P, is accessible from T. *John* moves to the Spec of TP, where it is assigned the nominative case particle *-ga*, as represented in (19). Hence, our analysis correctly yields (1), explaining the PF-LF mismatch. It should be noted that if *John* were assigned the accusative case particle *-o* in the Spec of VP and *n*P were assigned the nominative case particle *-ga* in the Spec of TP, the resultant structure would be (20):

(20) *[$_{TP}$ [$_{nP}$ **t$_{John}$** Bill-to-no   aiseki]-ga   [[$_{v}$P [VP **John-o**   [t_{nP} su]] *v*] T]]
          [**t$_{John}$** Bill-with(-Gen) table-sharing]-Nom   **John**-Acc   do

 (20) is correctly ruled out by the Proper Binding Condition, because *t$_{John}$*, the trace of *John*, is not c-commanded by its antecedent.
     The nominal phrases in the light verb constructions are in contrast with ordinary nominal phrases like (21):

(21) [$_{TP}$ Mary-ga [[$_{v}$P [VP [$_{nP}$ [NP John-no   Amerika-e-no   ryokoo] *n*]-o
          Mary-Nom   John-Gen America-to-Gen travel-Acc
     [t_{nP} kyakkasita]] *v*]T]]
          turned-down
     'Mary turned down John's trip to the United States.'

In (21), the nominal case domain, *i.e.* the accessible domain of *n*, is indicated by the shaded area whereas the clausal case domain, *i.e.* the accessible domain of *v*, is indicated by the closed box. Following Grimshaw (1990), I claim that *John* in (21) is not an external argument but an adjunct; *John* is not in the Spec of *n*P but adjoined to NP. This is supported by the fact that *John* does not have to be Agent. For example, (21) may have the interpretation that Mary turned down the trip to the US which John planned. Unlike *n*P in the light verb construction, the ordinary *n*P in (21) counts as a PF-phase (though it is not a "proposition" and hence does not function as an LF-phase). For PF-phenomena including case marking, therefore, *John* and *Amerika-e* 'America-to' are within the nominal case domain (the shaded area), but not within the clausal case domain (the closed box). They must be assigned the genitive case particle *-no*.

4. Consequences

First, the proposed analysis can account for Grimshaw and Mester's (1988) observation that external arguments never receive the genitive case particle *-no* as shown in (22):

(22)***John-no**   Bill-to-no   aiseki-o   sita koto-ga   nai
       John-Gen Bill-with-Gen table-sharing-Acc did fact-Nom Neg
       'John has never shared a table with Bill.'

Recall that in our analysis, the external argument *John* originates in the Spec of *n*P and thus remains outside the nominal case domain, *i.e.* the accessible domain of *n*, throughout the derivation. Hence, *John* can never be assigned the genitive case particle *-no*.
   Second, our analysis can account for the ergativity constraint, which states that a VN in the light verb construction cannot be ergative (see, among others, Miyagawa 1989, Tsujimura 1990, and Kageyama 1991, 1993). For example, the ergative VNs *meityuu* 'strike' and *tootyaku* 'arrival' cannot be assigned the accusative case particle *-o* as shown below:

(23) a.*?Ya-ga   mato-ni   **meityuu-o** sita
           arrow-Nom target-Dat **strike-Acc** did
           'The arrow hit the target.'   (Miyagawa 1989: 659)
       b. *Ressya-ga Tookyoo-kara **tootyaku-o** sita
           train-Nom Tokyo-from   **arrival-Acc** did
           'The train arrived from Tokyo.'

Let us consider (23b) as an example. Under our analysis, the *v*P phase structure of (23b) is (24):

(24) [*v*P [VP [*n*P [NP Tookyoo-kara ressya tootyaku] *n*]   su]   *v*]
               Tokyo-from   train   arrival **<UA/P>** do **<UA/P>**

It should be noted that since *tootyaku* 'arrival' is an ergative noun, it only assigns its θ-role to its internal argument; the surface subject *ressya* 'train' originates within NP as an internal argument in (24). In (24), given that *n*P, *i.e.* the nominal phrase complement of the light verb, is not a PF-phase, there is an overlap between the nominal case domain, *i.e.* the accessible domain of *n* (the shaded area), and the clausal case domain, *i.e.* the accessible domain of *v* (the closed box). According to (15), "case domain fusion" must take place. Given the constraint on "case domain fusion" (16), since *n* is an unaccusative (ergative)/passive type, *v* must also be of the same type. It then follows that *v* in (24) does not have any accusative Case feature; there is no way of assigning the accusative case particle *-o* to the *n*P complement of the light verb; the ergativity constraint follows.[3]

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[3] One might argue that our analysis could not rule out deviant examples like (i):

   (i)   *[Tookyoo-kara-no ressya-no tootyaku]-ga sita
           Tokyo-from-Gen train-Gen arrival-Nom did
           'The train arrived from Tokyo.'

(i) could be derived from (24) as follows; *Tookyoo-kara* 'Tokyo-from' and *ressya* 'train', both of which are within the nominal case domain, are assigned the genitive case particle *-no*, and then the whole *n*P moves to the Spec of TP,

Our analysis can also account for the fact that although zero-place ergative VNs like *jinari* 'underground-rumbling' and *sokobie* 'freezing' cannot be assigned the accusative case particle *-o*, they can be assigned the nominative case particle *-ga* and combined with the light verb *suru* 'do', as shown in (25) (cf. Kageyama 1993: 285):

(25) a. **Jinari-ga/*-o**   suru
         underground-rumbling-Nom/*-Acc do
         'We hear an underground rumbling.'
     b. **Sokobie-ga/*-o**   suru
         freezing-Nom/*-Acc do
         'It is freezing.'

Let us consider (25a) as an example. Under our analysis, the *v*P phase structure of (25a) is (26):

(26) [$_{v}$P [VP [$_n$P [NP Jinari   ] ***n***]   su]   ***v***]
                    underground-rumbing **<UA/P>** do **<UA/P>**

Since there is an overlap between the nominal case domain and the clausal case domain, "case domain fusion" takes place. Since *n* is of the unaccusative/passive type, *v* must also be of the same type. It follows that *v* in (26) does not have any accusative Case feature; the *n*P complement *jinari* 'underground-rumbling' cannot be assigned the accusative case particle *-o*. We then construct TP (27):

(27) [$_{TP}$ **Jinari-ga**   [[$_{v}$P [VP ***t$_{n}$P*** su] *v*] T]]
         underground-rumbling   do

Jinari 'underground-rumbling' moves into the Spec of TP, where it is assigned the nominative case particle *-ga*; (25a) follows.
    Third, a VN in the light verb construction typically assigns an Agent θ-role to its external argument. As pointed out by Kageyama (1993), however, there are cases where a VN assigns an experiencer θ-role to its external argument as shown in (28):

(28) a. **Ikaiyoo-no   titi-ga**   i-no   tiryoo/syuzyutu-o   sita
         gastric ulcer-Gen father-Nom stomach-Gen treatment/operation-Acc did
         'My father, who had been trouble with a gastric ulcer, had treatment/an operation of his stomach.'
     b. **Kodomo-ga** asi-ni kega-o   sita
         child-Nom   leg-Dat injury-Acc did
         'The child injured his leg.'   (Kageyama 1993: 282)

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where it is assigned the nominative case particle *-ga*. Legate (2003), Sauerland (2003), and Svenonius (2004) argue that in the clausal unaccusative/passive construction, a subject moves to the edge of *v*P before landing into the Spec of TP. I extend this analysis to *n*P, assuming that a subject moves to the edge of *n*P in the nominal unaccusative/passive phrase. Then, in (24), even when *ressya* 'train' does not move from within *n*P to the Spec of TP, it moves to the Spec of *n*P, which is outside the nominal case domain. Given that Case is assigned to a chain and the head of a chain is a Case position, the chain of *ressya* 'train', whose head position is in the Spec of *n*P, cannot be assigned the genitive case particle *-no*; (i) is deviant.

Under our analysis, since *n* in (28) is of the transitive/experiencer type, *v* must also be of the same type. Hence, *v* in (28) has the accusative Case feature; the *n*P complement of the light verb is assigned the accusative case particle *-o*. Our analysis can accommodate the light verb construction with an experiencer subject.

Fourth, our analysis can accommodate the fact that among intransitive VNs, unergative VNs like *syokuji* 'meal' and *kooen* 'lecture' can appear in the light verb construction:

> (29) a.   John-ga   **syokuji-o** sita
>   John-Nom **meal-Acc** did
>   'John had a meal.'
>   b.   John-ga   **kooen-o**   sita
>   John-Nom **lecture-Acc** did
>   'John gave a lecture.'

Given Chomsky's (1995) assumption that unergatives are hidden transitives, *n* in (29) is of the transitive/experiencer type. It then follows that *v* must be of the same type. Hence, the *n*P complement is correctly assigned the accusative case particle *-o*.

Fifth, as pointed out by Kishimoto (2001), an internal argument in the light verb construction is inside the scope of the quantificational particle *-mo* attached to a VN. Let us first consider (30), where the quantificational particle *-mo* is attached to the complement clause and the matrix verb is in the negative form (Fukui and Sakai 2006: 330):

> (30) a.   Taroo-wa Hanako-ni [**dare**-ga   warui]-to-**mo** iwa-**nakat**-ta
>   Taro-Top Hanako-Dat **anyone**-Nom fault-that-**MO** say-**Neg**-Past
>   Lit. 'Taro did not say to Hanako that anyone was wrong.'
>   b.   *Taroo-wa **dare**-ni   [Hanako-ga   warui]-to-**mo** iwa-**nakat**-ta
>   Taro-Top **anyone**-Dat Hanako-Nom fault-that-**MO** say-**Neg**-Past
>   Lit. 'Taro did not say to anyone that Hanako was wrong.'

In (30a), the indeterminate pronoun *dare* 'anyone' is inside the complement clause whereas in (30b), it is outside the complement clause. The contrast between (30a) and (30b) shows that the indeterminate pronoun *dare* 'anyone' must be in the scope of both the quantificational particle *-mo* and the negation. Bearing this fact in mind, let us next consider (31):

> (31) a.   *Taroo-wa **dare**-ni   hon-**mo**   watasa-**nakat**-ta
>   Taro-Top **anyone**-Dat book-**MO** hand-**Neg**-Past
>   'Taro did not hand a book to anyone.'
>   b.   Taroo-wa **dare**-ni   soodan-**mo**   si-**nakat**-ta
>   Taro-Top **anyone**-Dat consultation-**MO** do-**Neg**-Past
>   'Taro did not consult anyone.'   (Kishimoto 2001: 624)

In (31a), where the quantificational particle *-mo* is attached to the direct object *hon* 'book', the indirect object *dare* 'anyone' is not within the scope of *-mo*; (31a) is deviant. In (31b), on the other hand, the quantificational particle *-mo* is attached to the VN *soodan* 'consultation'; the result is acceptable. This indicates that in (31b), although *dare* 'anyone' is not marked by the genitive case particle *-no*, it is inside the scope of the quantificational particle *-mo* attached to the

VN. Recall that under our analysis, *dare* 'anyone', which is the internal argument of the VN, stays inside the *n*P complement throughout the derivation as shown in (32):

(32) John-wa [*n*P *t~John~* **dare**-ni   soodan]-**mo**   si-**nakat**-ta
       John-Top   **anyone**-Dat consultation-**MO** do-**Neg**-Past

Hence, we can correctly predict that the indeterminate pronoun *dare* 'anyone' is properly licensed within the scope of both the quantificational particle *-mo* and the negation.[4]

  Sixth, our analysis can account for the fact that a "bare" VN resists XP operations including topicalization, relativization, clefting, passivization, and scrambling (see, among others, Grimshaw and Mester 1988, Kageyama 1993, Uchida and Nakayama 1993, Matsumoto 1996, and Saito and Hoshi 2000). Let us consider topicalization as an example:

(33) a.   John-wa [Tokyoo-ni ryokoo]-o sita
            John-Top [Tokyo-to   trip]-Acc did
            'John made a trip to Tokyo.'
      b. ***Ryokoo~i~-wa** John-ga   [Tokyoo-ni *e~i~*] sita
            trip-Top   John-Nom Tokyo-to   did   (Matsumoto 1996: 114)

Recall that under our analysis, the internal argument of a VN, even when it is not accompanied by the genitive case particle *-no*, stays within the nominal phrase complement of a light verb throughout a derivation; the VN is the head of the NP complement of *n*, and thus an X^0 category. It follows that (33b) can be ruled out along the same line with (34b):

(34) a.   John-ga [kagaku-no   ronbun]-o kaita
            John-Nom [chemistry-Gen paper]-Acc wrote
            'John wrote a paper on chemistry.'

---

[4] Kishimoto (2001) observes that in contrast to (31b), when the quantificational particle *-mo* is attached to the VN *soodan* 'consultation' and the indeterminate pronoun *dare* 'anyone' appears in the subject position, the result is deviant, as shown in (i):

(i)   ***Dare**-ga   Hanako-ni soodan-**mo**   si-**nakat**-ta
        anyone-Nom Hanako-Dat consultation-**MO** do-**Neg**-Past
        Lit. 'Anyone did not consult Hanako.'   (Kishimoto 2001: 625)

Under our analysis, (i) is assigned structure (ii):

(ii) **Dare**-ga   [*n*P *t~dare~* Hanako-ni   soodan]-**mo**   si-**nakat**-ta
        anyone-Nom   Hanako-Dat consultation-**MO** do-**Neg**-Past

The indeterminate pronoun *dare* 'anyone' originates in the Spec of *n*P and then moves to the subject position, where it is assigned the nominative case particle *-ga*. A question arises why the indeterminate pronoun *dare* 'anyone' cannot be reconstructed into its original position and properly licensed there. Let us assume that the indeterminate pronoun *dare* 'anyone', which must be within the scope of negation as well as the quantificational particle *-mo*, is a kind of Negative Polarity Items (NPIs). We might be able to say that the indeterminate pronoun *dare* 'anyone' and the quantificational particle *-mo* constitute a discontinuous NPI which must be licensed within the scope of negation. If this view is on the right track, (i) can be ruled out by the fact that NPIs cannot be licensed under reconstruction as exemplified by (iii):

(iii) a. *[Buy **any** records]~i~ she did**n't** *t~i~*.   (Laka 1990: 195)
       b. *[Whose theory about **anything**]~i~ does John **not** like *t~i~*?   (Phillips 1996: 53)
       c. *[**Anyone**'s picture]~i~ seemed to **no one** *t~i~* to be outrageous.   (Johnson 1997: 24)
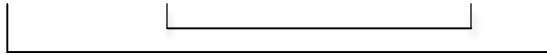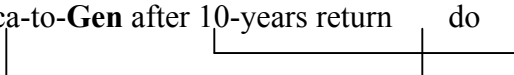
b. *__Ronbun_i-wa__ John-ga　　[kagaku-no　*t_i*](-o)　　kaita

　　paper-Top　John-Nom chemistry-Gen(-Acc) wrote

Under our analysis, the VN *ryokoo* 'trip' in (33a) is the head of the nominal phrase complement just like *ronbun* 'paper' in (34a). Hence, (33b) and (34b) are both excluded by the fact that topicalization, which is an XP operation, cannot target the head noun, *i.e.* an X^0 category, within the nominal phrase complement.

Finally, our analysis can account for the distribution of genitive case marked elements. When there are more than one elements within the nominal phrase complement of a light verb, an element without the genitive case particle *-no* can never intervene between a genitive case marked element and a VN as shown below:

(35)　a.　John-ga　　[amerika-e　10-nen buri-ni kikoku]-o　suru rasii
　　　　　John-Nom [America-to after 10-years　return]-Acc do　seem
　　　　　'It seems that John will return to his country, the United States, after 10 years of absence.'
　　　b.　John-ga　　[amerika-e　10-nen buri-**no**　　kikoku]-o　suru rasii
　　　　　John-Nom [America-to　after 10-years-**Gen** return]-Acc do　seem
　　　c.　*John-ga　　[amerika-e-**no**　　10-nen buri-ni kikoku]-o　suru rasii
　　　　　John-Nom [Americak-to-**Gen** after 10-years　return]-Acc do　seem
　　　d.　John-ga　　[amerika-e-**no**　10-nen buri-**no**　　kikoku]-o　suru rasii
　　　　　John-Nom　[America-to-**Gen** after 10-years-**Gen** return]-Acc do　seem

In (35c), *10-nen buri-ni* 'after 10 years', which is not marked by the genitive case particle *-no*, intervenes between the genitive case marked element *amerika-e-no* 'Amerika-to-Gen' and the VN *kikoku* 'return'; the result is deviant. Recall that under our analysis, the clausal and nominal case domains are defined as the accessible domains of C/*v* and *n*, respectively. I argue that there are dependencies between C/*v* and a clausal case marked (non-genitive-case-marked) element and between *n* and a nominal case marked (genitive-case-marked) element. Then, the above distribution can be accounted for by a crossing constraint (see, among others, Fodor 1978 and Pesestsky 1982). The relevant structures of (35b, c) are (36a, b), respectively:

(36)　a.　...[[_{NomP} Amerika-e 10-nen buri-**no**　　kikoku] *n*]] su] *v*]
　　　　　　　　　America-to after 10-years-**Gen** return　　　do

b. *...[[_{NomP} Amerika-e-**no**　10-nen buri　kikoku] *n*]] su] *v*]
　　　　　America-to-**Gen** after 10-years return　　do

While (36a) shows nesting dependencies, (36b) shows crossing dependencies. (36b) violates the crossing constraint; the deviancy of (35c) follows.

5. Conclusion

This paper has dealt with the light verb construction in Japanese, arguing that the nominal phrase complement of a light verb functions only as an LF-phase but not as a PF-phase. It was shown that the proposed analysis straightforwardly accounts for the paradoxical PF-LF mismatch in the light verb construction. I have also argued that the various properties of the light verb construction follow from our analysis. This paper presents evidence for the view of non-simultaneous Transfers, where a syntactic object can be transferred to a single interface during a derivation.

References

Baker, Mark. 1988. *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.

Cecchetto, Carlo. 2004. Explaining the locality condition of QR: Consequences for the theory of phase. *Natural Language Semantics* 12: 345-397.

Cecchetto, Carlo. 2005. QR in the theory of phases. *MIT working papers in linguistics* 49: 103-114.

Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris.

Chomsky, Noam. 1986. *Knowledge of language: Its nature, origin, and use*. New York: Praeger.

Chomsky, Noam. 1995. *The minimalist program*. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries. In In *Step by Step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89-155. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. by Michael Kenstowicz, 1-52. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2004. Beyond explanatory adequacy. In *Structures and beyond: The cartography of syntactic structures Volume 3*, ed. by Adriana Belletti, 104-131. Oxford: Oxford University Press.

Chomsky, Noam. 2005. On phases. Ms., MIT.

Chomsky, Noam. 2006. Approaching UG from below. Ms., MIT.

Dubinsky, Stanley. 1990. Light verbs and predicate demotion in Japanese. In *Grammatical relations: A cross-theoretical perspective*, ed. by Katarzyna Dzewirek, Patrick Farrel, and Errapel Meijias-Bikandi, 127-145. Stanford: The Stanford Linguistics Association.

Felser, Claudia. 2004. *Wh*-coping, phases, and successive cyclicity. *Lingua* 114: 543-574.

Fodor, Dean. 1978. Parsing strategies and constraints on transformations. *Linguistic Inquiry* 9: 427-473.

Fukui, Naoki, and Hiromu Sakai. 2006. The visibility guideline for functional categories: Verb raising in Japanese and related issues. In *Theoretical comparative syntax*, by Naoki Fukui, 289-336. New York: Routledge.

Grimshaw, Jane. 1990. *Argument structure*. Cambridge, Mass.: MIT Press.

Grimshaw, Jane, and Armin Mester. 1988. Light verbs and θ-marking. *Linguistic Inquiry* 19: 205-232.

Hasegawa, Nobuko. 1991. On head movement in Japanese: The case of verbal nouns. *Zyooti Daigaku Gengogakkai Kaihoo* 6 *(Proceedings of the 6th Sophia Linguistics Conference)*: 8-32.

Huang, C.-T. James. 1997. On lexical structure and syntactic projection. *Chinese Languages and Linguistics* 3:45-89.

Ishii, Toru. to appear. Discontinuous antecedents and radical reconstruction. *WECOL 2007 Proceedings*, University of California, San Diego.

Johnson, Kyle. 1997. A review of *The antisymmetry of syntax*. Lingua 102: 21-53.

Kageyama, Taro. 1991. Light verb constructions and the syntax-morphology interface. In *Current English Linguistics in Japan*, ed. by Heizo Nakajima, 169-203. Berlin: Mouton de Gruyter.

Kageyama, Taro. 1993. *Bunpoo to Gokeisei (Grammar and word formation)*. Tokyo: Hituzi Syoboo.

Kishimoto, Hideki. 2001. Binding of indeterminate pronouns and clause structure in Japanese. *Linguistic Inquiry* 32: 597-633.

Laka, Miren. 1990. *Negation in syntax: On the nature of functional categories and projections.* Doctoral dissertation, MIT.

Legate, Julie. 2003. Some interface properties of the phase, *Linguistic Inquiry* 34: 506-515.

Marušič, Franc. 2005. *On non-simultaneous phases*. Doctoral dissertation, Stony Brook University.

Matsumoto, Yo. 1996. A syntactic account of light verb phenomena in Japanese. *Journal of East Asian Linguistics* 5: 107-149.

Matsushansky, Ora. 2005. Going through a phase. *MIT working papers in linguistics* 49:157-181.

Megerdoomian, Karine. 2002. *Beyond words and phrases: A unified theory of predicate composition*, Doctoral dissertation, University of Southern California.

Miyagawa, Shigeru. 1989. Light verbs and the ergativity hypothesis. *Linguistic Inquiry* 20: 659-668.

Miyagawa, Shigeru. 1991. Case realization and scrambling, Ms., Ohio State University.

Nissenbaum, Jonathan. 2000. *Investigations of covert phrase movement*. Doctoral dissertation, MIT.

Pesetsky, David. 1982. *Paths and categories*. Doctoral dissertation, MIT.

Phillips, Colin. 1996. *Order and structure*. Doctoral dissertation, MIT.

Sauerland, Uli. 2003. Intermediate adjunction with A-movement. *Linguistic Inquiry* 34: 308-313.

Saito, Mamoru, and Hiroto Hoshi. 2000. Japanese light verb construction and the minimalist program. In *Step by wtep: Essays on minimalist syntax in honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 261-295. Cambridge, Mass.: MIT Press.

Sells, Peter. 1989. More on light verbs and theta-marking. Ms., Stanford University.

Svenonius, Peter. 2004. On the edge. In *Peripheries: Syntactic edges and their effects*, ed. by David Adger, Cécile de Cat, and George Tsoulas, 259-287. Dordrecht: Kluwer.

Tsujimura, Natsuko. 1990. Ergativity of nominals and Case assignment. *Linguistic Inquiry* 21: 277-288.

Uchida, Yoshiko, and Mineharu Nakayama. 1993. Japanese verbal noun constructions. *Linguistics* 31: 623-666.

School of Arts and Letters
Meiji University
1-1 Kandasurugadai, Chiyoda-ku
Tokyo, 101-8301 JAPAN
E-mail: tishii@kisc.meiji.ac.jp