

On PF-LF Mismatch in the Japanese Light Verb Construction*

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This paper proposes a non-simultaneous Transfer analysis of the light verb construction in Japanese; the nominal phrase complement of a light verb functions as an LF-phase but not as a PF-phase, and thus only undergoes LF-Transfer but not PF-Transfer. 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. The proposed analysis straightforwardly accounts for a paradoxical PF-LF mismatch in argument linking which the light verb construction exhibits; the arguments in the light verb constructions stay within nominal phrases from the θ -theoretic point of view, whereas they may be outside nominal phrases from the Case-theoretic point of view. It is also shown that our analysis accommodates various properties of the light verb construction in Japanese like Case marking of an external argument, the ergativity constraint, licensing of indeterminate pronouns, resistance of “bare” verbal nouns to XP operations, the double-*o* constraint, and the distribution of genitive case marked elements. If the proposed analysis is on the right track, it presents evidence for the view of non-simultaneous Transfers, where a syntactic object can be transferred to a single interface during a derivation.

Key words: light verb construction, non-simultaneous Transfer, PF-LF mismatch

1. Introduction

It is a traditional assumption in generative grammar that sound and meaning are indirectly connected through the syntactic component. 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-

* This is a revised version of the paper presented at *The Past Meets the Present: A Dialogue Between Historical Linguistics and Theoretical Linguistics* held at Academia Sinica on July 14-16, 2008. I would like to thank the audience at the conference and two anonymous *Language and Linguistics* reviewers for helpful comments and discussions on earlier versions of this paper. Remaining errors and omissions are, of course, my sole responsibility. This work was supported in part by the Japan Society for the Promotion of Science under grant Scientific Research C 19520436.

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 vP in his system. Since PF-Transfer and LF-Transfer are independent operations, however, there is a priori no 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 Nissenbaum (2000), Megerdooimian (2002), Cecchetto (2004, 2005), Felser (2004), Marušič (2005), Matushansky (2005), and Ishii (2008).¹ This paper proposes a non-simultaneous Transfer analysis of the light verb construction in Japanese, arguing that it accounts for various properties of the light verb construction in a straightforward fashion. More specifically, I propose 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.

The organization of this paper is as follows. Section 2 introduces the light verb construction in Japanese, paying special attention to the difference between the light and heavy uses of *suru*. Section 3 reviews previous analyses of the light verb construction, and explicates how they attempt to account for a paradoxical PF-LF mismatch in argument linking which the light verb construction exhibits. Section 4 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 straightforwardly accounts for the PF-LF mismatch. Section 5 presents further arguments for our analysis. Section 6 makes concluding remarks.

¹ Although these authors share the idea that PF-Transfer (Spell-Out) and LF-Transfer may apply non-simultaneously, they differ as to whether LF-Transfer is allowed to apply during a derivation. Nissenbaum (2000) and Cecchetto (2004, 2005) claim that while PF-Transfer is allowed to apply during a derivation, LF-Transfer can only apply to the output of narrow syntax. Megerdooimian (2002), Felser (2004), Marušič (2005), Matushansky (2005), and Ishii (2008), on the other hand, allow both PF-Transfer and LF-Transfer to apply during a derivation. This paper takes the latter view on non-simultaneous Transfers.

2. Japanese light verb constructions

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

- (1) a. John-ga Bill-to aiseki-o site-iru²
 John-Nom Bill-with table-sharing-Acc do-ing
 ‘John is sharing a table with Bill.’
 b. John-ga Yooroppa-e tomodati-to ryokoo-o sita
 John-Nom Europe-to friend-with trip-Acc did
 ‘John traveled to Europe with his friends.’

In (1a), the light verb *site-iru* ‘do-ing’, which is the present progressive form of *suru* ‘do’, is combined with the verbal noun *aiseki* ‘table-sharing’, which is marked by the accusative case particle *-o*. In (1b), the light verb *sita* ‘did’, the past form of *suru* ‘do’, appears with the accusative case marked verbal noun *ryokoo* ‘trip’. The term “light verb” refers to a verb which is semantically/thematically empty.

This light use of *suru* needs to be distinguished from the heavy verb *suru*. As pointed out by Uchida & Nakayama (1993), *suru* has many heavy uses. The most relevant to the discussion of the light verb, however, is the one with the meaning ‘do, carry out’. This heavy use of *suru* selects an agentive subject, a theme object, and optionally a recipient indirect object as exemplified by (2):

- (2) a. John-ga [ensoku-no zyunbi]-o sita
 John-Nom [excursion-Gen preparation]-Acc did
 ‘John got himself ready for an excursion.’
 b. John-ga Bill-ni [syukun-no adauti]-o sita
 John-Nom Bill-to lord-Gen revenge-Acc did
 ‘John took revenge on Bill for his lord.’ (cf. Kageyama 1993:266)

In (2a), the heavy verb *suru* takes the agentive subject *John* and the theme object *ensoku-no zyunbi* ‘excursion-Gen preparation’. In (2b), the heavy verb *suru* takes the agentive subject *John*, the recipient indirect object *Bill*, and the theme object *syukun-no adauti* ‘lord-Gen revenge’. It should be noted that the heads of the nominal phrase

² Abbreviations used in this paper are: Acc=Accusative Case; Comp=Complementizer; Conj=Conjunction; Dat=Dative Case; Gen=Genitive Case; Neg=Negation; Nom=Nominative Case; Perf=Perfect; Top=Topic.

complements of the heavy *suru* in (2), i.e. *zyunbi* ‘preparation’ in (2a) and *adauti* ‘revenge’ in (2b), are action nouns or simple event nominals in Grimshaw’s (1990) term. Although action nouns (simple event nominals) denote activities or events, they differ from verbal nouns (complex event nominals) in that they do not have any argument structures.

There are diagnostics to be used to distinguish between the light and heavy uses of *suru* (see, among others, Kageyama 1993). First, while the light verb *suru* can overtly incorporate the head of a nominal phrase complement, the heavy verb *suru* cannot:

(3) Verbal Noun (Complex Event Nominal) + Light Verb *Suru*

- a. John-ga Bill-to **aiseki-site-iru**
 John-Nom Bill-with **table-sharing-do-ing**
 ‘John is sharing a table with Bill.’
- b. John-ga Yooroppa-e tomodati-to **ryokoo-sita**
 John-Nom Europe-to friend-with **trip-did**
 ‘John traveled to Europe with his friends.’

(4) Action Noun (Simple Event Nominal) + Heavy Verb *Suru*

- a. *John-ga ensoku-o **zyunbi-sita**
 John-Nom excursion-Acc **preparation-did**
 ‘John got himself ready for an excursion.’³
- b. *John-ga Bill-ni syukun-o **adauti-sita**
 John-Nom Bill-to lord-Acc **revenge-did**
 ‘John took revenge on Bill for his lord.’

As shown in (3a-b), (1a-b) can be converted into the overtly incorporated constructions. In (3a-b), the verbal nouns *aiseki* ‘table-sharing’ and *ryokoo* ‘trip’ are overtly incorporated into the light verbs, forming the complex predicates *aiseki-site-iru* ‘table-sharing-do-ing’ and *ryokoo-sita* ‘trip-did’, respectively. Hence, *suru* in (1) is a light verb. As shown in (4a-b), on the other hand, (2a-b) do not have their overtly incorporated counterparts; *suru* in (2) is a heavy verb.

Second, the heavy verb *suru* can be replaced by transitive verbs like *okonau* ‘do’ and *zissisuru* ‘carry out’ whereas the light verb *suru* cannot:

³ It should be noted that (4a) is deviant in the intended sense. It is acceptable under the interpretation that John made arrangements for an excursion, which is irrelevant to the present discussion.

- (5) Verbal Noun (Complex Event Nominal) + Light Verb *Suru*
- a. *?John-ga [Bill-to-no aiseki]-o **okonatte/zissisite-iru**
 John-Nom Bill-with-Gen table-sharing-Acc **doing/carrying out-be**
 ‘John is sharing a table with Bill.’
- b. *?John-ga [Yooroppa-e-no tomodati-to-no ryokoo]-o **okonatta/zissisita**
 John-Nom Europe-to-Gen friend-with-Gen trip-Acc **did/carried out**
 ‘John traveled to Europe with his friends.’
- (6) Action Noun (Simple Event Nominal) + Heavy Verb *Suru*
- a. John-ga [ensoku-no zyunbi]-o **okonatta/?zissisita**
 John-Nom [excursion-Gen preparation]-Acc **did/carried out**
 ‘John got himself ready for an excursion.’
- b. John-ga Bill-ni [syukun-no adauti]-o **okonatta/zissisita**
 John-Nom Bill-to lord-Gen revenge-Acc **did/carried out**
 ‘John took revenge on Bill for his lord.’

As shown in (5), since *suru* in (1) cannot be replaced by *okonau* ‘do’ or *zissisuru* ‘carry out’, it is a light verb. *Suru* in (2), on the other hand, can be replaced by either *okonau* ‘do’ or *zissisuru* ‘carry out’ as shown in (6); *suru* in (2) is a heavy verb.

It should be noted that there are many nominals like those in (7) which are used ambiguously as verbal nouns (complex event nominals) or action nouns (simple event nominals):

- (7) *tiryoo* ‘treatment’, *syuzyutu* ‘operation’, *hookoku* ‘report’, *kenkyuu* ‘study’,
soozi ‘cleaning’, *sitami* ‘preview’, *kaisei* ‘revision’

For example, since *tiryoo* ‘treatment’ and *syuzyutsu* ‘operation’ can be verbal nouns or action nouns, *sita*, the past form of *suru*, in (8) can be either a light verb or a heavy verb:

- (8) Taro-ga Hanako-no tiryoo/syuzyutu-o sita
 Taro-Nom Hanako-Gen treatment/operation-Acc did
 ‘Taro did the treatment/operation on Hanako.’ (Hasegawa 1991:18)

We can disambiguate *tiryoo* ‘treatment’ and *syuzyutu* ‘operation’ by some modifications as shown below (see Kageyama 1993:270-271, Hasegawa 1991:18):

- (9) a. Verbal Noun (Complex Event Nominal) + Light Verb *Suru*
 Ikaiyoo-no titi-ga i-no tiryoo/syuziyutu-o sita
 gastric ulcer-Gen father-Nom stomach-Gen treatment/operation-Acc did
 ‘My father, who had been troubled with a gastric ulcer, had treatment/an operation on his stomach.’
- b. Action Noun (Simple Event Nominal) + Heavy Verb *Suru*
 Taroo-ga Hanako-ni kanzoo-isyoku-no tiryoo/syuziyutu-o sita
 Taro-Nom Hanako-Dat liver-transplant-Gen treatment/operation-Acc did
 ‘Taro did the treatment/operation on the liver transplant to Hanako.’

In (9a), *i* ‘stomach’ is the argument of *tiryoo* ‘treatment’ or *syuziyutu* ‘operation’; *tiryoo* ‘treatment’ and *syuziyutu* ‘operation’ are verbal nouns. In (9b), on the other hand, *kanzoo-isyoku* ‘liver-transplant’ is a type of treatment or operation; it is not an argument but a modifier. *Tiryoo* ‘treatment’ and *syuziyutu* ‘operation’ in (9b) are action nouns. This is supported by the fact that *tiryoo* ‘treatment’ and *syuziyutu* ‘operation’ in (9a) can be incorporated into *suru* whereas *tiryoo* ‘treatment’ and *syuziyutu* ‘operation’ in (9b) cannot, as shown below:

- (10) a. Ikaiyoo-no titi-ga i-o **tiryoo/syuziyutu-sita**
 gastric ulcer-Gen father-Nom stomach-Acc **treatment/operation-did**
 ‘My father, who had been troubled with a gastric ulcer, had treatment/an operation on his stomach.’
- b. *Taroo-ga Hanako-ni kanzoo-isyoku-o **tiryoo/syuziyutu-sita**
 Taro-Nom Hanako-Dat liver-transplant-Acc **treatment/operation-did**
 ‘Taro did the treatment/operation of the liver transplant to Hanako.’

Further evidence comes from the fact that *suru* in (9b) can be replaced by other transitive verbs like *okonatta* ‘did’ and *zissisita* ‘carried out’ as shown in (11b) whereas *suru* in (9a) cannot as shown in (11a):

- (11) a. *Ikaiyoo-no titi-ga i-no tiryoo/syuziyutu-o
 gastric ulcer-Gen father-Nom stomach-Gen treatment/operation-Acc
okonatta/zissisita
did/carried out
 ‘My father, who had been troubled with a gastric ulcer, had treatment/an operation on his stomach.’⁴

⁴ (11a) is deviant in the intended sense. It is acceptable under the interpretation that my father did a treatment/an operation on someone else’s stomach.

- b. Taro-ga Hanako-ni kanzoo-isyoku-no tiryoo/syuzuyutu-o
 Taro-Nom Hanako-Dat liver-transplant-Gen treatment/operation-Acc
okonatta/zissisita
did/carried out
 ‘Taro did the treatment/operation of the liver transplant to Hanako.’

In the rest of this paper, we are concerned with the light verb construction, which consists of a verbal noun (a complex event nominal) and the light verb *suru*. In the next section, I shall review previous analyses of the light verb construction.

3. Previous analyses

Since Grimshaw & Mester’s (1988) seminal work, the light verb construction in Japanese has drawn much attention in recent literature mainly due to a paradoxical PF-LF mismatch in argument linking it exhibits (see, among others, Grimshaw & Mester 1988, Sells 1989, Ahn 1990, Dubinsky 1990, Hasegawa 1991, Kageyama 1991, 1993, Uchida & Nakayama 1993, Matsumoto 1996, Huang 1997, and Saito & Hoshi 2000). Let us consider (1a) (repeated here as (12)) as an example:

- (12) John-ga Bill-to aiseki-o site-iru
 John-Nom Bill-with table-sharing-Acc do-ing
 ‘John is sharing a table with Bill.’

Since the light verb is semantically/thematically empty, the arguments *John* and *Bill* are assigned θ -roles, i.e. Agent and Theme, by the nominal head, i.e. the verbal noun *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 (12) should be inside the nominal phrase (NomP) as shown in (13a). 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 (NomP) as shown in (13b):

(13) PF-LF Mismatch in Argument Linking

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

3.1 Grimshaw & Mester's (1988) Argument Transfer analysis


Grimshaw & Mester (1988) propose an operation called Argument Transfer, which transfers the θ -roles of a verbal noun to a light verb. Let us consider (12) (repeated here as (14)) as an example:

- (14) John-ga Bill-to aiseki-o site-iru
 John-Nom Bill-with table-sharing-Acc do-ing
 'John is sharing a table with Bill.'

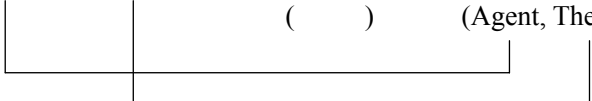
Under their analysis, the light verb *suru* 'do' and the verbal noun *aiseki* 'table-sharing' would originally have the argument structures in (15):

- (15) a. *suru* 'do' () <Acc>
 b. *aiseki* 'table-sharing' (Agent, Theme)

In (15a), the parentheses are used to indicate that the light verb *suru* 'do' has a skeletal or incomplete argument structure, and the notation <Acc> indicates that the light verb *suru* 'do' assigns the accusative case particle *-o* to the verbal noun *aiseki* 'table-sharing'. Argument Transfer applies to the arguments of the verbal noun *aiseki* 'table-sharing' in (15b). This operation produces the argument structure of the combination of the verbal noun and the light verb:

- (16) *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 (17):

- (17) 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 (NomP), they are not assigned the genitive case particle *-no*; this accounts for the PF-LF mismatch in argument linking. Although Grimshaw & Mester’s analysis describes the PF-LF mismatch, Argument Transfer is a special additional mechanism only for the light verb construction, which is theoretically undesirable.⁵

3.2 Huang’s (1997) lexical decomposition analysis

Huang (1997) proposes a lexical decomposition analysis of the light verb construction by making use of an “eventuality predicate,” whose existence is independently motivated by the causative, possessive object, event quantification, and genitive agent constructions in Chinese. (18) is an example of the Chinese possessive object construction:

- (18) Tamen bang-le wo-de piao
 they tie-Perf my ticket
 ‘They kidnapped me.’ (Huang 1997:56)

Huang (1997:57) claims that the structure of (18) involves a Larsonian VP-shell:

⁵ Since Grimshaw & Mester’s (1988) analysis assumes that the light verb *suru* ‘do’ has the ability of accusative Case assignment, it would predict that every verbal noun can be assigned the accusative case particle *-o* from the light verb. This prediction, however, is not borne out. As pointed out by Miyagawa (1989) and Tsujimura (1990), ergative verbal nouns cannot be assigned the accusative case particle *-o*. See §5.2 for a detailed discussion of the ergativity constraint on the light verb construction.

- (19) a. [_{VP} tamen [_{V'} DO [_{VP} wo [_{V'} bang piao]]]]
 they DO my tie-Perf ticket
 b. [_{VP} tamen [_{V'} **bang**_i [_{VP} wo [_{V'} *t*_i piao]]]]
 ↑
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As represented in (19a), the higher verb is an empty “eventuality predicate” DO in the underlying structure. The surface form is derived by raising of the lower verb *bang* ‘tie-Perf’ to the higher empty verb as represented in (19b).

Huang (1997:67-71) argues that *suru* is the Japanese counterpart of the empty “eventuality predicate” in the Chinese constructions. In the light verb construction like (14), the light verb *suru* ‘do’ is an overt form of the “eventuality predicate” DO. Under his analysis, the light verb construction (14) would be assigned structure (20):

- (20) John-ga [_{NomP} [_{VP} Bill-to aiseki]]-o site-iru
 John-Nom Bill-with table-sharing-Acc doing-be
 ‘John is sharing a table with Bill.’

In (20), the light verb *suru* ‘do’, i.e. the eventuality predicate DO, is a two-place predicate, which s-selects the agent *John* as its subject and the action *Bill-to aiseki* ‘Bill-with table-sharing’ as its complement. The light verb also c-selects the nominal phrase (NomP) *Bill-to aiseki* ‘Bill-with table-sharing’, which is a gerundive nominal phrase, i.e. a nominalized verb phrase, and assigns the accusative case particle *-o* to this NomP. Under this analysis, *John* is outside the nominal phrase and thus not assigned the genitive case particle *-no*. Although *Bill* is within the gerundive nominal phrase, it is immediately dominated by VP. It is then reasonable to assume that *Bill* does not need to be assigned the genitive case particle *-no*. Huang (1997) also argues that abstract complex predicate formation takes place in (20), which combines the eventuality predicate, i.e. the light verb *suru* ‘do’, with the main predicate of its complement, i.e. the verbal noun *aiseki* ‘table-sharing.’ As a result, the arguments of the individual predicates, i.e. the verbal noun *aiseki* ‘table-sharing’ and the light verb *suru* ‘do’, become the arguments of the composite predicate, i.e. *aiseki-suru* ‘table-sharing-do’. The arguments *John* and *Bill* are assigned θ -roles by the composite predicate. In other words, Grimshaw & Mester’s (1988) Argument Transfer can be understood as the result of this abstract complex predicate formation. Hence, Huang’s (1997) lexical decomposition analysis captures the PF-LF mismatch in argument linking.

In the light verb constructions like (14) where no complex predicate formation takes place on the surface, however, it is not clear exactly how Argument Transfer in terms of abstract complex predicate formation takes place. Huang (1997:66-67) argues

that such Transfer in terms of abstract predicate formation is independently motivated by English examples like (21):

- (21) a. John did *yesterday's* reading of the poem.
 b. John did the reading of the poem *yesterday*.

We should notice, however, that what is transferred in (21) is *yesterday*, which is not an argument but an adjunct. This is in contrast with the light verb construction (14), where the arguments are transferred. One possible way to solve this problem is to assume that a verbal noun covertly incorporates into a light verb, forming a complex predicate in the covert component. As we shall see in the next subsection, however, there are problems with such incorporation analyses.

3.3 Incorporation analyses

Hasegawa (1991), Kageyama (1991, 1993), and Saito & 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 & Hoshi's (2000) analysis as an illustration. Saito & Hoshi assume the minimalist program and propose an LF incorporation analysis, where a verbal noun is covertly incorporated into a light verb. Under their analysis, (14) would be analyzed as shown in (22):

- (22) 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 in the present term), (14) is assigned structure (22a). In (22a), the arguments *John* and *Bill* are outside the nominal phrase (NomP) and thus not assigned the genitive case particle *-no*. Then, as shown in (22b), the θ -role assigning verbal noun *aiseki* 'table-sharing' incorporates into the light verb *suru* 'do' at LF and assigns its θ -roles 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 & Hoshi's incorporation analysis captures the PF-LF mismatch in argument linking.

There are, however, problems with such incorporation analyses. First, as pointed out by Fukui & Sakai (2006), such incorporation analyses have trouble in accounting for examples like (23):

- (23) 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 & Sakai 2006:328)

(23) involves coordination of a verbal noun 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 verbal nouns *ryokoo* ‘travel’ and *ryuugaku* ‘study abroad’ would be incorporated into the light verb *suru* ‘do’. This would violate the general constraint on movement (24):

- (24) Constraint on an Across-the-Board Movement
An across-the-board movement of different elements into a single landing site is prohibited.

Hence, the incorporation analyses would wrongly predict that (23) is deviant.

Second, assuming that a verb overtly raises to T in Japanese, Miyagawa (2001:305) claims that focus particles like *mo* ‘also’ and *sae* ‘even’ block verb raising, a kind of head movement, when they attach to a verb as shown in (25b):

- (25) a. Taroo-ga sensei-o seme-ta
Taro-Nom teacher-Acc blame-Past
‘Taro blamed the teacher.’
b. *Taroo-ga sensei-o seme-**mo/sae**-ta
Taro-Nom teacher-Acc blame-**also/even**-Past
‘Taro also/even blamed the teacher.’

(25b) can be remedied by supporting the stranded tense morpheme by *su* ‘do’-support as shown in (26) (Miyagawa 2001:305):

- (26) Taro-o-ga sensei-o seme-**mo/sae** si-ta
 Taro-Nom teacher-Acc blame-**also/even** do-Past
 ‘Taro also/even blamed the teacher.’

In the light verb construction, however, even when a focus particle attaches to a verbal noun, the result is acceptable, as pointed out by, among others, Harada (2003:10):

- (27) Taro-o-ga Hanako-kara [hooseki-no ryakudatu]-**mo/sae** sita
 Taro-Nom Hanako-from jewels-Gen plunder-**also/even** did
 ‘Taro also/even plundered jewels of Hanako.’

Under the incorporation analyses, raising of the verbal noun *ryakudatu* ‘plunder’ to the light verb *sita* ‘did’ (the past form of *suru* ‘do’), which is a kind of head movement, should be blocked by the intervening focus particle *-mo* ‘also’ or *-sae* ‘even’. Hence, the incorporation analyses would wrongly predict that (27) is deviant.⁶

The next section proposes a non-simultaneous Transfer analysis of the light verb construction, showing that it straightforwardly accounts for the PF-LF mismatch in argument linking.

4. A non-simultaneous Transfer analysis

In this section, I propose a non-simultaneous Transfer analysis of the light verb construction. 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. It is shown that non-simultaneous Transfers coupled with “case domain fusion” account for the PF-LF mismatch in the light verb construction.

⁶ Another problem with the incorporation analyses is that they employ special additional mechanisms for case marking of a verbal noun. Hasegawa (1991) and Kageyama (1991) propose “reflexive case marking,” where a verbal noun “reflexively” assigns accusative Case to itself. Saito & Hoshi (2000) claim that the accusative Case on a verbal noun 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 verbal noun. Although Kageyama (1993) does not make use of any special mechanism for case marking, it violates the locality condition on θ -marking, since an external argument appears outside the maximal projection of a θ -role assigning verbal noun.

Let us consider (14) (repeated here as (28)) again as an example:

- (28) John-ga Bill-to aiseki-o site-iru
 John-Nom Bill-with able-sharing-Acc do-ing
 ‘John is sharing a table with Bill.’

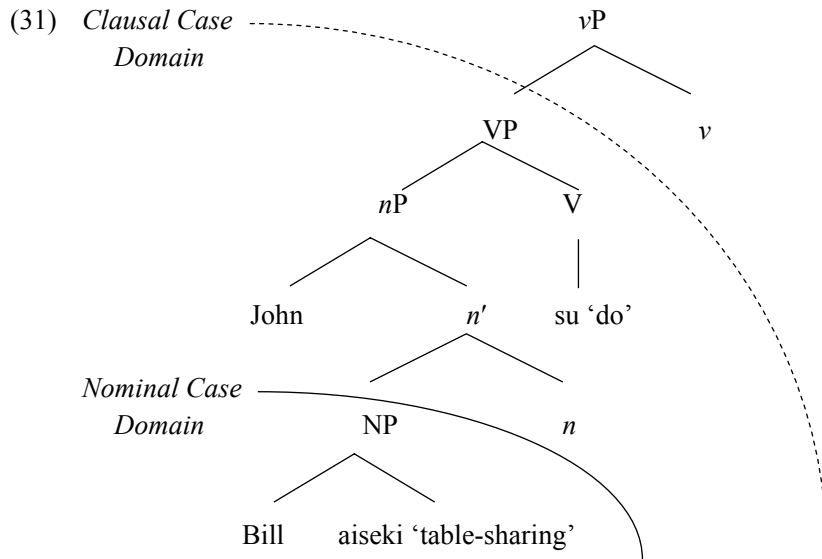
During its derivation, our analysis constructs the nominal phrase (29):

- (29) [_{nP} John [[_{NP} Bill-to aiseki] *n*]]
 John Bill-with table-sharing
 (Agent, Theme)
-

Essentially following, among others, Chomsky (2006), I assume that the nominal phrase contains the nominal functional category *n*, which is analogous to the verbal functional category *v*. The nominal functional category *n* is a light noun taking NP as its complement. In (29), the external argument *John* appears in the Spec of *nP* 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 *vP* whereas an internal argument appears within VP. In (29), both *John* and *Bill* are assigned θ -roles by the verbal noun *aiseki* ‘table-sharing’ within *nP*, 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 verbal noun *aiseki* ‘table-sharing’. It should be noted that given the diagnostic of an LF-phasehood (30) (see, among others, Chomsky 2000, 2001, 2004, 2005, 2006, Matushansky 2005), *nP* in (29) marks the completion of an argument structure (i.e. all the θ -roles are assigned within *nP*). Hence, *nP* has the status of a “proposition” just like *vP*; it counts as an LF-phase:

- (30) LF-phasehood
 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 *vP* phase (31):



This paper basically adopts Miyagawa's (1991) view on Case. Assuming that Cases involve two steps, i.e. Case assignment and Case realization (cf. Chomsky 1986), Miyagawa (1991) proposes that Case realization must be licensed by a functional category. Miyagawa (1991) investigates Case of the clausal type including nominative and accusative, arguing that in order to be morphologically realized, it must be licensed by INFL, which has the entire clause within its scope, i.e. its government domain in his analysis. Case of the clausal type has the function to identify an element as a member of a clause through its morphological realization. Extending Miyagawa's idea, I argue that just as Case of the clausal type has the function to identify an element as a member of 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. Case marking without the genitive case particle *-no* (like nominative and accusative Case marking and dative Case marking not accompanied by the genitive case particle *-no*), 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 identify an element as a member of a clause whereas the nominal case marking system has the function to identify an element as a member of 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" and then morphologically realized. 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 (30)). Under this view, although nominative

and accusative Cases, for example, are assigned by T and V respectively, they must be licensed within the accessible domain of C/v in order to be morphologically realized. Nominal case marking, on the other hand, must be licensed within “the nominal case domain” and then morphologically realized 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:

- (32) a. Clausal case marking, i.e. Case marking without the genitive case particle *-no*, must be licensed within the clausal case domain, i.e. the accessible domain of C/v.
 b. Nominal case marking, i.e. the presence of the genitive case particle *-no*, must be licensed within the nominal case domain, i.e. the accessible domain of *n*.

The notion of accessible domain is regulated by c-command and the Phase Impenetrability Condition (PIC) (33) formulated in Chomsky (2001):

- (33) The Phase Impenetrability Condition (PIC)
 In $[_{ZP} Z \dots [_{HP} \alpha [H YP]]]$, 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 (31), 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. It should be noted that given that the nominal phrase complement of a light verb, i.e. *nP* in (31), is not a PF-phase, *Bill* is within the accessible domain of *v* for PF-phenomena including case marking.⁷ *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 (28). In (31), *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 & Mester (1988) and Saito & Hoshi (2000). As pointed out by Matsumoto (1996), although (34), 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 (35).⁸

⁷ For a detailed discussion of the notion of “PF-phase,” see §5.6.

⁸ Grimshaw & Mester (1988) and Saito & Hoshi (2000) claim that the light verb construction cannot have all of its internal argument(s) accompanied by the genitive case particle *-no*. They

- (34) ?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 & Mester 1988:218)
- (35) John-ga Bill-to(-**no**) aiseki-o sita koto-ga nai
 John-Nom Bill-with(-**Gen**) able-sharing-Acc did Comp-Nom Neg
 ‘John has never shared a table with Bill.’ (Matsumoto 1996:116)

It is important to note that there is an overlap between the nominal and clausal case domains in (31). I argue that when more than one case domain overlaps, “case domain fusion” must take place:

claim that examples like (35) involve the heavy use of *suru* rather than the light use of *suru*. Based on the diagnostics to distinguish between the heavy and light uses of *suru* mentioned in §2, however, I argue that *sita*, the past form of *suru*, in (35) is not a heavy verb but a light verb. First, (35) may be converted into the overtly incorporated construction, as shown in (i), which indicates that *suru* in (35) 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, *suru* in (35) cannot be replaced by either *okonau* ‘do’ or *zissisuru* ‘carry out’ as shown in (ii), which also indicates *suru* in (35) 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.’

Note in passing that Grimshaw & Mester (1988) 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 (iii) (see Matsumoto 1996:118):

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

In (iiib), 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 & Mester’s (1988) constraint claims.

(36) 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” (37):

(37) Constraint on Case Domain Fusion

“Case domain fusion” only takes place when two case-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 (31), 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 (37) that the functional head v , which defines the clausal case domain, must also be of the same type, as shown below:⁹

- (38) [_{VP} [_{VP} [_{NP} John [[_{NP} Bill-to aiseki] n]] su] v]
 John Bill-with table-sharing <T/E>do <T/E>

Hence, v has the accusative Case feature, which is inherited by V as argued by Chomsky (2006). The nominal phrase complement nP moves to the Spec of VP, where it is assigned the accusative case particle *-o* by the light verb *suru* ‘do’ as shown in (39):

- (39) [_{VP} [_{VP} [_{NP} **John Bill-to aiseki**]-***o*** [_{NP} su]] v]
 [John Bill-with table-sharing]-Acc do

We then construct TP (40):

⁹ One might argue that in (38), v cannot be a transitive/experiencer type, since it does not introduce any external argument; the external argument *John* is not introduced by v but by n . I claim that through application of “Case domain fusion,” the two case-domain-defining functional heads, i.e. n and v in (38), are abstractly fused into a single functional head. Then, the constraint on Case domain fusion (37) can be regarded as a constraint on abstract functional head fusion, which states that only case-domain-defining functional heads of the same type can be fused into a single functional head. Under this view, *John* is not the external argument of n , but the external argument of the “fused functional head” n/v . I would like to thank an anonymous *Language and Linguistics* reviewer for bringing my attention to this issue.

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

According to the PIC (33), *John*, which is the Spec (edge) of *nP* and thus at the edge of *n*, is accessible from T, since the domain of *v* does not become opaque until the next phase head C merges. *John* moves to the Spec of TP, where it is assigned the nominative case particle *-ga*, as represented in (40). Hence, our analysis correctly yields (28), explaining the PF-LF mismatch in argument linking. It should be noted that if *John* were assigned the accusative case particle *-o* in the Spec of VP and *nP* were assigned the nominative case particle *-ga* in the Spec of TP, the resultant structure would be (41):

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

(41) is correctly ruled out by the Proper Binding Condition (PBC), because *t_{John}*, the trace of *John*, is not c-commanded by its antecedent.¹⁰

Note in passing that the nominal phrases in the light verb constructions are in contrast with ordinary nominal phrases like (42):

- (42) [TP Mary-ga [[_{VP} [_{VP} [_{NP} John-no Amerika-e-no ryokoo] *n*]-o]
 Mary-Nom John-Gen America-to-Gen travel-Acc
 [_{nP} *kyakkasita*]]] *v*] T]]
 turned-down

‘Mary turned down John’s trip to the United States.’

: The clausal case domain = the accessible domain of *v*

: The nominal case domain = the accessible domain of *n*

In (42), 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 (42) is not an external argument but an adjunct; *John* is not in the Spec of *nP* but adjoined to NP. This is supported by the fact that *John* does not have to be Agent. For example, (42) may have the interpretation that Mary turned down the trip to the US which *John planned*. Unlike *nP* in the light verb construction, the ordinary *nP* in (42) counts as a PF-phase

¹⁰ It should be noted that under the minimalist approach to the PBC effect where the PBC at S-structure is eliminated, (41) is still excluded by Müller’s (1993) Generalization. See §5.7 for detailed discussion of the minimalist approach to the PCB effect.

(though it is not a “proposition” and hence does not function as an LF-phase).¹¹ 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 can only be assigned the genitive case particle *-no*.

This section has proposed that the nominal phrase complement of a light verb counts only as an LF phase but not as a PF-phase. It was shown that the non-simultaneous Transfer analysis of the light verb construction enables us to account for the PF-LF mismatch in argument linking. The next section presents further arguments for our non-simultaneous Transfer analysis.

5. Consequences

5.1 Case marking of an external argument

The proposed analysis can account for Grimshaw & Mester’s (1988) observation that an external argument never receives the genitive case particle *-no* as shown in (43):

- (43) ***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 *nP* 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*.

5.2 Ergativity constraint

Our analysis can account for the ergativity constraint, which states that a verbal noun in the light verb construction cannot be ergative (see, among others, Miyagawa 1989, Tsujimura 1990, and Kageyama 1991, 1993). For example, the ergative verbal nouns *meityuu* ‘strike’ and *tootyaku* ‘arrival’ cannot appear in the light verb construction as shown below:

¹¹ As suggested by an anonymous *Language and Linguistics* reviewer, an alternative way to accommodate the difference between verbal noun phrases and ordinary noun phrases is to claim that *nP* is not a PF-phase, but counts as an LF-phase only if it contains a verbal noun, and that only ordinary noun phrases project up to DP, which always counts as a PF-phase. I would like to leave a detailed investigation of this interesting view for future research.

- (44) 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 (44b) as an example. Under our analysis, the ν P phase structure of (44b) is (45):

- (45) [ν P [ν P [n P [n P Tookyoo-kara ressyā tootyaku] *n*] su] ν]
 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 *ressyā* ‘train’ originates within NP as an internal argument in (45). In (45), 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 ν (the closed box). According to (36), “case domain fusion” must take place. Given the constraint on “case domain fusion” (37), since n is an unaccusative (ergative)/passive type, ν must also be of the same type. It then follows that ν in (45) 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.¹²

¹² One might argue that our analysis could not rule out deviant examples like (i):

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

(i) could be derived from (45) as follows; *Tookyoo-kara* ‘Tokyo-from’ and *ressyā* ‘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, 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 ν 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 (45), even when *ressyā* ‘train’ does not move out of n P, it moves to the Spec of n P. Let us assume with, among others, Chomsky (1986) that Case is a property of a chain and the head position of a chain (more precisely, an “A-chain”) is its unique Case position. When *ressyā* ‘train’ moves from its original position to the Spec of n P, it forms a chain. Its head position is the Spec of n P, which is outside the nominal case domain. It cannot be assigned the genitive case particle *-no*; (i) is deviant.

Our analysis can also account for the fact that although zero-place ergative verbal nouns 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 (46) (cf. Kageyama 1993:285):

- (46) 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 (46a) as an example. Under our analysis, the *vP* phase structure of (46a) is (47):

- (47) [_{vP} [_{VP} [_{nP} [_{NP} Jinari] ***n***] ***su***] ***v***]
 underground-rumbling <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 (47) does not have any accusative Case feature; the *nP* complement *jinari* ‘underground-rumbling’ cannot be assigned the accusative case particle *-o*. We then construct TP (48):

- (48) [_{TP} **Jinari-ga** [_{vP} [_{VP} ***t*_{nP}** ***su***] ***v***] T]
underground-rumbling-Nom do

Jinari ‘underground-rumbling’ moves into the Spec of TP, where it is assigned the nominative case particle *-ga*; (46a) follows.

5.3 Experiencer subjects

A verbal noun 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 verbal noun assigns an experiencer θ -role to its external argument as shown in (49):

- (49) a. **Ikaiyoo-no** **titi-ga** i-no tiryoo/syuzuyutu-o sita
 gastric ulcer-Gen father-Nom stomach-Gen treatment/operation-Acc did
 ‘My father, who had been troubled with a gastric ulcer, had treatment/an
 operation on 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)

Under our analysis, since *n* in (49) is of the transitive/experiencer type, *v* must also be of the same type. Hence, *v* in (49) 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.

5.4 Intransitive unergative verbal nouns

Our analysis can accommodate the fact that among intransitive verbal nouns, unergative verbal nouns like *syokuji* ‘meal’ and *kooen* ‘lecture’ can appear in the light verb construction as shown in (50):

- (50) 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 (50) is of the transitive/experiencer type. It then follows that *v* must be of the same type. Hence, the unergative verbal nouns are correctly assigned the accusative case particle *-o*.

5.5 Indeterminate pronouns

As pointed out by Kishimoto (2001), an internal argument in the light verb construction is inside the scope of the quantificational particle *-mo* ‘also’ attached to a verbal noun. Let us first consider (51), where the quantificational particle *-mo* ‘also’ is attached to the complement clause and the matrix verb is in the negative form (Fukui & Sakai 2006:330):

- (51) a. Taroo-wa Hanako-ni [**dare-ga** warui]-to-**mo** iwa-**nakat-ta**
 Taro-Top Hanako-Dat **anyone-Nom** fault-that-**also** 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-**also** say-**Neg-Past**
 Lit. ‘Taro did not say to anyone that Hanako was wrong.’

In (51a), the indeterminate pronoun *dare* ‘anyone’ is inside the complement clause whereas in (51b), it is outside the complement clause. The contrast between (51a) and (51b) shows that the indeterminate pronoun *dare* ‘anyone’ must be in the scope of both the quantificational particle *-mo* ‘also’ and the negation. Bearing this fact in mind, let us next consider (52):

- (52) a. *Taroo-wa **dare-ni** hon-**mo** watasa-**nakat-ta**
 Taro-Top **anyone-Dat** book-**also** 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-**also** do-**Neg-Past**
 ‘Taro did not consult anyone.’ (Kishimoto 2001:624)

In (52a), where the quantificational particle *-mo* ‘also’ is attached to the direct object *hon* ‘book’, the indirect object *dare* ‘anyone’ is not within the scope of *-mo* ‘also’; (52a) is deviant. In (52b), on the other hand, the quantificational particle *-mo* ‘also’ is attached to the verbal noun *soodan* ‘consultation’; the result is acceptable. This indicates that in (52b), although *dare* ‘anyone’ is not marked by the genitive case particle *-no*, it is inside the scope of the quantificational particle *-mo* ‘also’ attached to the verbal noun. Recall that under our analysis, *dare* ‘anyone’, which is the internal argument of the verbal noun, stays inside the *nP* complement throughout the derivation as shown in (53):

- (53) John-wa [_{nP} *t_{John}* **dare-ni** soodan]-**mo** si-**nakat-ta**
 John-Top **anyone-Dat** consultation-**also** 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* ‘also’ and the negation.¹³

¹³ Kishimoto (2001) observes that in contrast to (52b), when the quantificational particle *-mo* ‘also’ is attached to the verbal noun *soodan* ‘consultation’ and the indeterminate pronoun *dare* ‘anyone’ appears in the subject position, the result is deviant, as shown in (i):

5.6 Right dislocation

Right dislocation in Japanese provides independent evidence for our claim that the nominal phrase complement of a light verb is not a PF-phase. Japanese allows a constituent to undergo “right dislocation” from a preverbal position to a sentence-final position as shown below (see, among others, Simon 1989, Honda 2002, Fukutomi 2007):

- (54) a. John-ga kinoo ringo-o tabeta
 John-Nom yesterday apple-Acc ate
 ‘John ate an apple yesterday.’
 b. John-ga kinoo tabeta yo, **ringo-o**
 John-Nom yesterday ate Particle **apple-Acc**
 Lit. ‘John ate it yesterday, an apple.’

In (54b), *ringo-o* ‘apple-Acc’ is “right-dislocated” to the sentence-final position. Bearing this fact in mind, let us consider the light verb construction (35) (repeated here as (55)):

- (55) 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.’

Recall that under our analysis, *Bill-to(-no) aiseki-o* ‘Bill-with(-Gen) table-sharing-Acc’ in (55) is an *nP* constituent as represented in its partial structure (56):

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

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

- (ii) **Dare-ga** [_{*nP*} *t_{dare}* Hanako-ni soodan]-**mo** si-**nakat-ta**
anyone-Nom Hanako-Dat consultation-**also** do-**Neg**-past

The indeterminate pronoun *dare* ‘anyone’ originates in the Spec of *nP* 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* ‘also’, 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* ‘also’ 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 didn’t **t_i**. (Laka Mugarza 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)

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

The *nP* complement of the light verb *t_{John} Bill-to(-no) aiseki-o* ‘*t_{John} Bill-with(-Gen) table-sharing-Acc*’ in (56), however, cannot be “right dislocated” as shown in (57):

- (57) ?? John-ga sita koto-ga nai yo, [_{nP} *t_{John}* **Bill-to(-no)**
 John-Nom did Comp-Nom Neg Particle [*t_{John}* **Bill-with(-Gen)**
 aiseki]-o
 table-sharing]-Acc
 Lit. ‘John did it, sharing a table with Bill.’

It should be noted that (57) is in contrast with (58b), which shows that the nominal phrase complement of the heavy verb *suru* can be “right dislocated”:

- (58) a. John-ga [ensoku-no zyunbi]-o sita (= (2a))
 John-Nom [excursion-Gen preparation]-Acc did
 ‘John got himself ready for an excursion.’
 b. John-ga sita yo, [ensoku-no zyunbi]-o
 John-Nom did Particle [excursion-Gen preparation]-Acc
 Lit. ‘John did it, getting himself ready for an excursion.’

Based on Chomsky’s (2001, 2004) claim that PF-phases are isolable at PF, Matushansky (2005) argues that one of the PF diagnostics of phase is that PF-phases may appear at a clausal periphery irrespective of whether they are moved or not:

- (59) PF-phasehood
 PF-phases may appear at a clausal periphery irrespective of whether they are moved or not.

As the degraded status of (57) shows, the *nP* complement of a light verb cannot appear in isolation at a clausal periphery. This straightforwardly follows from our claim that the *nP* complement of a light verb, though an LF-phase, does not count as a PF-phase.¹⁴

¹⁴ One might argue that (57) can be ruled out by the Proper Binding Condition (PBC) due to the fact that the trace of *John* is not c-commanded by its antecedent. It is not entirely clear, however, whether the degraded status of (57) can be attributed to the PBC effect, since it is

5.7 Targets of XP operations

Our analysis can explain the fact that “bare” verbal nouns resist XP operations including topicalization, relativization, clefting, passivization, and scrambling, as shown below (see, among others, Grimshaw & Mester 1988, Kageyama 1993, Uchida & Nakayama 1993, Matsumoto 1996, and Saito & Hoshi 2000):

- (60) a. John-wa [Tokyoo-ni ryokoo]-o sita
 John-Top [Tokyo-to trip]-Acc did
 ‘John made a trip to Tokyo.’
- b. Topicalization
 ***Ryokoo_i-wa** John-ga [Tokyoo-ni *e_i*] sita
trip-Top John-Nom Tokyo-to did
 Lit. ‘The trip, John made to Tokyo.’ (Matsumoto 1996:114)
- c. Relativization
 *[[John-ga [Tokyoo-ni *e_i*] sita] **ryokoo_i**
 John-Nom Tokyo-to did **trip**
 Lit. ‘the trip John made to Tokyo’
- d. Clefting
 *[[John-ga [Tokyoo-ni *e_i*] sita]-no]-wa **ryokoo_i(-o)** da
 John-Nom Tokyo-to did-Comp-Top **trip(-Acc)** be
 Lit. ‘It is the trip that John made to Tokyo.’
- e. Scrambling
 *John-ga **ryokoo-o_i** [Tokyoo-ni *e_i*] sita
 John-Nom **trip-Acc** Tokyo-to did
 ‘John made a trip to Tokyo.’
 ***Ryokoo-o_i** John-ga [Tokyoo-ni *e_i*] sita
trip-Acc John-Nom Tokyo-to did
 ‘John made a trip to Tokyo.’

still controversial where the “right dislocated” *nP* complement is merged, i.e. whether the “right dislocated” *nP* complement is in a structurally higher position than the subject *John*. In fact, Honda (2002) and Fukutomi (2007) assume Kayne’s (1994) Linear Correspondence Axiom and propose antisymmetric analyses of “right dislocation,” in which “right dislocated” elements appear structurally lower than subjects. Furthermore, under the minimalist approach to the PBC effect, even if the “right dislocated” *nP* complement appears structurally higher than the subject *John*, it does not necessarily lead to a PBC violation; the PBC effect only appears if the “right dislocated” position is of the same type with the subject position. See §5.7 for detailed discussion of the minimalist approach to the PBC effect.

Our analysis can correctly rule out (60b-e) along the same line with (61b-e):

- (61) a. John-ga [kagaku-no ronbun]-o kaita
 John-Nom [chemistry-Gen paper]-Acc wrote
 ‘John wrote a paper on chemistry.’
 b. Topicalization
 ***Ronbun_i-wa** John-ga [kagaku-no *e_i](*-o*) kaita
paper-Top John-Nom chemistry-Gen(*-Acc*) wrote
 Lit. ‘The paper, John wrote on chemistry.’
 c. Relativization
 *[John-ga [kagaku-no *e_i](*-o*) kaita] **ronbun_i**
 John-Nom chemistry-Gen(*-Acc*) wrote **paper**
 Lit. ‘the paper that John wrote on chemistry’
 d. Clefting
 *[[John-ga [kagaku-no *e_i] kaita]-no]-wa **ronbun_i(*-o*)** da
 John-Nom chemistry-Gen wrote-Comp-Top **paper(*-Acc*)** be
 Lit. ‘It is the paper that John wrote on chemistry.’
 e. Scrambling
 *John-ga **ronbun-o_i** [kagaku-no *e_i] kaita
 John-Nom **paper-Acc** chemistry-Gen wrote
 ‘John wrote a paper on chemistry.’
 ***Ronbun-o_i** John-ga [kagaku-no *e_i] kaita
paper-Acc John-Nom chemistry-Gen wrote*****

In (61a), *ronbun* ‘paper’ is the head of the NP complement of *n*; it is an X^0 category, as represented in (62):

- (62) John-ga [_{NP} [_{NP} kagaku-no ronbun] *n*]-o kaita
 John-Nom chemistry-Gen paper-Acc wrote
 ‘John wrote a paper on chemistry.’

It then follows that *ronbun* ‘paper’ in (61a) resists XP operations as shown in (61b-e). Recall that under our analysis, the internal argument of a verbal noun, 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, as the structure of (60a) shows:

- (63) John-wa [_{NP} *t_{John}* [_{NP} Tokyooo-ni ryokoo]]-o sita
 John-Top [_{NP} *t_{John}* [Tokyo-to trip]]-Acc did
 ‘John made a trip to Tokyo.’

In (63), the verbal noun *ryokoo* ‘trip’ is the head of the NP complement of *n* just like *ronbun* ‘paper’ in (62); it is an X^0 category. It then follows that the verbal noun *ryokoo* ‘trip’ in (60a) resists XP operations. Hence, we can correctly predict that (60b-e) are deviant.

Let us next consider topicalization and relativization of the nominal phrase complement of a light verb as a whole, which consists of a verbal noun and its internal argument(s):¹⁵

- (64) John-ga Yooroppa-e(-no) ryokoo-o sita
 John-Nom Europe-to(-Gen) trip-Acc did
 ‘John made a trip to Europe.’
- (65) Topicalization
 a. [**Yooroppa-e-no ryokoo**]_i-wa John-ga *e_i* sita
 Europe-to-Gen trip-Top John-Nom did
 Lit. ‘The trip, John made to Europe.’
 b. ***[Yooroppa-e ryokoo]**_i-wa John-ga *e_i* sita
 Europe-to trip-Top John-Nom did
- (66) Relativization
 a. [John-ga *e_i* sita] [**Yooroppa-e-no ryokoo**]_i
 John-Nom did **Europe-to-Gen trip**
 Lit. ‘the trip John made to Europe’
 b. ***[John-ga *e_i* sita] [Yooroppa-e ryokoo]**_i
 John-Nom did **Europe-to trip**

As shown in (65a) and (66a), when the internal argument *Yooroppa-e* ‘to Europe’ is marked by the genitive case particle *-no*, the nominal phrase complement of a light verb can undergo topicalization and relativization. When the internal argument *Yooroppa-e* ‘to Europe’ is not accompanied by the genitive case particle *-no*, on the other hand, neither topicalization nor relativization is allowed as shown in (65b) and (66b).

Under our analysis, (65a-b) and (66a-b) are assigned structure (67) and (68) respectively:

- (67) [_{NP} *t_{John}* [[_{NP} Yooroppa-e(-no) ryokoo] *n*]]_i-wa John-ga *e_i* sita
 Europe-to(-Gen) trip-Top John-Nom did
 Lit. ‘The trip, John made to Europe.’

¹⁵ Clefting and scrambling are not taken up here, since it has been pointed out by Fukui & Sakai (2006) that scrambled elements and the elements in the focus position of the cleft construction need not form single constituents.

- (68) John-ga e_i sita [_{nP} t_{John} [[_{NP} Yooroppa-e(-no) ryokoo] n]];
 John-Nom did Europe-to(-Gen) trip
 Lit. ‘the trip John made to Europe’

In (67), the subject *John* first moves to the Spec of TP, and then the remnant *nP* containing the trace of *John* is topicalized across the subject. Assuming the raising/promotion analysis of relative clauses advocated by Vergnaud (1974) and Kayne (1994), I claim that in (68), the subject *John* first moves to the Spec of TP, and then the remnant *nP* undergoes relativization across the subject. One might argue that (67) and (68) violate the Proper Binding Condition (PBC), since the trace of the subject *John* in the Spec of the topicalized/relativized *nP* is not bound by its antecedent *John*. In fact, (67) and (68) are typical cases motivating the PBC at S-structure. Under the minimalist program where S-structure is eliminated, however, various proposals have been designed to eliminate the PBC at S-structure, with the PBC effect being reduced to either the general constraint on variables (69) or Müller’s (1993) generalization (70) (see, among others, Müller 1993, Kitahara 1997, and Koizumi 2000):

- (69) Constraint on Variables
 Variables must be bound at LF.
- (70) Müller’s Generalization
 A trace with a (not necessarily c-commanding) antecedent in a position of type α must not be dominated by a category in a position of the same type α .

Given the minimalist approach to the PBC effect, (67) and (68) do not violate either the constraint on variables (69) or Müller’s Generalization (70). In (67) and (68), t_{John} is the trace left by movement of *John* to the Spec of TP, which is an “A-position”; the trace of *John* is not an “A’-trace” (a variable) but an “A-trace.” It then follows that t_{John} is not subject to the constraint on variables (69). Furthermore, both (67) and (68) satisfy Müller’s generalization (70). In (67) and (68), the trace of *John* is in an “A-position.” In (67), the category which dominates the trace of *John*, i.e. the topicalized phrase, is in an “A’-position.” Assuming Kayne’s (1994) raising analysis of relative clauses, where relativized phrases move into the Spec of CP, the relativized phrase which dominates the trace of *John* is also in an “A’-position.” Hence, neither (67) nor (68) exhibits any PBC effect.¹⁶

¹⁶ One might argue that given the PF diagnostic of phase (59), (65a) and (66a) present evidence against our claim that the *nP* complement of a light verb is not a PF-phase, since the *nP* complement appears at the clausal periphery position, i.e. the topic position in (65a) and the head position of the relative clause in (66a). It should be noted, however, that (59) should be regarded

The question now arises as to how we can account for the difference in acceptability between (65-66a) and (65-66b). Given that Case is a property of a chain and the head of a chain (more precisely, an “A-chain”) is its unique Case position (see, among others, Chomsky 1986), it is the head position of the chain that determines which case domain the chain belongs to. In (67) and (68), the internal argument *Yooroppa-e* ‘to Europe’, which does not undergo movement by itself, constitutes a trivial chain and thus assigned Case based on its surface position (though the *nP* complement which contains *Yooroppa-e* ‘to Europe’ undergoes topicalization/relativization, constituting a non-trivial chain). It is widely assumed that a topic phrase is in the CP-domain. Recall that I assume following Kayne (1994) that a relativized phrase is also in the CP-domain. The topicalized/relativized *nP* which contains *Yooroppa-e* ‘to Europe’ is not c-commanded by either C or *v*. Under our analysis, therefore, the internal argument *Yooroppa-e* ‘to Europe’ is within the nominal case domain, i.e. the accessible domain of *n*, but not within the clausal case domain, i.e. the accessible domain of C or *v*, as represented below:

- (71) a. $[[[_{NP} t_{John} [[[_{NP} \text{Yooroppa-e-no ryokoo}] n]]]_i\text{-wa} [[[_{TP} \text{John-ga } e_i \text{ sita}]] C]]$
Europe-to-Gen trip-Top John-Nom did
‘John made a trip to Europe.’
b. $[[[[[_{TP} \text{John-ga } e_i \text{ sita}]] C] [_{NP} t_{John} [[[_{NP} \text{Yooroppa-e-no ryokoo}] n]]]_i]$
John-Nom did Europe-to-Gen trip
Lit. ‘the trip John made to Europe’

The internal argument *Yooroppa-e* ‘to Europe’ must be accompanied by the genitive case particle *-no*; the contrast between (65-66a) and (65-66b) follows.¹⁷

as a necessary condition (but not a sufficient condition) for PF-phasehood; non-PF-phase constituents may also appear at clausal periphery positions, as exemplified by (i):

- (i) a. [AP Neurotic]_i I would say she is t_i , not nervous.
b. [PP In his attic]_i he keeps his plants t_i , not his pets.

In (i), AP and PP, which have not been assumed to be phases, undergo topicalization and appear at the clausal periphery positions.

Note also that the base-generation analyses of topicalization/relativization are not available here, since in such analyses, there is no way of moving (lowering) the subject *John*, which is base generated in the Spec of the topicalized/relativized *nP*, to the Spec of TP.

¹⁷ The light verb construction is not subject to passivization irrespectively of whether its target is a “bare” verbal noun or the nominal phrase complement of a light verb as a whole as shown below:

- (i) a. *Ryokoo-wa_i John-ni-yotte [Tookyoo-ni *t_i*] s-are-ta
trip-Top John-by Tokyo-to do-Passive-Past
Lit. 'The trip was made to Tokyo by John.'

5.8 Double-*o* constraint

As pointed out by, among others, Harada (1973) and Kuroda (1978), there are two kinds of double-*o* constraint in Japanese, i.e. the deep double-*o* constraint and the surface double-*o* constraint. The deep double-*o* constraint effect emerges when there are two nominal phrases marked with structural (abstract) accusative Case both of which are immediately dominated by the same VP in a “surface structure”; it results in strong deviance, as shown in (72):

- (72) *John-ga **Mary-o** **tegami-o** kak-aseta
 John-Nom **Mary-Acc** **letter-Acc** write-made
 ‘John made Mary write a letter.’

In the causative construction (72), *tegami* ‘letter’ and the causee *Mary* are both marked by structural accusative Case. The surface double-*o* constraint, on the other hand, is exemplified by (73):

- (73) ?John-ga **Mary-o** **miti-o** aruk-aseta
 John-Nom **Mary-Acc** **road-Acc** walk-made
 ‘John made Mary walk on the road.’

In (73), while the causee *Mary* is accompanied by structural accusative case particle *-o*, *miti* ‘road’, which represents locative, is accompanied by the adverbial locative postposition *-o*. This only results in mild deviancy. Apart from the degree of deviancy, the deep double-*o* constraint differs from the surface double-*o* constraint in that only the latter can be circumvented by dislocating one of the nominal phrases, as shown below:

-
- b. *[Tookyoo-e(-no) ryokoo]-wa_i John-ni-yotte *t_i* s-are-ta
 Tokyo-to(-Gen) trip-Top John-by do-Passive-Past
 Lit. ‘The trip to Tokyo was made by John.’

I assume following Jaeggli (1986) and Baker (1988) that in the passive construction, the external θ -role is assigned to the passive morpheme and the *by*-phrase “doubles” the θ -role of the passive morpheme, thereby looking like it receives the external θ -role. Recall that under our analysis, it is the verbal noun *ryokoo*, but not the light verb, that is a θ -role assigner. The passive morpheme, however, is outside the nominal phrase and thus cannot be assigned any θ -role by the verbal noun due to the locality condition on θ -marking; the deviancy of (i) follows.

(74) Deep Double-*o* Constraint

- a. *John-ga **tegami-o** kak-aseta no wa **Mary-o** da
 John-Nom **letter-Acc** write-made Comp Top **Mary-Acc** be
 ‘It is Mary that John made write a letter.’
- b. *John-ga **Mary-o** kak-aseta no wa **tegami-o** da
 John-Nom **Mary-Acc** write-made Comp Top **letter-Acc** be
 ‘It is a letter that John made Mary write.’

(75) Surface Double-*o* Constraint

- a. John-ga **miti-o** aruk-aseta no wa **Mary-o** da
 John-Nom **road-Acc** walk-made Comp Top **Mary-Acc** be
 ‘It is Mary that John made walk on the road.’
- b. John-ga **Mary-o** aruk-aseta no wa **miti-o** da
 John-Nom **Mary-Acc** walk-made Comp Top **road-Acc** be
 ‘It is on the road that John made Mary walk.’

Given this background, let us look at the light verb construction. As pointed out by Sells (1989), Dubinsky (1990), and Saito & Hoshi (2000), the light verb construction is subject to the surface double-*o* constraint. First, the sequence of -*o* marked nominal phrases only results in mild deviancy as shown in (76) (Saito & Hoshi 2000:269):

- (76) ?? Mary-ga John-ni/e **toti-o** **zyooto-o** sita
 Mary-Nom John-to **land-Acc** **giving-Acc** did
 ‘Mary gave a piece of land to John.’

Second, the double-*o* constraint violation can be avoided when one of the nominal phrases is dislocated as shown in (77) (Saito & Hoshi 2000:271):

- (77) Mary-ga John-ni/e **zyooto-o** sita no wa **toti-o** da
 Mary-Nom John-to **giving-Acc** did Comp Top **land-Acc** be
 ‘It is a piece of land that Mary gave to John.’



Recall that under our analysis, the verbal noun *zyooto* ‘giving’ is assigned the structural (abstract) case particle -*o* by V through the mediation of *v*. The particle -*o* assigned to the internal argument *toti* ‘land’, which stays within the nominal phrase complement throughout the derivation, is not structural (abstract) Case but inherent Case assigned by the θ -role assigning verbal noun. Hence, our analysis can correctly predict that the light verb construction is subject to the surface double-*o* constraint but not the deep double-*o* constraint.

5.9 Distribution of genitive case marked elements

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 verbal noun as shown below:

- (78) 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 (78c), *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* ‘America-to-Gen’ and the verbal noun *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 Pesetsky 1982). The relevant structures of (78b-c) are (79a-b), respectively:

- (79) 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 (79a) shows nesting dependencies, (79b) shows crossing dependencies. (79b) violates the crossing constraint; the deviancy of (78c) follows.

6. 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.

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[Received 20 September 2008; revised 29 May 2009; accepted 8 June 2009]

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論日語輕動詞結構的語音-邏輯形式不對稱

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本文主張日語輕動詞結構的異位轉化分析，指出其名詞組補語構成邏輯階層而非語音階層，因而只適用邏輯介面轉化而非語音介面轉化。本文還提出格位範域合併的看法，規定該合併機制必須發生於多重格位範域交錯的句法結構，並且合併運作本身也得受階層阻擋條件的限制。上述分析可以一清二楚的說明何以從論旨架構的角度，輕動詞結構的論元是出現於名詞詞組內部，而從格位架構的角度，其論元則是分布於名詞詞組外部。這樣的詮釋也同時與日語輕動詞結構的各類屬性相互呼應，例如外在論元的格位標示，作格限制，居中代名詞認可等句法現象。本文的看法如果是正確的，主張句法賓語可在單一介面轉換的異位轉化則獲得進一步的論證。

關鍵詞：輕動詞結構，異位轉化，語音-邏輯形式不對稱