Papers from the Thirty-First Conference
November 9-10, 2013
and from
the Sixth International Spring Forum
April 27-28, 2013
of
The English Linguistic Society of Japan

JELS 31

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第 6 回国際春季フォーラム（東京大学本郷キャンパス）
研究発表論文集

The English Linguistic Society of Japan
2014

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本書は、2013年4月27日、28日に東京大学本郷キャンパスにて開催された日本英語学会第6回国際春季フォーラム、および同年11月9日、10日に福岡大学にて開催された日本英語学会第31回大会における研究発表論文とワークショップ要旨を収録していますが、投稿辞退の分は除き、締切日までに投稿された論文を掲載しています。

第31回大会運営委員長
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[I]

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Spell-Out of Intermediate Projections*

Akihiko Arano
Tohoku University

Keywords: Spell-Out, Drop Phenomena, Distinctness, Case-Resistance, Sluicing

1. Introduction

It has been widely assumed since Chomsky (2000) that the notion of phase plays a prominent role in the syntactic computation. One of its functions is to trigger the operation Spell-Out, which sends syntactic structures created by Merge in a bottom-up fashion to the sensorimotor interface. The application of Spell-Out makes its target inaccessible to syntactic operations at later stages (Phase-Impenetrability Condition (Chomsky (2000))) and, therefore, cyclicity effects are derived as a consequence of the multiple Spell-Out model adopted in the current minimalist theorizing. Moreover, the Phase-Impenetrability Condition succeeds in reducing computational burden because search space can be limited by Spell-Out.

This paper makes a proposal on the domain of Spell-Out, which is standardly assumed to be the complement of a phase head, as schematized in (1) (Spell-Out domains are shaded).

(1) $[_{XP}$ ZP $[_{X'}$ X $[_{YP}$ …]]] X: phase head

I argue that a traditional 'intermediate projection' undergoes Spell-Out if a phase head is in a spec-head agreement relationship, as shown in (2).

(2) $[_{XP}$ ZP $[_{X'}$ X $[_{YP}$ …]]] X: phase head

I show that my proposal becomes feasible under a labeling algorithm proposed in Chomsky (2013), according to which a feature becomes a label of the syntactic object consisting of XP and YP when it is the prominent one both in XP and YP. My proposal is supported by three kinds of linguistic phenomenon: drop phenomena in matrix clauses, distinctness effects, and sluicing.

First, I analyze aux drop and topic drop in terms of Spell-Out, following Fitzpatrick (2006) and Rizzi (2005). I show that my proposal correctly predicts the size of unpronounced elements in these constructions.

Second, my proposal solves a problem with the standard version of Spell-Out, and derives parts of the Case Resistance Principle (Stowell (1981)), assuming Richards' (2010) Distinctness Condition to the effect that the same kind of functional categories cannot exist in a single Spell-Out domain.

Third, my proposal derives Merchant's (2001) Sluicing-COMP generalization, assuming a direct connection between Spell-Out and ellipsis.

This paper is organized as follows. Section 2 reviews Chomsky's (2013) proposal on labeling, and clarifies its differences from previous analyses. Section 3 presents my proposal. Section 4 discusses two types of drop phenomenon observed in matrix clauses. Section 5 shows consequences my proposal brings to the Distinctness Condition. Section 6 derives Merchant's (2001) Sluicing-COMP generalization. Section 7 is a conclusion.

2. On Labeling: Chomsky (2013)

For syntactic objects to be interpreted at the interfaces, labels are needed. In the early minimalist program (Chomsky (1995)), the operation Merge was responsible for identifying labels. Thus, applied to two objects α and β, Merge forms the new object K, of the form {γ, {α, β}}, where γ is its label. This form of

Merge is no longer available in Chomsky (2013), where Merge is defined in the simplest form: Merge (α, β) = {α, β}. He argues that labels are determined at the phase level by a fixed labeling algorithm, which is just minimal search. Thus, for a syntactic object comprising H, a head, and XP, not a head, the labeling algorithm selects H as its label. In cases where XP and YP are merged, on the other hand, minimal search fails to determine the label of the syntactic object created, because it is ambiguous, finding the heads X and Y. Chomsky (2013) argues that this problem does not arise when XP and YP share the same prominent feature because the labeling algorithm finds it in both terms and can take that to be the label, creating an exocentric structure.

Let us see how this labeling mechanism works and compare it with previous accounts, using the following indirect question.

(3) They wondered [$_{\alpha}$ in which Texas city [$_{\beta}$ C [JFK was assassinated]]]

(Chomsky (2013: 45))

In the traditional accounts, the structure of the embedded clause is as in (4a). On the other hand, Chomsky's (2013) system requires it to be labeled as shown in (4b), where a shared prominent feature, an interrogative feature Q, has become the top label.

(4) a. [$_{CP}$ in which Texas city [$_{C'}$ C [JFK was assassinated]]]

b. [$_{Q}$ in which Texas city [$_{CP}$ C [JFK was assassinated]]]

It is clear from this illustration that the sister of PP *in which Texas city* has a different status in these implementations. It is regarded as an intermediate projection C′ in (4a), whereas it is a maximal projection CP in (4b).

More generally, Chomsky's (2013) analysis differs from the previous ones in that the sister of 'specifier,' a traditional intermediate projection, becomes a maximal projection when 'spec-head agreement' occurs, as represented in (5).

(5) a. [$_{XP}$ ZP [$_{X'}$ X [$_{YP}$ …]]]

b. [$_{F}$ ZP [$_{XP}$ X [$_{YP}$ …]]] X: phase head

Then, it is predicted in (5b) that the sister of 'specifier' may undergo some syntactic process. This prediction does not arise in (5a), because intermediate projections are assumed to be invisible to syntactic operations (Chomsky (1995)). Therefore, as long as there is evidence for applying syntactic operations to 'intermediate projections,' Chomsky's (2013) approach to labeling is supported. In the following sections, I present such evidence using Spell-Out.

3. Proposal

I propose that possible Spell-Out domains are phases themselves and their complements, i.e. XP and YP in (6).

(6) [$_{XP}$ X [$_{YP}$ …]] X: phase head

They are given a privilege status as Spell-Out domains because of their close relationship with a phase head that is a trigger of Spell-Out.

First, suppose that a phase head is introduced into the derivation and there is no Merge to the phase edge.

(7) [$_{XP}$ X [$_{YP}$ …]] X: phase head

XP (a phase) cannot be a target of Spell-Out in this case, because it is the topmost category necessary for continuing higher derivations. Therefore, YP (a phasal complement), undergoes Spell-Out.

Let us turn to a case where some element is moved to the phase edge and enters a 'spec-head relationship' with the phase head.

(8) [$_{F}$ ZP [$_{XP}$ X [$_{YP}$ …]]] X: phase head

Since XP, a phase, is not the top category, it is a possible candidate for Spell-Out domains in (8). I argue that XP, rather than YP, is spelled out in this case because Spell-Out of the former is more economical given that the more structures are spelled out at a phase level, the less domains

are searched at the next phase level due to the Phase-Impenetrability Condition (Chomsky (2000)). Recall that this possibility is unavailable in the traditional accounts. Since intermediate projections cannot be a target of syntactic operations (Chomsky (1995)), X′ fails to be a potential Spell-Out domain.

In summary, this section has proposed that there are two possible Spell-Out domains: phases themselves and their complements. I have argued that under the framework of Chomsky (2013), a traditional 'intermediate projection' undergoes Spell-Out when a phase head undergoes a spec-head agreement. In the following sections, I present three kinds of consequence of my proposal.

4. Drop Phenomena in Matrix Clauses

This section discusses aux drop (Fitzpatrick (2006)) and topic drop (Rizzi (2005)). Following previous researches, I analyze missing elements in these phenomena as ones that do not undergo Spell-Out. I show that my proposal provides a correct characterization of the size of unpronounced elements.

Both of the phenomena mentioned above are observed in main clauses, and unpronounced elements would be at the front of the pronounced structures.

First, aux drop is a phenomenon where fronted auxiliaries are not pronounced in questions in English and German. Descriptively, aux-drop is possible only when the missing auxiliary has been raised at the root level and would be left-most in the pronounced structure (Fitzpatrick (2006: 402)).

(9) a. Anybody want a hot dog?
b. Anyone seen John today?
(Fitzpatrick (2006: 400))

(10) a. Who *(does) everyone like?
b. Only Mary *(does) everyone like.
(Fitzpatrick (2006: 402))

(11) German
(Hat) irgendwer gestern Spiderman gesehen?
(Has) anyone yesterday Spiderman seen
'(Did) anyone see Spiderman yesterday?'
(Fitzpatrick (2006: 400))

Second, topic drop, observed in colloquial German, refers to situations in which a subject or a topicalized object is unpronounced (Rizzi (2005) and references cited therein).

(12) a. (Ich) habe es gestern gekauft
I have it yesterday bought
b. (Das) habe ich t_{das} gestern gekauft
this have I yesterday bought
(Rizzi (2005: 533))

It is impossible in the middle field ((13a)), or in the embedded clause ((13b, c)).

(13) a. Gestern habe *(ich) es gekauft
yesterday have I it bought
b. Hans glaubt *(ich) habe es gestern gekauft
Hans believes I have it yesterday bought
c. Hans glaubt dass *(ich) es gestern gekauft habe
Hans believes that I it yesterday bought have
(Rizzi (2005: 533))

Fitzpatrick (2006) and Rizzi (2005) both propose that what is missing in these constructions is what escapes Spell-Out. Within the standard version of current phase theory (Chomsky (2000 et seq)), Spell-Out cyclically applies to the complement of a phase head. Therefore, at the point where the topmost phase is introduced, elements in the edge do not undergo Spell-Out. If they remain unspelled out, then, it is predicted that they are unpronounced. This account of drop phenomena straightforwardly derives the fact that unpronounced elements must be at the front of root clauses.

Inheriting the insights of the previous

studies, I make the following analyses.

(14) a. Aux drop

$[_{CP}$ does $\underbrace{[_{TP}$ anybody t_T want a hot dog$]}_{\text{pronounced}}]$

b. Topic drop

$[_{Top}$ ich $\underbrace{[_{CP}$ habe $[_{TP}$ t_{ich} t_T es gestern gekauft$]]}_{\text{pronounced}}]$

In (14a) Aux sitting in T has moved to C, and TP has been spelled out. The rest of the structure is not spelled out and therefore Aux is dropped. In a similar vein, topic drop involves Spell-Out of CP. As a consequence, the topic sitting in the traditional specifier position is not pronounced, but C has phonetic realizations.

Note that in explaining these constructions, the size of Spell-Out domains plays an important role. If TP were Spell-Out domains in (14b), we would not expect that only the specifiers remain silent. Then the question arises especially as to why CP, not TP, is spelled out in topic drop. My proposal gives an answer to this question. The derivation of aux drop involves no spec-head agreement with C, and therefore TP is spelled out.[1] On the other hand, it is plausible to assume that [Top]-features trigger spec-head agreement in the derivations of topic drop. Then, the present analysis correctly predicts that traditional 'intermediate projections' undergo Spell-Out in topic drop.

5. Distinctness Effects

Richards (2010) proposes the Distinctness Condition, which rejects self-contradictory instructions to make nodes precede themselves.

(15) *Distinctness*

If a linearization statement <α, α> is generated, the derivation crashes.

He assumes, following Chomsky (1995, 2000), that trees created by syntax do not have information on linear order, and they are linearized via a version of Linear Correspondence Axiom (Kayne (1994)) at the point when Spell-Out applies. He adopts the framework of Distributed Morphology (Halle and Marantz (1993)), where functional heads undergo Late Insertion. This framework makes it possible to postulate that, when linearization occurs, we cannot distinguish different functional heads of the same type due to their scarcity of features that may be useful to differentiate them from each other. As a consequence, the Distinctness Condition forbids the same kind of functional categories to be in the same Spell-Out domain.

The Distinctness Condition has implications for a wide range of linguistic phenomena. One of them is Case Resistance, which is illustrated by facts like (16) (Stowell (1981)).

(16) * They're talking about [that they need to leave] (Richards (2010: 137))

Richards (2010: 137) suggests that Case Resistance is an instance of Distinctness, if we assume, following Emonds (1985), that prepositions and complementizers belong to the same category. He assigns the following structure to part of (16).

(17) $[_{PP}$ <u>about</u> $[_{CP}$ <u>that</u> $[_{TP}$ the Marines went to China$]]]$

When a phase above CP induces Spell-Out, P and C are linearized in the same Spell-Out domain. Therefore, if P and C are of the same type, they cannot be linearized, causing a violation of Distinctness.

The Case Resistance Principle does not apply to interrogative clauses, as Richards (2010: 139) notes.

(18) They're talking about [what they should buy] (Richards (2010: 139))

This fact, however, cannot be accounted for in terms of Distinctness, if we assume the standard version of Spell-Out, because it is incorrectly predicted that P and C induce a contravention of Distinctness in (18).

(19) $[_{PP}$ <u>about</u> $[_{CP}$ what <u>C</u> $[_{TP}$ they should buy$]]]$

In the same way, the standard version of Spell-Out rules out interrogatives clauses with a PP specifier, contrary to the fact.

(20) a. They don't know [with whom they should discuss this]
(Richards (2010: 137))
b. [$_{VP}$ know [$_{CP}$ [$_{PP}$ with whom] C [$_{TP}$ they should discuss this]]]

My proposal, on the other hand, correctly deals with these cases. Since 'spec-head agreement' occurs in interrogative clauses, 'bar-level' projections are spelled out, as illustrated in (21), where P and C are divided into separate Spell-Out domains.

(21) a. [$_{PP}$ about [$_{Q}$ what [$_{CP}$ C [$_{TP}$ they should buy]]]]
b. [$_{VP}$ know [$_{Q}$ [$_{PP}$ with whom] [$_{CP}$ C [$_{TP}$ they should discuss this]]]]

Furthermore, my analysis predicts that Case Resistance effects reappear if a specifier of CP contains a preposition in (21a). This prediction is borne out.

(22) a. * They're talking about [with whom they should discuss this]
(Richards (2010: 137))
b. [$_{PP}$ about [$_{Q}$ [$_{PP}$ with whom] [$_{CP}$ C [$_{TP}$ they should discuss this]]]]

Thus, my analysis gives an account of the discrepancy between declarative and interrogative clauses with respect to Case Resistance effects.

It should be kept in mind that my analysis allows an interrogative clause to occur as a complement of prepositions not because it is an interrogative clause but because there is a spec-head agreement within it, and that it prevents declarative clauses from occurring as a complement of prepositions not because it is a declarative clause but because there is no spec-head agreement within it. My proposal predicts that prepositions can take a clause as their complement as long as there is a spec-head agreement within it. I corroborate this prediction by seeing additional types of interrogative and declarative clauses.

Kayne (1991) discusses the status of interrogative *whether* and *if* and concludes that the former is a *wh*-phrase in spec and the latter is a kind of complementizer. This conclusion is supported, for example, by the fact that *whether* is like other *wh*-phrases in that it does not have an impact on the finiteness of the clause it selects, whereas *if* only selects finite clauses.

(23) a. I wonder whom I should invite.
a′. I wonder whom to invite.
b. I wonder whether I should go.
b′. I wonder whether to go.
c. I wonder if I should go.
c′. * I wonder if to go.
(Haegeman and Guéron (1999: 175, 176))

This contrast is expected if we assume that *if* is a kind of complementizer, while *whether* is not. Given that heads have sectional properties, it is plausible that only *if* imposes selectional requirements on the finiteness of its following clauses.

Let us adopt Kayne's (1991) conclusion and assign the following structures to interrogative clauses with *whether* and *if*.

(24) a. [$_{PP}$ on [$_{Q}$ whether [$_{CP}$ C [$_{TP}$ we have enough time left]]]]
b. [$_{PP}$ on [$_{CP}$ if [$_{TP}$ we have enough time left]]]

Under my proposal, CP is spelled out in (24a), whereas TP is spelled out in (24b). Therefore, it is predicted that interrogative clauses headed by *if* cannot be a complement of prepositions, as opposed to those with *whether*. This prediction is correct.

(25) It depends on whether/*if we have enough time left.
(Huddleston and Pullum (2002: 974))

A certain kind of declarative clause can be introduced by *how*, as the translation in (26)

shows.

(26) They told me how the tooth fairy doesn't really exist.
'They told me that the tooth fairy doesn't really exist.' (Legate (2010: 121))

Legate (2010) argues that it is a kind of free relative. As shown in (27), I assume that its head undergoes a spec-head agreement.

(27) [$_{PP}$ about [$_{X}$ how$_{i}$ [$_{CP}$ C [$_{TP}$ the tooth fairy doesn't really exist t_{i}]]]]

My analysis expects that this type of declarative clause may be a complement of prepositions. This prediction is verified.

(28) They told me about how the tooth fairy doesn't really exist. (Legate (2010: 122))

Summarizing, I have shown, relying on the Distinctness Condition, that my proposal is superior to the standard version of Spell-Out in that it can successfully derive the Case Resistance Principle.

6. Sluicing-COMP Generalization

This section derives Merchant's Sluicing-COMP generalization from the proposed mechanism of Spell-Out. In so doing, I assume that ellipsis has a direct connection with Spell-Out domains. Specifically, I assume that phase heads are a trigger of Spell-Out, and ellipsis is the option of not realizing a Spell-Out domain at PF (Gengel (2009), Wurmbrand (2013)).

Merchant (2001) shows that the statement shown in (29) is valid cross-linguistically.

(29) In sluicing, no non-operator material may appear in COMP. (Merchant (2001: 62))

For instance, English and German exhibit verb-second in matrix interrogatives. When sluicing applies in these sentences, the remnant cannot include the auxiliary, validating Merchant's generalization.

(30) a. A: Max has invited someone.
B: Really? Who (*has)? [English]
b. A: Max hat jemand eingeladen.
B: Echt? Wen (*hat)? [German]
(Merchant (2001: 63))

Given the structure shown in (31) and the IP-deletion analysis of sluicing, it is surprising that the auxiliaries must be elided in (30).

(31) [$_{CP}$ who$_{2}$ [$_{C'}$ has [$_{IP}$ Max t_{has} invited t_{2}]]]

One may account for the obligatory absence of auxiliaries in sluicing by assuming that deletion of the IP material precedes head-movement to C (Lasnik (1999)). However, the Sluicing-COMP generalization holds even for the material usually analyzed as being base-generated in C. For example, certain varieties of Dutch allow an overt complementizer to co-occur with a *wh*-phrase in [Spec, CP].

(32) Ik weet niet, wie (of) (dat) hij gezien heeft.
I know not who if that he seen has
'I don't know who he has seen.'
[(esp. Southern) Dutch]
(Merchant (2001: 74))

A grammatical sluiced counterpart of (32), however, involves only the *wh*-phrase.

(33) Hij heeft iemand gezien, maar ik weet niet
he has someone seen but I know not
a. wie.
b. * wie of.
c. * wie dat.
d. * wie of dat.
who if that
'He saw someone, but I don't know who.'
[Dutch]
(Merchant (2001: 75))

My proposal accounts for the Sluicing-COMP generalization by arguing that sluicing is derived through 'C''-deletion. The relevant structure of sluicing is represented as follows.

(34) [$_{Q}$ *wh*-phrase $\underbrace{[_{CP}\ C\ [_{TP} \ldots]]}_{\text{elided}}$]

Due to the 'spec-head agreement,' the top label

is Q, and the sister of the *wh*-phrase is CP, a maximal projection. As a result, the Spell-Out domain and the elided site are CP, including C. Therefore, the Sluicing-COMP generalization naturally follows from the present analysis.

7. Conclusion

This paper has proposed that under Chomsky's (2013) framework, 'intermediate projections' undergo Spell-Out when phase heads enter a 'spec-head' relationship. I have shown that the proposed analysis accounts for (i) a difference between aux drop and topic drop, with regard to the size of unpronounced elements (Fitzpatrick (2006), Rizzi (2005)), (ii) the Case Resistance Principle (Stowell (1981)) based on Distinctness (Richards (2010)), and (iii) the Sluicing-COMP generalization (Merchant (2001)).

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A Footnote

[1] To determine a sentence type, we may have to assume that CP is transferred to the C-I interface (cf. Marušič (2005)). I would like to thank Hisatsugu Kitahara (p.c.) for pointing this out to me.

References

Chomsky, Noam (1995) *The Minimalist Program*, MIT Press, Cambridge, MA.

Chomsky, Noam (2000) "Minimalist Inquiries: The Framework," *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels and Juan Uriagereka, 89-155, MIT Press, Cambridge, MA.

Chomsky, Noam (2013) "Problems of Projection," *Lingua* 130, 33-49.

Emonds, Joseph (1985) *A Unified Theory of Syntactic Categories*, Foris, Dordrecht.

Fitzpatrick, Justin M. (2006) "Deletion through Movement," *Natural Language and Linguistic Theory* 24, 399-431.

Gengel, Kirsten (2009) "Phases and Ellipsis," *Linguistic Analysis* 35, 21-42.

Haegeman, Liliane and Jacqueline Guéron (1999) *English Grammar: A Generative Perspective*, Blackwell, Oxford.

Halle, Morris, and Alec Marantz (1993) "Distributed Morphology and the Pieces of Inflection," *The View from Building 20*, ed. by Kenneth Hale and S. Jay Keyser, 111–176, MIT Press, Cambridge, MA.

Huddleston, Rodney and Geoffrey K. Pullum (2002) *The Cambridge Grammar of the English Language*, Cambridge University Press, Cambridge.

Kayne, Richard (1991) "Romance Clitics, Verb Movement, and PRO," *Linguistic Inquiry* 22, 647-686.

Kayne, Richard (1994) *The Antisymmetry of Syntax*, MIT Press, Cambridge, MA.

Lasnik, Howard (1999) "On Feature Strength: Three Minimalist Approaches to Overt Movement," *Linguistic Inquiry* 30, 197-217.

Legate, Julie Anne (2010) "On How *How* is Used Instead of *That*," *Natural Language and Linguistic Theory* 28, 121-134.

Marušič, Franc (2005) *On Non-Simultaneous Phases*, Doctoral dissertation, Stony Brook University.

Merchant, Jason (2001) *The Syntax of Silence: Sluicing, Islands, and the Theory of Ellipsis*, Oxford University Press, Oxford.

Richards, Norvin (2010) *Uttering Trees*, MIT Press, Cambridge, MA.

Rizzi, Luigi (2005) "Phase Theory and the Privilege of the Root," *Organizing Grammar: Linguistic Studies in Honor of Henk van Riemdijk*, ed. by Hans Broekhis, Norbert Corver, Riny Huybregts, Ursula Kleinhenz, and Jan Koster, 529-537, Mouton de Gruyter, Berlin.

Stowell, Tim (1981) *Origins of Phrase Structure*, Doctoral dissertation, MIT.

Wurmbrand, Susi (2013) "Stripping and Topless Complements," Ms., University of Connecticut.

日本語主格目的語構文に関する一考察
(Nominative Object, Goal-driven Movement and Scope Preference)

藤森千博　(FUJIMORI Chihiro)
弘前大学（非常勤）
(Hirosaki University, part-time)

キーワード：Nominative object, goal-driven movement, Multiple Agree/Move, equidistance, scope preference

本発表では、日本語主格目的語構文の構造・派生を考察するとともに、Koizumi (2008)で議論されている主格目的語数量詞と主節動詞（*-e* (*can*)）が示す作用域の preference について統語的立場からの説明を試みる。

1. Nominative Object Construction

日本語では、非状態動詞と状態動詞から成る複合動詞構文において目的語が主格でも対格でも認可されることが知られている。

(1) a. Taro-wa huransugo-o
Taro-Top French-Acc
hanas-e-ru
speak(non-stative)-can(stative)-Pres
'Taro can speak French'

b. Taro-wa huransugo-ga hanas-e-ru
Taro-Top French-Nom speak-can-Pres

このような複合動詞構文に対して、Tada (1992)は(2)のような数量詞作用域に関する対比を提示し、(1a)と(1b)に対し異なる派生を提案している。

(2) Tada's (1992) analysis

a. Kiyomi-wa migime-dake-o
-Top right-eye-only-Acc
tumur-e-ru
close-can-Pres
'Kiyomi can wink with her right eye/It is possible for Kiyomi to close her right eye only' (can>only)

b. Kiyomi-wa migime-dake-ga
-Top right-eye-only-Nom
tumur-e-ru (only>can)
close-can-Pres
'It is only her right eye that Kiyomi can close'

Tada は、(2a)では対格目的語が埋め込み VP 内で認可されるため上位構造へ移動する必要がなく、主節動詞に c-統御されるため can>only の解釈が得られる一方、(2b)では(3a)に示した移動が起きており、主格目的語が主節動詞を c-統御するため only>can の解釈が得られると主張している。さらに Koizumi (1995)などは、Tada の主張を発展させ、(3b)に示したように主格目的語が TP 指定部へ移動していると主張している。

(3) a. [$_{TP}$ Kiyomi [$_{T'}$ [$_{VP}$ migime-dake-ga$_j$ [$_{V'}$ [$_{VP}$ t_j tumur] e]] ru]] (Tada (1992))

b. [$_{TP}$ Kiyomi [$_{TP}$ migime-dake-ga$_j$ [$_{VP}$ [$_{VP}$ t_j tumur] e] ru]] (Koizumi (1995) etc.)

このような主格目的語の移動分析に対し、Takano (2003)は、(1b)のような主格目的語構文では目的語はそもそも埋め込み節内ではなく主節内に生起すると主張している。

(4) Takano's (2003) analysis
[$_{TP}$ [$_{vP}$ Johni-wa [$_{V1P}$ huransugo$_j$-ga [$_{vP}$ PRO$_i$ [$_{V2P}$ pro$_j$ [$_{V2}$ hanas]] *v*] [$_{V1}$ e]] *v*] ru]

Takano は(4)に示した構造を仮定し、主格目的語は主節内に生起し、主節動詞を（非対称的に）c-統御するため only>can の解釈しか得られないと主張している。

Takano (2003)が(4)の構造を仮定した理由として、Tada などの移動分析では主節動詞が移動前の生起位置にある主格目的語を c-統御してお

り、can>only の解釈が得られるはずなのにこの解釈が得られないことを挙げている。しかし、Nomura (2003, 2005)の指摘によると、文脈を適切に整えると、主格目的語が主節動詞より狭い作用域を取ることが可能である。

(5) Nomura's (2003) analysis

Taroo-ga vodka-dake-ga nom-e-ru
Taro-Nom vodka-only-Nom drink-can-Pres
no wa yuumei-da-ga, gin-dake-ga
NL Top famous-CPL-but gin-only-Nom
nom-e-ru no mo yoku
drink-can-Pres NL also well
sir-arete-iru
know-Pass-Pres
'It is famous that Taro can drink only vodka (shot with no soft drinks) but it is also well known that he can drink only gin (shot with no soft drinks)' (can>only)

(5)に示した can>only の解釈が可能であるとすれば、Takano などが提案する主格目的語が主節内に生起し主節動詞に c-統御されない構造は成立しないことになる（cf. Bobaljik and Wurmbrand (2007), Takahashi (2010)）。したがって本発表では、(5)の事実を基に、主格目的語は埋め込み VP 内に生起し、格認可のために主節内へ移動すると主張する。

さらに、(4)において Takano (2003)が埋め込み *v*P 指定部に PRO を仮定していることに注目したい。Hornstein は一連の研究で、PRO は A-movement の痕跡であると主張している（eg. Hornstein (1999)）。((6)では痕跡の代わりに copy が用いられているが、この違いは本発表の趣旨にとって crucial な違いをもたらさない。)

(6) Movement into θ-positions: Hornstein (1999)

a. John hoped to leave

b. $[_{IP}$ John$_{<\theta\text{-leave}><\theta\text{-hope}>}$ $[_{VP}$ John$_{<\theta\text{-leave}><\theta\text{-hope}>}$ [hopes $[_{IP}$ John$_{<\theta\text{-leave}>}$ to $[_{VP}$ John$_{<\theta\text{-leave}>}$ leave]]]]]

この主張が正しければ、先に述べた主格目的語の生起位置の仮定とともに、主格目的語構文の構造は(7)のようになると考えられる。

(7) $[_{TP}$ $[_{vP}$ Kiyomi-wa$_i$ $[_{V1P}$ migime-dake-ga$_j$ $[_{vP}$ t_i $[_{V2P}$ t_j $[_{V2}$ tumur]] *v*] [V1 e]] *v*] ru]

この構造では主節動詞が埋め込み VP 内の主格目的語の痕跡（あるいは copy）を c-統御するため、can>only の解釈を得ることができる。

2. Problems and Proposals

しかし(7)の派生には問題がある。まず、(8a)が示すように、主格目的語は埋め込み *v*P 内においてより高い位置にある主格主語を越えて先に移動してしまい、移動の最小性に違反してしまう。さらに、Chomsky (2000)以来の phase を派生単位とする分析では phase 主要部が Merge された段階でその補部は解釈部門へ Spell-Out/Transfer され上位 phase 内の要素からは不可視的となるとされており（Phase Impenetrability Condition (PIC)）、(7)において埋め込み *v* が Merge された段階でその補部である埋め込み VP は *v* やさらに上位要素である主節動詞から不可視的となるため、(7)の構造では can>only の解釈を保証できない。

(8) a. $[_{V1P}$ migime-dake-ga$_j$ $[_{vP}$ Kiyomi-wa $[_{V2P}$ t_j $[_{V2}$ tumur]] *v*] $[_{V1}$ e]]

b. $[_{vP}$ migime-dake-ga$_j$ $[_{vP}$ Kiyomi-wa $[_{V2P}$ t_j $[_{V2}$ tumur]] *v*]]

また、(8b)が示すように、PIC の観点から、埋込み VP 内の主格目的語が phase である埋め込み *v*P を越えて上位構造内へ移動するには、*v*P の指定部へ一旦移動する必要がある。この移動は、Bošković (2007)が指摘する look ahead の問題を引き起こす。

(9) goal-driven Movement : Bošković (2007)

a. What$_i$ does he think $[_{CP}$ t_i that$_{[EPP]}$ Mary bought t_i]?

b. You think $[_{CP}$ that$_{[\ ]}$ Mary bought a car]

(9)に示した対比について、Chomsky (2000)などは、(9a)では埋め込み C が持つ EPP によって *what* が CP 指定部へ移動するのに対し、(9b)で

は埋込みCはEPPを持っておらずCP指定部への移動が生じないと説明するが、(10a)でもし(10b)に示したように(9a)同様埋め込みCがEPPを持っていれば*what*はCP指定部へ移動できるはずである。したがってBoškovićは、ある要素が持つ解釈不可能素性が、ある phase 内で認可されず上位構造/phase 内で認可されるには PIC を避けるためにその phase 主要部には EPP が必要である、あるいはある phase 内で認可され上位構造/phase 内へ移動する必要がないのでその phase 主要部には EPP が不要である、というのは look ahead の問題を引き起こす、と主張している。

(10) a. *Who thinks whati that Mary bought t_i?

b. [$_{CP}$ what$_i$ that$_{[EPP]}$ Mary bought t_i]

同様の問題が主格目的語構文と対格目的語構文の対比においても生じる。(11a)の対格目的語構文では、対格目的語は埋め込み節内で格認可されるため移動する必要がなく Chomsky に従えば *v* は EPP を持っていない一方、(11b)の主格目的語構文では、主格目的語は埋込み節内では格認可されないため上位構造へと移動する必要があり、*v* は EPP を持っていなければならない。これは Bošković が指摘する look ahead の問題と並行的である。

(11) a. [$_{vP}$ SUBJ [$_{VP}$ OBJ$_{[Acc]}$ V] $v_{[\ \ ]}$]

b. [$_{vP}$ SUBJ [$_{VP}$ OBJ$_{[Nom]}$ V] $v_{[EPP]}$]

これらの問題を、移動する要素が持つ解釈不可能素性が認可されることが移動の動機となるとする Bošković (2007)の主張に沿って説明する。まず Bošković は Last Resort を(12)のように定義し、ある phase 内で解釈不可能素性を認可されない要素は上位構造/phase へと移動し認可される必要があると主張している。

(12) Bošković's (2007) Last Resort

X undergoes movement iff without movement the structure will crash.

具体的には、(13a)において Y が持つ解釈不可能素性[*u*K]が XP という phase 内で認可されない場合、(12)に従い上位構造/phase へと移動しなければならないが、(13b)に示すように PIC を避けるため XP の指定部へと移動した後、(13c)に示すように認可する素性[K]を持つ主要部 W の指定部へさらに移動し W を c-統御（Probe）することで Y が持つ[*u*K]が認可される、というものである。

(13) a. [$_{XP}$ ... X ... Y$_{[uK]}$] (XP=phase)

b. [$_{XP}$ Y$_{[uK]}$ ... X ... t_Y]

c. [$_{WP}$ Y$_{[uK]}$ W$_{[K]}$ [$_{XP}$ t_Y... X ... t_Y]]

この分析を用いて主格目的語構文を説明する。

(14) a. [$_{vP}$ Kiyomi-wa [$_{V2P}$ migime-dake-ga$_j$ [$_{V2}$ tumur]] *v*]

まず、(14a)において埋め込み *v*P 内で格を認可されない主格目的語は上位 phase 内で認可される必要があるため(12)に従い移動しなければならないが、この際 PIC に違反しないようまず埋め込み *v*P 指定部に移動する必要がある(14b)。

b. [$_{vP}$ migime-dake-ga$_j$ [$_{vP}$ Kiyomi-wa [$_{V2P}$ t_j [$_{V2}$ tumur]] *v*]]

ここで注目すべきなのは、この移動は *v* が持つ EPP によるものではなく、主格目的語が持つ解釈不可能な格素性を上位構造で認可するための(12)を動機とする移動であるという点である。また主格主語は埋め込み *v*P 指定部に生起しているためこの段階では PIC を避けるための移動が必要ないことにも注目したい。

これに続く派生(14c)では主節動詞が Merge され、この段階で主節動詞が主格目的語を c-統御するため can>only の解釈が得られると仮定する。（この点について後に触れる。）

c. [$_{VP}$ [$_{vP}$ migime-dake-ga$_j$ [$_{vP}$ Kiyomi-wa [$_{V2P}$ t_j [$_{V2}$ tumur]] *v*]] [$_{V1}$ e]]

can c-commands *only* >>> can>only

さらに次の派生では *v* が Merge されるが、この *v*P 内でも格素性を認可されないふたつの NP はさらに上位 phase 内で認可してもらうため(12)に従い移動する必要がある。しかし(14b)同様 *v* が phase であるため PIC を避けるにはふたつの NP はそれぞれ *v*P 指定部へ移動する必要がある。ここで、構造上上位にある主格目的語が先に移

動し①、その後構造上下位にある主格主語が外側の指定部へ移動する②と仮定する（その理由は後述する）。

d. [$_{vP}$ Kiyomi-wa$_i$ [$_{vP}$ migime-dake-ga$_j$ [$_{VP}$ [$_{vP}$ t_j [$_{vP}$ t_i [$_{V2P}$ t_j [$_{V2}$ tumur]] v]] [$_{V1}$ e]] v]]

この移動も v が持つ EPP によるものではなく NP が持つ解釈不可能な格素性の認可が動機となっていることに注目したい。

その後の派生では T が Merge され、それぞれの NP が TP 指定部に移動することで格素性を認可されるが、(14d)と同様の移動が起きている(15)では構造上上位にある主格主語が先に移動しその後構造上下位にある主格目的語が外側の指定部に移動してしまうため正しい語順を保証できない。

(15) *[$_{TP}$ migime-dake-ga$_j$ [$_{TP}$ Kiyomi-wa$_i$ [$_{vP}$ t_i [$_{vP}$ t_j [$_{VP}$ [$_{vP}$ t_j [$_{vP}$ t_i [$_{V2P}$ t_j [$_{V2}$ tumur]] v]] [$_{V1}$ e]] v]] T]]

この問題を解決するために、本発表では Hiraiwa (2001) が提案する Multiple Agree/Move を Bošković (2007)の主張に組み入れることを提案する。具体的には、主格を認可する T が Merge された段階で格認可を必要とするふたつの NP は TP 指定部に移動するが、この際(17)に示したように、Multiple Move は"single simultaneous operation"であり、移動する複数の要素間の c-command relation は維持されたままであるとの提案を採用し、(14d)における主語＞目的語の c-command relation を維持したまま TP 指定部へ移動すると仮定する。

(16) Multiple Agree/Move: Hiraiwa (2001)
α > β > γ
AGREE (α, β, γ), where α is a probe and both β and γ are matching goals for α

(17) (because)"movement of multiple goals is a single simultaneous operation that merges multiple goals without any countercyclic merger(,) a c-command relation between the goals cannot be changed"
(Hiraiwa (2001): 70, note 3)

(18) [$_{TP}$ Kiyomi-wa$_i$ [$_{TP}$ migime-dake-ga$_j$ [$_{vP}$ t_i [$_{vP}$ t_j [$_{VP}$ [$_{vP}$ t_j [$_{vP}$ t_i [$_{V2P}$ t_j [$_{V2}$ tumur]] v]] [$_{V1}$ e]] v]] T]]

この移動は最小性にしたがう(14d)の派生と大きく異なる。この相違について、Ochi (2009)の主張を基に説明したい。Ochi は日本語でも目的語が vP 指定部に顕在的に移動していると主張し、さらに(20)に示した equidistance を仮定し、T は下位要素と Agree できるとしている。

(19) Ochi's (2009) analysis
a. Taro-ga hon-o yonda
Taro-Nom book-Acc read-past
'Taro read a book'
b. [$_{TP}$ Taro$_i$ [$_{vP}$ book$_j$ [$_{vP}$ t_i [$_{VP}$ t_j read]]]]]

(20) Terms of the minimal domain of H are equidistant from probe Z, unless Z is the next phase head (or any head higher than that).
(Ochi (2009): 330)

(21) [$_{TP}$ [$_{vP}$ OBJ [$_{vP}$ SUBJ [[$_{VP}$ … t_{OBJ} …] v]]] T]
OBJ and SUBJ are equidistant from T
>>> T can AGREE with SUBJ

(21)では OBJ は vP 指定部において対格を認可されているため T からの Probe の対象とはならず下位要素である SUBJ とのみ Agree するが、(14d)ではどちらの NP も主格を認可されておらず T から Agree（Bošković (2007)の枠組みでは TP 指定部への移動）の対象となる。したがって(18)の移動は Hiraiwa (2001)に従えばふたつの NP は(14d)における主語＞目的語の c-command relation を維持したまま移動すると考えられる。

一方(14d)の移動は PIC を避けるための移動であり、このような移動は最小性にしたがい、ふたつの NP が phase を越えて移動する場合、上位要素が phase 指定部へ移動した後でなければ下位要素はさらに上位 phase 指定部へは移動できないと仮定することで(14d)と(18)の移動の相違を説明できる。

3. Scope Preference

ところで、(5)に示した例（=(22)）の作用域に

関する解釈について、Koizumi (2008)は、can>only の解釈は可能であるが、only>can の解釈の方が preferred であると論じている。その理由として Koizumi は、目的語が対格で認可される場合(=(2a))必ず can>only の解釈となるのに、あえて主格目的語を用いて（(=(2b)）can>only の解釈を出す必要がない、と語用論的観点に基づいて説明している。この作用域に関する preference について、Pica and Snyder (1995)及び Martin and Uriagereka (1998)の主張を基に統語的立場からの説明を試みる。

(22) Taroo-ga vodka-dake-ga nom-e-ru no wa yuumei-da-ga, gin-dake-ga nom-e-ru no mo yoku sir-arete-iru (=(5))
(only>can, can>only)

まず、これまでの分析では(23)のような英語の例は多義的であるとされている。

(23) A boy saw every girl
(a boy>every girl, every girl>a boy)

しかしその一方で、Pica and Snyder (1995)や Martin and Uriagereka (1998)などによれば、(23)の例では *a boy* が *every girl* より広い作用域を取る解釈の方が preferred である。この preference について Martin and Uriagereka は、Pica and Snyder (1995)の(24)の分析を基に、さらに数量詞の作用域を QR ではなく A-movement で説明する Hornstein (1995)や Kitahara (1996)に従った上で、派生の過程において *a boy* が *every girl* より構造上高い位置にある（=c-統御する）段階がその逆の段階より多いことが原因であると主張している。

(24) Pica and Snyder's (1995) analysis
a. The preferred syntactic position in which to interpret a DP (quantified or otherwise) is the position in which its Case is checked.
b. It is marginally possible to interpret a DP in its theta-position.
(Pica and Snyder (1995: 340-341))

(25) Martin and Uriagereka's (1998) analysis
a. [a boy$_{[\varphi]}$ [every girl$_{[\varphi]}$ [saw]]]
(a boy>every girl)
b. [a boy$_{[\varphi]}$ [[saw every girl$_{[\theta]}$]]]
(a boy>every girl)
c. [[a boy$_{[\theta]}$ [saw every girl$_{[\theta]}$]]]
(a boy>every girl)
d. [[every gir$_{l[\varphi]}$ [a boy$_{[\theta]}$ [saw]]]]
(every girl>a boy)

(25d)に示したように *every girl* が *a boy* を c-統御する段階があるため *every girl>a boy* の解釈が保証される一方、(25a-c)に示したように *a boy* が *every girl* を c-統御する段階がより多いため *a boy>every girl* の解釈が preferred reading となる。

この分析を基に、本発表では(5)のような主格目的語構文における scope preference を統語的観点から説明したい。

具体的には、(14c=26a)の派生段階で主節動詞が Merge され埋め込み *v*P 指定部にある主格目的語を c-統御するので can>only の解釈が保証される。しかし、(24)の観点からすると、主格目的語が PIC を避けるために移動した埋め込み *v*P 指定部は Case-position でも θ-position でもないため、NP が占める位置に言及しない c-command relation で数量詞作用域の解釈を説明する Aoun and Li (1992)が提案する Scope Principle によってのみ can>only の解釈を保証されるという点で、主格目的語が取る狭い作用域は一層 less preferred であると考えることができる。さらに、(14c=26a)では主節動詞は埋め込み VP 内の主格目的語の痕跡も c-統御しているように思われるが、埋め込み *v* が Merge された段階で埋め込み *v* の補部は Spell-Out/Transfer されるため、その後に Merge された主節動詞はこの痕跡にはアクセスできないと仮定することで can>only は less preferred なままであると考えることができる。

その後(14d=26b)→(18=26c)と派生が進むが、いずれの派生においても主格目的語が主節動詞を（非対称的に）c-統御しており、only>can の解釈を得られる段階が多いため、この解釈が preferred reading になると考えることができる。

(26) a. [$_{VP}$ [$_{vP}$ migime-dake-ga$_j$ [$_{vP}$ Kiyomi-wa [$_{V2P}$ t_j [$_{V2}$ tumur]] *v*]] [$_{V1}$ e]] (=(14c)
((can>only))

b. [$_{vP}$ Kiyomi-wa$_i$ [$_{vP}$ migime-dake-ga$_j$ [$_{VP}$ … [$_{V1}$ e]] *v*]] (=(14d)) ((only>can))

c. [$_{TP}$ Kiyomi-wa$_i$ [$_{TP}$ migime-dake-ga$_j$ [$_{vP}$ t_i [$_{vP}$ t_j [$_{VP}$ … [$_{V1}$ e]] *v*]] T]] (=(18))
((only>can))

本発表で提案した構造及び派生は、Fujimori (2013)が提案する複合動詞の構造及び派生と多くの特徴を共有している。Fujimori (2013)では、(27)のような例において、主語＞目的語だけでなく、目的語＞主語の解釈が可能であるとしている。

(27) Fujimori's (2013) analysis

a. Dareka-ga daremo-o
someone-Nom everyone-Acc
yaki-korosi-ta
burn-kill-Past
'Someone burned everyone to death'
(some>every, every>some)

b. [$_{TP}$ SUBJ$_i$ [$_{vP}$ t_i [$_{VP}$ OBJ$_j$ [$_{vP}$ t_j [$_{vP}$ t_i [$_{VP}$ t_j V] *v*]] V] *v*] T]

しかし、(27)が示す目的語＞主語の解釈は主格目的語が示す can>only の解釈と同様に less preferred である。まずこれについて(24)を基に説明する。(27b)において、Case-position に移動した OBJ は θ-position の主語を c-統御しており目的語＞主語の解釈が可能であるが、(24b)によれば θ-position で得られる解釈は marginal であるため、目的語＞主語の解釈は less preferred になると考えられる。

主語と目的語の数量詞作用域に関する Fujimori (2013)の分析が、その構造及び派生に共通点を持つという点において、主格目的語構文に関する本発表の分析にも当てはまるとすれば、主格目的語構文においても目的語＞主語の解釈が可能であることが予測されるが、実際には主語＞目的語の解釈のみ可能である。

(28) Dareka-ga subete-no-gengo-ga
Someone-Nom all-Gen-language-Nom
hanas-e-ru
speak-can-Pres
'Someone can speak every language'
(some>every, *every>some)

(27)と似たような派生を辿りながら(28)では目的語＞主語の解釈を得られないという点について、Ochi (2009)の提案を基に説明する。Ochi はまず(29=23)の例において、目的語＞主語の解釈を得るには(29b)に示すように主語が θ-position に reconstruction するが、日本語ではこの reconstruction が許されないため主語＞目的語の scope rigidity が保証されるとしている。その理由として Ochi は、日本語の T が持つ EPP は defective である一方、目的語の overt movement は obligatory であるため obligatory movement は reconstruction が可能であるとしている(29c)。

(29) A boy saw every girl (=(23))
Ochi (2009)'s analysis

a. [$_{TP}$ SUBJ$_i$ [$_{vP}$ OBJ$_j$ [$_{vP}$ t_i [$_{VP}$ V t_j]]]]

b. [$_{TP}$ SUBJ$_i$ [$_{vP}$ OBJ$_j$ [$_{vP}$ SUBJ$_i$ [$_{VP}$ V t_j]]]]

c. [$_{vP}$ OBJ$_j$ [$_{vP}$ SUBJ [$_{VP}$ OBJ$_j$ V]]]

さらに Ochi は、(30)において IO＞DO の解釈が rigid であるという事実について、(31)に示したように、Multiple Move によって移動した要素は reconstruction する際もその構造を保ったまま reconstruct するため、DO＞IO の解釈が得られないとしている。

(30) Taro-ga dareka-ni daremo-o
Taro-Nom someone-Dat everyone-Acc
syookai-si-ta
introduce-do-Past
'Taro introduced everyone to someone'
(some>every, *every>some)

(31) [$_{TP}$ Taro-ga$_i$ [$_{vP}$ dareka-ni$_j$ [$_{vP}$ daremo-o$_k$ [[$_{vP}$ t_i [[$_{VP}$ t_j t_k V] *v*]]]]]
Multiple Move >>> Multiple Undoing

ここで重要なのは、Multiple Move した要素はその c-command relation を常に保っているという点である。本発表が主格目的語構文に対して提

案した Multiple Move による分析が正しければ、(31) の IO>DO と同様に主語＞目的語の c-command relation は保たれていると考えられるため、(28)のような例でも目的語＞主語の解釈は得られない一方、複合動詞構文(27)では主語は TP 指定部で、目的語は VP 指定部で格認可されており、認可する要素/主要部が異なる移動では scope interaction が生じると考えることができる。

References

[1] Bošković, Ž. 2007. "On the locality and motivation of Move and Agree: An even more minimal theory," *LI* 38: 589-644. [2] Fujimori, C. 2013. "Goal-driven movement in Japanese: verb-verb compounds," *JELS* 30: 271-277. [3] Hiraiwa, K. 2001. "Multiple Agree and the defective intervention constraint in Japanese," in *Proceedings of the 1st HUMIT student conference in language research,* ed. by N. Lance et. al., 67–80. Cambridge, MA: MITWPL. [4] Koizumi, Masatoshi. 1995. *Phrase Structure in Minimalist Syntax,* Ph.D. dissertation, MIT. [5] Koizumi, M. 2008. "Nominative object," in *The handbook of Japanese linguistics,* ed. by S.Miyagawa and M. Saito, 141–164. Oxford: Oxford University Press. [6] Martin, R. and J. Uriagereka. 1998. "Towards an account of preferences," in *Report of the special research project for the typological investigation of language and cultures of the east and west,* 563-582. University of Tsukuba. [7] Nomura, M. 2003. "The true nature of nominative objects in Japanese," in *Proceedings of Penn linguistic colloquium* 26, ed. by E. Kaiser and S. Arunachalam, 169–183. Philadelphia: Penn Linguistics Club. [8] Ochi, M. 2009. "Overt object shift in Japanese," *Syntax* 12: 324-362. [9] Pica, P. and W. Snyder. 1995. "Weak crossover, scope, and agreement in a Minimalist framework," in *Proceedings of the 13th WCCFL*, ed. by W. Bryne et..al., 334-349. CSLI: Cambridge University Press. [10] Tada, H. 1992. "Nominative objects in Japanese," *JJL* 14: 91–108. [11] Takano, Y. 2003. "Nominative objects in Japanese complex predicate constructions: A prolepsis Analysis," *NLLT* 21: 779–834.

「２つ」の *un-* と blocking 現象

(“Two” *Un*-s and Blocking)

浜田啓志 (Takashi Hamada)
慶應義塾大学大学院 (Keio University)

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1. はじめに

英語の接頭辞 *un-* は、2 種類に大別されることが多い。1 つは、*unhappy* や *uneaten*, *unsmiling* に見られるような、形容詞や現在分詞を基体にとり「否定」を表す *un-* （以下 UN-1）である。もう 1 つは、動詞を基体に取り、「逆」を表す *un-* (以下 UN-2) である。こちらの例としては、*undo*, *unload*, *untie* などが挙げられる。本研究の目的は、この両者が孕む曖昧性に *Oxford English Dictionary* (OED) や *Corpus of Contemporary American English* (COCA) などを用いた調査に基づき迫っていくことである。両者は、同じ生起環境に位置づけられたときに、homonymy blocking, つまり、ある表現がそれと同じ言語形式を有した別の表現の出現を阻止するという現象に参与するというかたちで不均衡な力関係に位置づけられることを主張する。

UN-1 と UN-2 の意味関係が特に興味深くなるのは、*unlocked* や *undoable* のように双方な解釈が可能な場合である。文脈を省いた表面的な構造のみからは、ここに現れている接頭辞が UN-1 と UN-2 のどちらなのか察しをつけられない。ここに曖昧性が生じることは既に多く指摘はされているものの、意味的な相関性やどちらの解釈がより妥当なものとして好まれるのかという点に関しては十分に検討されてこなかった。少なからず異なる性質を持つ 2 つの接頭辞の意味は、曖昧性を孕んだ表現においてどの程度意識されるものなのか。本発表の調査結果から、UN-1 と UN-2 の不均衡な力関係が浮き彫りになってくる。

2. 先行研究

まずは、接頭辞 *un-* が先行研究の中でどのように位置づけられ、どのような下位分類を与えられているのかを見ていく。OED では、*un-* には ”un- prefix[1]” と”un- prefix[2]” という 2 つの見出し語が与えられており、それぞれ ”Expressing negation (…)” , “expressing reversal or deprivation (…)” と定義されている。したがって、両者はそれぞれ本研究の UN-1 と UN-2 に相当するものとして捉えることが出来る。もちろん OED には細かな下位区分が詳細に示されてはいるものの、この「見出し語」というかたちで現れる接頭辞 *un-* の二分性が垣間見える。

この「2 つの」*un-* だが、場合によっては異なる基準での分類を被ることがある。Mettinger (1990) は、基体の種類や、対応する肯定表現との間に成立する反意性の種類に応じた分類を試みている。

	Morphology	semantics	examples
1	*un*-V	reverse	*untie*
2a	*un*-V-*ed*/-*ing*/-*able*	negation	*uneaten*
2b	*un*-Adj	negation	*unequal*
3a		antonymy	*unselfish*
3b			*unhappy*
3c			*unsafe*

表 1: *un-* の分類 (Mettinger 1990)

表 1 からも分かるように、Mettinger は表される意味の種類 (i.e. reverse, negation, antonymy) に応じてまず大分類をし、そこか

ら基体の品詞に即した下位分類を展開している。Mettinger は、*un-* の参与する中でも分詞や接尾辞*-able* を伴う表現を形容詞とは独立させて分類している。こうした表現は、対応する肯定形と相補分布的な関係で結び付く contradictory なものであるとしている。同様の関係は、表 1 (2b) に分類されているような一部の形容詞対 (e.g. *equal – unequal*) にも当てはまるものであるという。

一方、由本 (2001) は結びつく基体の品詞として名詞を形容詞・動詞に加えて分類している。

(1) a. *unkind*, *unlucky*, *unable*, *unaware*, *unavoidable*, *unfamiliar*, *unused*
b. *unfasten*, *unbind*, *untie*, *undo*, *unclose*, *unclasp*, *unwrap*, *unwind*
c. *unconcern*, *unemployment*, *untruth*
(由本 2001: 283)

(1a) は形容詞、(1b) は動詞、(1c) は名詞を基体にとる表現であるが、由本はこのうち (1a) と (1c) が「否定」, (1b) が「逆」と結び付くものとして解釈している。彼女のねらいは Mettinger のように反意関係の種類に応じて「否定」を更に分類することではない。むしろ、一度分類された「否定」と「逆」という意味を、語彙概念構造の記述によって改めてより包括的な「否定」という意味で統合することにある。彼女は、(1b) に属し「逆」を表すと考えられる動詞 *unfreeze* の意味構造を、その肯定形 *freeze* と対照させながら提示している。

(2) *freeze* (他動詞): <行為> → <変化> → <凍った状態>
(3) *unfreeze*: <行為> → <変化> → <「凍った状態」でない>
（由本 2001: 283）

(2) の意味構造から、ある行為が対象物に変化をもたらし、最終的にそれを凍った状態に至らしめるという一連の連鎖を語彙化したものが動詞 *freeze* の意味であるということが示されている。これに対し、(3) にみる *unfreeze* の意味構造では、終着点の「状態」の箇所に否定が作用している。由本は、これを形容詞 *unkind* において *un-* が *kind* によって表される「親切である状態」を否定するのと同様であるとし、*un-* という接頭辞の単一性を強調している。

Hamawand (2009) は認定言語学的な観点から *un-* の多義構造を素描している。

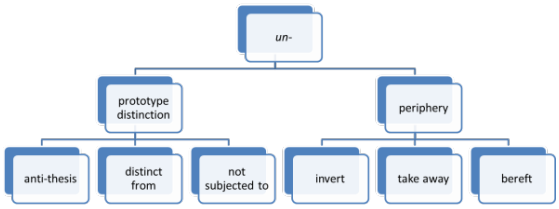

図 1: *un-*の多義構造 (Hamawand 2009: 72)

Hamawand の分類では、 UN-1 の「否定」にあたる意味が典型的、「逆」に相当する意味が周縁的なものとして位置づけられている。単一の否定接頭辞の多義性というかたちで意味のバリエーションを提示しており、ここでも UN-1 と UN-2 は意味的に関連性のあるものとして扱われている。

3. *un-* にまつわる構造的な曖昧性

以上に見てきたように *un-* の分類の仕方は様々であり、UN-1 と UN-2 を別個の接頭辞として見なすか、あるいは単一の接頭辞が持つ多義性の一端が現れたものとして見なすかについては意見の一致が得られていないのが現状である。どちらの立場を採用するにしても、UN-1 と UN-2 という区別は実在性のあるものとして捉えて差し支えはないだろう。というのも、両者は比較的相補分布的にその生起環境を分け合っているため、個々

の事例における *un-* が UN-1 なのか UN-2 なのかは、一目瞭然である場合がほとんどなのである。位置づけられる文脈に依らなくとも、*unhappy* の *un-* が UN-1, *unbutton* のそれが UN-2 であるということは、それぞれの基体がどういう品詞に属するものなのかさえ分かっていれば、労なく察しがつくようになっている。

それにも関わらず、この明瞭な境界線が幾分損なわれてしまう場合がいくつかある。Horn (1989) は以下のように説明する。

(4) In the presence of deverbal, adjective producing suffix, we get structurally ambiguous lexical items— *unbending*, *uncoiled*, *unfoldable*, *unlockable*, *unwrapped* — each of which make be taken either as [ADJun[1][V]X]] or as [ADJ [Vun[2][V]]X].

(Horn 1989: 287)

つまり、1) UN-2 を冠した動詞が接尾辞*-ed* あるいは *–able* と組み合わさり、形容詞として派生されたものと、2) この動詞の基体となっている、*un-* を伴わない動詞が 1) 同様の接尾辞と組み合わさることで形容詞派生し、そこから更に UN-1 とも結び付いたものとの間には、少なくとも表面的には [*un-* + 動詞 + *-ed* / *-able*] という構造が共有されている。そのため、この字面を単独で見たときにはその区別がつかない。

Horn の提示する曖昧性を伴う例は、*-ed* で終わるものと *-able* で終わるものとのに分類されるが、両者の性質には幾ばくかの違いがあるように感じられる。例えば、「2 つの」*uwrappable* によって表される状態は著しく異なるものであることが予想されるのに対して、*unwrapped* は接頭辞を UN-1 と UN-2 のいずれで解釈しても同じ「包まれていない」という状態を指示する表現として解釈できる。Marchand (1969) はこの点について、(5) のように説明する。「2 つの」*unbound* の間には、表される状態に至るまでの過程という付加的な情報の有無という違いしか存在しないとしている。ここでは「否定」に司られる状態が UN-1 と UN-2 の参与する表現間で共有されている。

(5) "…the idea of negativity is common to both…" "What distinguishes *unbound* 'not bound from *unbound* 'loosened' is only the additional idea of an action preceding the state of being loosened, but the state of itself is the same[…]"

(Marchand 1969: 153)

動詞的な受け身文ではこの過程というものが重要になってくるだろうが、確かに結果状態を言うような場合は幾分背景化される側面だろう。こういった表現に関しては結果的にそれが現れる前後関係を正確に捉えてきたとしても、接頭辞の同定に至らないという事態が十分に起き得る。

一方、上述の通り *un*-V-*able* のパターンにおいてはこのような一種の類義性は期待できない。*Un*-V-*able* では、UN-1 と UN-2 のどちらで解釈されるのかによって、言及される対象の属性や、表される価値的意味が大きく変わってくる。まず、UN-1 で解釈される場合、接頭辞は局所的に見れば接尾辞 *-able* に作用していることになる。UN-1 は、この少なからず肯定的な価値を持った要素を「否定」することになるので、結果として得られる *un*-V-*able* 全体では否定的価値を持ったもの、せいぜい中立的なものになることがほとんどである。一方で、この構造が UN-2 を含むものとして解釈された場合、言うまでもなくこの接頭辞は直後の動詞を基体として修飾するため、これに続く*-able* の表す肯定的な価値は構造全体においてもそのまま保

たれていることになる。同じ表面的な構造を有しながらも価値的には対照的な性質を持つようになり、これでは当然ながら意味の共通性は見出しにくくなる。そのため、*un*-V-*ed* の場合と異なり、十分な文脈さえあればどちらの接頭辞を擁した表現であるかは問題なく理解することが出来る。

4. *un-* と blocking

前節で見たように、過去分詞-*ed* と-*able* のどちらを接尾辞にとるのかによって、接頭辞 *un-* によって示される曖昧性の性質は大きく変わる。ところで、この曖昧さは実際にはどの程度共有されているものなのだろうか。先に見た *unbound* などは UN-1 と UN-2 の潜在的な曖昧性が如実に現れる事例ではあるが、Marchand の言うように、つまるところ同じ事態を表すことになるのであればもはや UN-1 と UN-2 どちらか一方のみの関わる表現として使用者によって解釈されている可能性もある。そこには、UN-1 と UN-2 の淘汰関係はないのだろうか。もしそうであれば、UN-1 と UN-2 は特定の環境において競合関係に参与し、一方が他方を抑圧するという blocking の図式が成り立つのではないのだろうか。

Plag (2003) は blocking を homonymy blocking と synonymy blocking とに分類している。前者は、同音異義語 (homonyms) 同士で発生する関係、後者は類義語 (synonyms) 同士で発生する関係である。homonymy blocking の例として Plag が挙げているのは、2 つの *liver* の関係である。「肝臓」を表す *liver* が定着した語彙として存在しているために、動詞 *live* + 接尾辞-*er* という生産的な語形成パターンから得られる「生きる人・もの」のような意味では用いられにくくなるのだという。synonymy blocking の例としては、*thief* と *stealer* が挙がっている。「盗人」を表すのには *thief* という語が存在しているために、これと同じような意味を表すと考えられる動詞 *steal* + 接尾辞 *–er* というパターンは語彙的に独立した振る舞いを見せづらくなる。このように、参与する表現が同音異義語であれ類義語であれ、blocking とは「語彙として定着した表現が、生産的なパターンに則った語形成の成立を妨げる現象」として一般化することが可能である。

5. 調査

5.1 手法

本研究では *Corpus of Contemporary American English* (COCA) と *Oxford English Dictionary* (OED) を用い、UN-1 と UN-2 の潜在的な曖昧性が認められる場合において、それがどちらの意味に根ざした表現として認識されているのか、その傾向性を探ることを目的とした調査を行った。ここで今回の調査の手順を提示する。まず、COCA にて文字列 *un-* で始まる動詞を検索し、そこから *untie* や *underplay* など接頭辞 *un-* 以外の要素が関わっている例を手作業で省いた。結果として、260 タイプの *un-* 動詞が得られた。次に、この収集された 260 の *un*-動詞に関して、1) これに-*ed*, -*able*, -*ing* が伴った形式が OED の見出し語として記載されているのか、 2) そしてその場合、語源や複雑表現の構造についての注釈 [etymology] の項において、当該表現がどちらの接頭辞から派生したものとして扱われているものなのかを吟味した。動詞の選抜には COCA を用いたにも関わらず、これに関連する派生表現を得るのに OED を用いたことには、COCA では十分な数のデータを得ることが出来なかったという背景がある。ところで、こうした類の調査で辞書を使用することは、必ずしも賛成される方法ではないかもしれない。しかしながら、OED は他の英語辞書と比べて圧倒的に派生形、つまりは *–able* や-*ed* ˆのついた形式を独立した見出し語で扱っている。加えて、複数の構

成要素からなる見出し語の内部構造に関しても先述の通り詳細な注釈が示されている。こういった観点から、コーパスのみの調査では直感に頼らざるを得ない部分を大いにサポートしてくれるものとして OED は有効であると判断した。

5.2 結果と考察

5.2.1 *un*-V-*ed*

(6) では、COCA で得られた動詞が提示されている。ここでは、260 件 *un-* 動詞のうち生起数順で上位 30 位のもののみを列挙する。

(6) *uncover*, *unfold*, *unveil*, *undo*, *unlock*, *unleash*, *unload*, *unravel*, *unsettle*, *unearth*, *unpack*, *undress*, *unnerve*, *unwind*, *untie*, *unzip*, *unfurl*, *unbutton*, *unwrap*, *unseat*, *unscrew*, *unhook*, *untangle*, *unmask*, *unquote*, *unroll*, *unplug*, *unhinge*, *unsay*, *unbelieve*

これらの動詞から派生した *un*-V-*ed* パターンを OED で引くと、言及される状態が同じものであるということもあって、判断に窮した跡が多く見られた。UN-1 と UN-2 の双方が構成要素の接頭辞として記載されているものについては、1) 別個の見出し語が設けられている場合 (*unfolded*, *undone*) もあれば、2) 単一の見出し語の語源解説として'or', 'and', 'also' などのマーカーと共に用いられている場合もある。前者は、やはり見出し語が別々ということもあって UN-1 と UN-2 がある程度それぞれの独自性を保った定義がなされている場合もある。一方で後者に関しては、接辞単独では明確に区別されるものとして(つまり同音異義語として) 扱われがちな 2 つの *un-* が、同一の後続要素と結び付くことで少なくとも派生形全体では意味的な類似性を呈しているという点が興味深い。OED において、*un*-V-*ed* に関して UN-1 と UN-2 共に記載がある見出し語の数は 37 (e.g. *unveiled*, *unsettled*, *unzipped*) であった。しかしながら、全体で見ると、UN-1 のみ言及があるものは 108 項目、UN-2 のみは 11 項目と、その差がはっきりと顕在化した。このことから、過去分詞化した動詞に UN-1 が結び付くほうが、既に UN-2 が伴う動詞がそこから過去分詞化するよりも、形容詞的性質を持った 1 つの語彙項目として定着しやすいという傾向があると想定される。つまり、構造的な曖昧性は極めて非対称的なかたちで認識されているということになる。同じ形式を持つ 2 つの構造の不均衡な力関係ということで、両者の間に homonymy blocking が起きていると見なすことが出来るだろう。ただし、先ほどから繰り返し述べている通りここでは意味的な共通性が発生しているため、もちろんごく純粋な homonymy blocking というわけにはいかないだろう。しかしながら、この類義性という側面が blocking の発生や定着を助長している可能性はあると考えられる。

5.2.2 *un*-V-*able*

2 つの *un*-V-*ed* 間での blocking 発生に貢献していると考えられる類義性という要素は、*un*-V-*able* の場合は欠如していると考えられる。そのため、blocking が発生しづらく、相互に意味が異なる 2 つの表現が成立していることが予想される。しかしながら、実際の調査結果はこれに沿うものではない。またしても、UN-2 の解釈は極めて劣勢である。OED の記載では、UN-2 の解釈が認められている見出し語は *unlearnable* と *undressable* というわずかに 2 例のみであった。これは、比較的もれなく派生形も拾い集めて記載している方針の OED においては顕著というべき少なさである。一方で UN-1 の注釈がついたものは 82 例確認でき、その差はより一層歴然である。意味的な重なりも

少ないため、純度の高い homonymy blocking であるといえる。類義性という後ろ盾なしに blocking が確認できるのは何故だろうか。おそらく、*un*-V-*able* という構造においては、優先的に否定的な価値が付与されるのだろう。この否定的価値と結び付くのは、専ら UN-1 である。この価値的意味が構造全体の語彙的な緊密性に貢献し、UN-2 で解釈されるものに対して一層優勢な振る舞いを見せていると考えられる。

OED の万能性を踏まえても、それのみに委ねた調査では実際に見られる言語現象を少なからず拾い損ねている可能性は否定しがたいだろう。実際、COCA では *unlockable* が UN-2 としてしか解釈出来ない例も見られる。とはいえ、同じ-*able* 形でも接頭辞をとらない *lockable* などの肯定形は OED において動詞 *lock* から派生した見出し語としての記載があるという点を鑑みれば、*unlock* + -*able* というパターンが語彙的な意味を定着させるのを妨げる何らかの要因はあると考えて差し支えないだろう。

6. 結論

前節までで見てきた点をまとめると、少なくとも辞書の記載レベルで独立した語彙の形容詞として認められる否かという点に関しては、UN-1 と UN-2 の間に不均衡な力関係、homonymy blocking が認められるということが主張出来るだろう。しかし、特に *un*-V-*ed* の例において指し示される意味が極めて似ているという点を考えると、ここに成立する関係は当然 homonymy らしさからは真っ向から対立するものということになる。だからといって、形式も完全に同一であるため、典型的な synonymy とも見なしがたい。結局は、単一の接頭辞が持つ多義性の現れであるという見方が最も妥当かもしれない。現時点ではこれに関する結論を示すことは控えるが、参与する意味関係を定めにくいという点も、単独では品詞で表されるような意味を満たせない拘束形態素ならではなのかも知れない。

7. 参考文献

Corpus of Contemporary American English <http://corpus.byu.edu/coca/>

Cruse, D. A. (1986) *Lexical Semantics*, Cambridge University Press, Cambridge.

Hamawand, Z. (2009) *The Semantics of English Word Negative Prefixes*, Equinox, London.

Horn, L. R. (1989) *A Natural History of Negation*, Center for the Study of Language and Information, Calif.

影山太郎・由本陽子 (1997) 『語形成と概念構造』 研究社出版, 東京.

Lipka, L. (1990) *An Outline of English Lexicology*, Niemeyer, Tübingen.

Marchand, H. (1969) *The Categories and Types of Present-day English Word-formation*, Beck, München.

Mettinger, A. (1990) “Oppositeness of Meaning, Word-formation, and Lexicography: the English Prefix Un-“, *Meaning and Lexicography*, eds. by J. Tomaszcyzk and B. L. Tomaszcyk, 93-112, John Benjamins, Amsterdam, Philadelphia.

Murphy, L. (2003) *Semantic Relations and the Lexicon*, Cambridge University Press, Cambridge, U.K.

Oxford English Dictionary Online <http://www.oed.com/>

Tuggy, D. (1993) “Ambiguity, Polysemy, and Vagueness,” *Cognitive Linguistics* 4-3, 273-290.

由本陽子(2001) 「複雑述語の形成, 影山太郎(編)『日英対照 動詞の意味と構文』269-296, 大修館書店, 東京.

同族目的語構文と格の意味解釈における機能について

(Cognate Object Construction and the function of Case in Semantic Interpretation)

平崎永里子(HIRASAKI Eriko)
関西学院大学大学院
(Kwansei Gakuin University)

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1. はじめに

本稿では、格の意味的な側面を反映した新しい理論を用いて同族目的語の統語的振る舞いに対して説明を与えることを試みる。同族目的語構文は、通常の他動詞が含まれる文と共通点がある一方、異なる振る舞いをする場合も多数あることが観察されている。一方、一見同族目的語を含んでいる文のように見える文の中には同族目的語構文とは異なり通常の他動詞文と同様の振る舞いをするものがある。本稿では、Hale and Keyser(2002)に倣い、前者のタイプの文を cognate object construction（以下 COC と略記)、後者を hyponymous argument construction (以下 HAC)と呼び区別する。

これまで、COC と HAC や普通の他動詞文の統語的振る舞いの差異を取り扱う研究は数多くなされてきたが、COC と通常の他動詞文に共通の特徴が見られる事に関して取り扱う研究は少ないように思われる。また、構文間の差異を取り扱う論文では、COC と HAC の共通の特徴が何に起因するかを統一的に説明を与える事が困難であった。それを踏まえ、本稿では下記の 2 点を目標とする。

(1) 格のもつ意味的な側面を捉える新しい格理論により、COC と HAC の振る舞いに共通点と差異の両方が存在する理由に説明を与える。

(2) 上記の理論により格の意味解釈への貢献の極小主義理論下における体系化が可能となると示す。

本稿で提案する新しい格理論は、同族目的語構文の統語的振る舞いを説明できるだけではなく、現行のミニマリストプログラムにおける格理論の不備を補うこともできる理論である。これまで、格と意味とが関係する現象は数多く観察され、内在格のように意味と結びついた格の存在も認められてきた。しかし、ミニマリストの理論においては、格は C-I system にとって解釈不可能な素性として扱われ、理論内には格の意味的側面は反映されていない。それに対し、本稿の提案する理論では、意味に関する格素性が形態に関する格素性とは独立に存在すると仮定することを提案するため、格と意味の結びつきを捉えることが可能となる。

2. COC と HAC の性質

本節では、これまでの研究で観察されてきた COC と HAC の統語的な特徴を概観する。

(3) a. Henleigh smiled a wicked smile.
(Massam 1990: 164)

b. Sam danced a merry dance.
(Jones 1988: 91)

前節で述べた COC の例が(3a)、HAC の例が(3b)である。いずれも文の動詞を名詞化した要素が文の目的語となっている。COC と HAC の差異を 2 点挙げる。1 点目は、目的語位置に出てこられる名詞に関する差異である。

(4) a.*She slept her last nap/ a long winter slumber.

b.*He laughed a surreptitious giggle/ chuckle. (Hale and Keyser 2002: 71)

c. Bernadette danced the Irish jig.

d. Tosca sang an aria. (Massam 1990: 163)

(4a,b)に示される通り、COC は文に用いられた動詞を名詞化したものと異なる要素が目的語位置に出てくると非文になる。一方 HAC は、(4c,d)に示される通り前述の要素でも目的語となり得る。これまでの研究では基本的にこの差異で以て COC と HAC を区別している。

2 点目の差異は、受動化が可能であるか否かという点である。

(5) a. *An uneventful life was lived by Harry.

b. *A weary sigh was sighed by Bill.

c. A merry dance was danced by Sam. (Jones 1988: 91)

d. The Irish jig was danced by Bernadette Dooley. (Massam 1990: 163)

(5)に示される通り、COC は受動化できない一方、HAC は、普通の他動詞文と同様に受動化が可能である。このことは、COC において目的語への格付与がないと仮定することにより説明を与えられ得る。(Jones 1988)

ここまで見た通り、COC と HAC の異なる振舞が観察されている一方、COC と HAC が同様の振舞を見せることも観察されている。

(6) a. Let Ben run (*quickly) a little run.

b. Ben sneezed (*that way) a glorious sneeze. (Massam 1990: 166)

(6)に示される通り、COC と HAC のいずれにおいても動詞と目的語の間に副詞が介在出来ない。このことは、COC にも HAC にも格隣接条件が適用されている事を示している。そのため、前述の COC における目的語への格付与がないという仮定とは相容れない事実が観察されているという事になる。

以上纏めると、COC と HAC は受動化の可否に関して差異がある一方、動詞と目的語との間の副詞の介在の可否に関しては共通しているといえる。本稿では、新しい格の理論を提案する事により類似点と差異の両方に対し統一的な説明を与える事を試みる。

3. 提案

本節では、本稿の主要な提案とそれに基づく分析を提示する。本稿では、中世以降の文法研究における意味と音の仲立ちをする役割を果たす要素としての格の扱いを踏襲し、格を「名詞の持つ文法関係とその名詞が各 interface で受ける解釈を表す名詞に特有の素性」であると見做す。2 つの interface 其々における解釈を格が表すことは即ち、PF のみならず LF においても格が必要である事を意味する。それを踏まえ本稿では、PF と LF が読み取るための格素性が独立に存在すると仮定する事を提案する。具体的には、PF で読み取られるために存在する格素性を morphological case（以下 M 格）と呼び、LF で読み取られるために存在する格素性を diathetic case（以下 D 格）と呼ぶ。

M 格は、文法関係と名詞の Argument としての働きを PF において読み取るための素性である。本稿では、Argument の定義として下記の定義を採用する。

(7) Arguments reduce the adicity of the predicate they combine with; modifiers leave it unchanged. (cf. Heim & Kratzer 1998)

(7)を踏まえると、述語のadicityを減らす名詞はM格を持つ事となる。本稿では、M格はPFにとって解釈可能[i]な素性である一方、LFには解釈不可能であると仮定する。

D 格は、文法関係とその文における名詞の意味を読み取るための素性である。D 格は LF にとって解釈可能であるが PF にとって解釈不可能であると仮定とする。すると、D 格は PF 以前、つまり Spell-out 前に照合を行う必要があり、そのため顕在的移動を必要とする。一方 M 格は LF での読み取りよりも前に照合されれば良いため、必ずしも顕在的移動は必要ない。それを踏まえ、ここでは

下記の素性照合の方法を採用する。

(8) a. M-Case feature can be checked iff the checkee is in the checking domain of the checker, *v* or T.

b. D-Case feature can be checked iff the checkee is in the Spec-head relation with the checker, V or T.[ii]

照合に顕在的移動を必要とするD格は、必ずSpec-head関係によって素性照合が行われる。これに対し、顕在的移動を必要としないM格は、素性がchecking domain[iii]内にあれば照合が行われる。これに従うと、D格とM格の両方を持つ名詞句は両方の格素性を照合する要素のSpecに移動すれば 2 つの格素性を共に照合する事が可能となる。また、D格のみをもつ名詞句は、D格の素性照合のために顕在的移動を行うため、2つの格素性を持つ要素と同じ位置に見た目上存在する事となる。

上述の２つの格素性の存在を仮定したとすると、4 種類の名詞が論理的に存在し得る事が導出される。具体的には、下記の表に示す通り、M 格を持つか否か、D 格を持つか否かの組み合わせで名詞句が分類される。

(9) 可能な名詞句の種類

	D 格 有	D 格 無
M 格 有	hyponymous argument	[iv]
M 格 無	同族目的語	

D格を持つか否かはその名詞が文の意味解釈に影響を与えるか否かで決まり、M格を持つか否かはその名詞が文中でArgumentとして機能しているか否かによって決まる。HACの目的語は、通常の他動詞文における目的語と同様述語である動詞のadicityを減らす名詞であるためM格素性をもつ。つまり、HACにおけるdance等の動詞は、自動詞文において用いられるdanceとは異なる述語であると見做す事となる。具体的には、HACの動詞は二項述語であり、目的語と主語の両方が動詞のArgumentとなっている要素であるという事である。また、それらの要素はHACの文の意味解釈に影響を与える要素であるため、D格を持つ。[v]一方、COCの目的語は、述語のadicityを減らしていないためにM格を持たない要素である。COCに含まれる動詞はtype<e, t>であり、主語の名詞句がtype <e>であるという通常と同様の仮定をすると、同族目的語は述語のadicityを減らしていない事となるため、(7)で挙げたArgumentの定義には当てはまらない。[vi]その事から、同族目的語はM格を持たない要素である事になる。一方、同族目的語の有無が文の意味解釈に影響を与えることから、同族目的語はD格は持っていると考えられる。同族目的語が文の意味解釈に影響を与えている事は、Massam (1990)によって指摘されている。

(10) a.?Casey laughed a hearty laugh in 20 seconds.

b. *Casey laughed heartily in 20 seconds.

c. Mayflies live their lives in a day.

d. *Mayflies live in a day.

(Massam 1990: 178)

(10)から、COC は telic であるのに対し、同じ動詞を用いた自動詞文は atelic であると言える。その事から、同族目的語の有無が文の telicity に影響を与えていると考えられ、同族目的語は D 格をもつ事が導出される。

2 節に示した COC と HAC の共通点と相違点を分析するにあたり、前述の提案に加えて必要な仮定を 2 点挙げる。

まず、COC と HAC で用いられている述語の持つ格素性に関する仮定をする。本稿では、COC で用いられている一項述語は D 格素性のみを持ち、M 格素性を持たないために M 格素性の照合をすることは出来ないと仮定する。それに対し、HAC や他の他動詞文で用いられている二項述語は M 格素性と D 格素性の両方を持つと考える。

2 つ目に、受動化に関わっているのは M 格のみであるため M 格を持たない動詞は受動化出来ないと仮定する。具体的には、受動化の際に起こるとされている格吸収は M 格を対象としているため、M 格を持たない動詞は受動化が出来ないと考える。つまり、受動化の可否は M 格素性の有無によって決まることとなる。

4. 分析

本節では、前節の提案に基づき 2 節でみた COC と HAC の特徴の分析を行う。

まず、COC と HAC の受動化の可否に関する差について考察する。本節において、COC では目的語が D 格素性は持つが M 格は持っていないと提案した。そのため、COC に用いられている動詞が M 格を check する能力がなくても派生が収束する。また、HAC では、目的語が D 格と M 格の両方を持っていると提案したため、HAC で用いられている動詞は D 格と M 格の両方を持っている必要がある。それを踏まえ、本稿では COC で用いられている一項述語は M 格を持たず、HAC で用いられる二項述語は M 格を持つと仮定した。つまり、COC と HAC では、用いられている動詞が M 格を持つか否かと言う点で異なる事となる。更に、本稿では受動化は M 格の吸収であると仮定した。前述の通り、COC で用いられる動詞は一項述語であり M 格を持たないことから、受動化の対象になれないことが導出される。それに対し、HAC で用いられる動詞は二項述語であり M 格を持つため、受動化の対象となることが可能である。

上記の分析に従うと、Jones (1988)によって指摘されていた同族目的語と副詞的名詞句の共通性に対し自然な説明を与える事が可能となる。Jones (1988)によって挙げられた副詞的名詞句とその特徴は次の文に例示される。

(11)a. John arrived this morning.
b. George went the wrong way.
c. Mary dances this way.

(12)a. *This morning was arrived by John.
b. *The wrong way was gone by George.
c.*This way was danced by Mary.

(Jones 1988: 95)

副詞的名詞句とは、(11)における this morning、the wrong way、this way 等のように、副詞的に用いられる名詞句の事を指す。Jones (1988)は、副詞的名詞句は受動化が出来ないという点において同族目的語と類似している事を指摘した。M 格の有無が受動化の可否を決定するという本稿の仮定に従うと、同族目的語と副詞的名詞句のこのような類似点に対し自然な説明を与える事が可能となる。具体的には、副詞的名詞句も同族目的語と同様 Argument ではないために動詞との M 格素性照合が行われていない事となる。そのため、COC を受動化できない事と同様に(12)の非文法性の説明を説明できるという事である。

次に、2 節に挙げた COC と HAC の共通点を分析する。COC と HAC の両方において動詞と目的語の間に副詞句が介在出来ない事は、D 格の照合のための顕在的移動が生じている場合に格隣接条件が働いていると考える事で統一的な説明が可能となる。Koizumi (1993)では、ECM 構文において不定詞節の主語と主節の動詞の間に副詞が介在できないという事実に対し、格素性照合のための顕在的移動の存在を仮定する事で説明を与えた。本稿はこれに倣い、動詞と目的語の間に副詞が介在出来ない理由は格素性照合のために顕在的移動が行われているためであると仮定する。上述の過程と 3 節の提案を踏まえ、COC の構造は次のようになっていると仮定する。

(13) Henleigh smiled a wicked smile

[$_{TP}$ Henleigh [$_{vP}$ a wicked smile$_j$ [v+V$_i$ [$_{VP}$ t_i t_j]]]] [vii]

上記のような構造を仮定し、それに従うと、動詞と目的語の間で D 格素性の照合が行われている場合に格隣接条件が生じる事となる。COC の目的語は、HAC やほかの他動詞文の目的語と同様に D 格を持つ要素であるため、顕在的移動による素性照合を必要とする。D 格の素性照合のための移動が格隣接条件を引き起こしていると仮定する事により、COC と HAC のいずれにおいても動詞と目的語の間に副詞が介在出来ない事が導出された。

以上の分析を纏めると、COC と HAC が共通して持つ特徴は D 格によるものであり、COC と HAC の異なる振る舞いは M 格の有無が異なるために起こっているものであると考える事で COC と HAC の共通点と差異の両方に対し、統一的な説明を与える事が可能となった。

5. 帰結

本節では、3 節で提案した新しい格理論はどのような帰結をもたらすかを考察する。まず、経験的帰結として、これまで例外として扱わざるを得なかった COC が受動化出来ているように見えるデータにも説明を与え得る事が挙げられる。本稿では、COC と HAC の区別を、文中で使われている動詞が一項動詞か二項動詞かの差異によって説明した。HAC で用いられている動詞が二項動詞であると考えているという事は即ち HAC で用いられている動詞と自動詞文で使われている動詞は異なる意味を持つ動詞であると見做す事に等しい。つまり、同じ形の動詞であっても、その項の数が異なる場合があり得るという事である。すると、(13)のようなデータを例外扱いする事なく分析出来る可能性が認められる。

(14) a....The last laugh has now been laughed, and was it ever a long one!

b. It is a smile that could be smiled by the whole country.

c. That precise scream was screamed by the murder victim. (高見・久野 2002: 165)

これまで、(14)は COC であるにも拘らず受動化が許されているために統一的に分析を行う事が困難であった。このような事例は稀ではあるが、例外が生じる理由を説明出来る事が望ましい。本稿の理論を用いると、(14)で用いられている動詞が二項動詞であると仮定する事により説明が可能となる。言い換えると、(14)で用いられている動詞が M 格素性を持つために受動化が可能であると見做すという事である。このような事例が稀であるのは laugh 等の動詞を二項述語として用いる事が稀であるためであると考えられる。本校の提案を認める事により、動詞が一項動詞であるか二項動詞であるかによって受動化が可能であるか否かが決まると予測され、(14)のような事実が存在する事を動詞の習得に還元することが可能となる。

次に、本稿の理論的帰結について考察する。1 節でも述べた通り、これまでの生成文法において、格は特定の文法関係を持つ要素に対して与えられる形態的な素性であると考えられてきた。Chomsky (1995)における極小主義理論においては、格素性を C-I system にとって解釈不可能な形式素性の一つとして扱っている (Ura 2001)。極小主義理論において格が C-I system にとって解釈不可能であると見做す事は、意味解釈に格が関与出来ないものとする事に等しい。しかし、実際の言語現象を精察すると、格が意味解釈に影響を与えていると仮定する事によってのみ説明が可能となる現象は散見される。一例として、フィン語の telicity に関する現象が挙げられる。Kratzer (2004)は、格と telicity に相関関係がある事に対し、フィン語の特定の格素性が解釈可能であり、格素性が

telic の意味を担っているという分析を行った。格の種類と意味が対応している事を正しく導出できる妥当な分析であるように思われる。しかし、C-I system が格素性を解釈できない事を仮定する現行の格理論とは相容れない。現行の格理論は、格と意味の結びつきが存在しない事を予測するため、この例に限らず格と意味に相関関係がある現象いずれに対しても適切な説明を与える事を許容しない。この事から、現行の格理論は記述的妥当性が不十分であると考えられる。

更に、中世以降の文法研究において格が果たしていると考えられていた役割とは、述語とその項の間の意味関係(生成文法で言う所の theta-relation)と、その項が文中で有する文法関係の２つの関係を顕在化する事であった。この事から、格は意味と音の仲立ちをする役割を果たす要素であったと考えられる。中世の文法研究における格の理論が正しかったとすると、概念的必然性がある格と意味の結び付きを捉えられない現行の理論は説明的妥当性も満たしていない。これに対し、本稿で提案した新しい格理論では、LF で読み取るための格素性の存在を仮定したため、格が意味解釈に影響を与える事が自然に予測される。つまり、本稿の提案は、COC や HAC に対して統一的な説明を与えられるだけではなく、理論的にも望ましい帰結をもたらすと言える。

6. 終わりに

以上纏めると、本稿では COC と HAC を分析するにあたり、従来考えられてきた形態に関する格素性とは独立に意味概念に関する格素性の存在を提案した。更に、その提案に則って分析すると英語の COC と HAC の特徴に対して一様に説明を与える事が可能である事を提示した。本稿の提案の理論的に重要な帰結は、名詞句の持つ格が意味解釈に貢献する事実を捉える事を可能にした点である。

注

[i] 本稿では、Chomsky (1995)に倣って完全解釈の原理が PF と LF の両方において適用される事を仮定する。そのため、PF における解釈(不)可能性という概念を導入し、解釈不可能な素性が送られると派生が破綻すると仮定する。

[ii] 本稿では、語彙範疇である V が意味に関係する D 格、機能範疇である *v* が形態に関係する M 格を照合すると仮定した。また、本稿では前置詞句に関しては取り扱わないため、格素性照合の定義から除外してある。

[iii] 本稿における checking domain の定義は Chomsky (1995)に従う。

[iv] M 格をもち D 格を持たない要素として英語の虚辞 *there* が挙げられる。*there* が M 格を持つ事は(i)、D 格を持たないことは(ii)、(iii)によって示される。

(i) *It seems [there to be a man here].
(Lasnik 1992: 382)

(ii) *I’ve believed there for a long time now to be no solution to this problem.
(Ura 1993: 276)

(iii) I’ve believed for a long time now there to be no solution to this problem.

[v] この仮定の妥当性に関する独立の根拠を示す事は現段階では難しいため、本稿ではその点に関して触れない。do it による置換が証拠として有効である可能性がある事を示唆するにとどめる。

[vi] COC の意味を合成的に計算する際は、同族目的語を動作様態副詞と同様のものとして扱う。より具体的には、event semantics を用いて、Heim and Kratzer (1998)の Predicate Modification のような規則を利用する事を想定している。

[vii] この構造を従来の形で線形順序化すると目的語が動詞よりも前になるため正しい語順を導くことはできない。それ故主要部移動した場合の線形順序化の際に通常と異なる線形順序化に関して通常と異なる仮定をする必要がある。本稿では言及せず、可能性を示唆するにとどめる。

参考文献

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

Hale, Ken, and Samuel J. Keyser. 2002. *Prolegomenon to a theory of argument structure*. Cambridge, Mass: MIT Press.

Heim, Irene. and Angelika Kratzer. 1998. *Semantics in Generative Grammar*. MA. Blackwell Publishing

Jones, Michael A. 1988. Cognate objects and the case-filter. *Journal of Linguistics* 24, 89-110.

Koizumi, Masatoshi.1993. Object agreement and the split VP hypothesis. *MIT Working Papers in Linguistics* 18, 99-148.

Kratzer, Angelika. 2004. Telicity and the meaning of objective case. In *The syntax of time*, ed. Guérone, Jacqueline, and Jacquline Lecarme, 389-423. Cambridge, Mass: MIT Press.

Lasnik, Howard. 1992. Case and Expletives: Notes toward a Parametric Account. *Linguistic Inquiry* 23, 381-405.

Massam, Diane. 1990. Cognate objects as thematic objects. *Canadian Journal of Linguistics* 35, 161-190.

高見健一・久野瞳. 2002. 『日英語の自動詞構文』研究社, 東京.

Ura, Hiroyuki. 2001. Case. In *The handbook of contemporary syntactic theory*, ed. Baltin, Mark and Chris Collins, 334-373. Oxford: Blackwell.

Ura, Hiroyuki. 1993. On Feature-Checking for Wh-Traces. *MIT Working Papers in Linguistics* 18, 243-280.

the doctor from the football game「一緒にサッカーをした医者」のような表現に現れる from について

(On the usage of *from* in *the doctor from the football game*)

平沢 慎也（HIRASAWA Shinya）
東京大学大学院（University of Tokyo）

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1.イントロダクション

本稿は、Lindstromberg (1998)や Tyler and Evans (2003)といった前置詞の包括的な研究書に言及のない、英語前置詞 from の次のような用法について記述を行った上で、この用法と from の他の用法との関係を考察したものである。

(1) The doctor **from** the football game told me yesterday that I might have cancer.

(2) About a week later, out of the blue, Dex asked me what the story was with my friend.
"Which friend?" I asked, playing dumb.
"You know, the dark-haired woman **from** the Red Lion?"
"Oh, Darcy."
(emily giffin, *something borrowed*)

(3) Are you in love with him?
I don't know. But I'm crazy about him, that much I do know. And the sex is pretty sensational.
Who is he?
The one.
What one?
The one **from** the summer of two thousand.
(Paul Auster, *Sunset Park*)

(4) She looked terribly pale […] Maybe it was the Chinese food **from** last night, she said […]
(Paul Auster, *Oracle Night*)

下線部の意味は、(1) 話し手が一緒にサッカーをした（一緒にサッカー観戦に出かけた、など）医者、(2) レッド・ライオンという店で出会ったダークヘアの女性、(3) 2000 年の夏に情事を重ねた男、(4) 昨晩食べた中華料理、である。

2.当該用法の記述

2.1.統語的特徴

まず、この用法の from は、NP_1 from NP_2 全体で一つの NP を構成するという統語的な特徴を持つ。たとえば(1)の該当文を次のように書き換えることはできない。

(5) ＊**From** the football game, the doctor told me yesterday that I might have cancer.

NP_1 P NP_2 で一つの NP が構成されているということから、次のような所属の at や出身地の from の用法と同じように思われるかもしれない。

(6) Most guys **at** Pencey just talked about having sexual intercourse with girls […]
(J. D. Salinger, *The Catcher in the Rye*)

(7) […] she was presumably engaged to a man **from** New Orleans.
(F. Scott Fitzgerald, *The Great Gatsby*)

しかし、ここには明確な違いがある。(6)(7)

の下線部は(8)(9)のように関係代名詞と be 動詞を使って意味をほとんど変えずに書き換えることが可能であるのに対して、(1)〜(4)の下線部をそのように書き換えることはできない（(10)(11)）。

(8) Most guys who were at Pencey

(9) a man who was from New Orleans

(10) * the doctor who is/was from the football game

(11) * the dark-haired woman who is/was from the Red Lion

この事実は、(1)〜(4)の from は単体で意味を持っているのではなく、NP_1 from NP_2 全体で一つの単位をなして意味を持っているということ、すなわち、（Goldberg (1995, 2003)の「構文文法」との関連で言えば）「NP_1 from NP_2 構文」と呼ぶべきものが存在するということを示している。

2.2. NP_1 と NP_2 の意味的関係

NP_1 と NP_2 の具体的な意味関係はコンテクストから補われる。たとえば(1)では NP_2 という出来事を一緒に経験した人間が NP_1 に来ているが、(2)では NP_2 という場所で会った人間が NP_1 となっている。(3)では NP_2 という時に情事を重ねた相手が NP_1 に来ているが、(4)では NP_2 という時に食べたものが NP_1 に来ている。

また、NP_2 の位置には出来事、ないし出来事発生の時・場所を表す名詞句が入るという点も重要である。たとえば(12)の下線部を(14)(16)(17)のように書き換えることはできるが、(13)(15)のように言うことはできない。

(12) I'm talking with a girl who was playing the piano with a red hat on in the Italian restaurant last week.

(13) * a girl **from** the piano

(14) a girl **from** the piano performance

(15) * a girl **from** a red hat

(16) a girl **from** the Italian restaurant

(17) a girl **from** last week

(1)〜(4)を見直すと、NP_2 は(1)では出来事、(2)では場所、(3)(4)では時となっている。

ここで、NP_2 に場所・時の名詞が入る場合も、それは出来事発生の場所・時であるということに注意されたい。(2)(3)のレッド・ライオンと 2000 年の夏は出会いと情事という出来事が起こった場所・時であり、(4)の last night は中華料理を食べるという出来事が起こった時である。従って、NP_2 は本質的に出来事と結びついた形で概念化されているということになる。

このように理解すると、NP_2 と結びついている出来事は、NP_1 from NP_2 という大きな名詞句を含んでいる節の参照時よりも相対的に過去に起こった出来事である、という特徴に気付く。たとえば(1)で話し手が医者と一緒にサッカーの試合（観戦）をしたという出来事が起こった時点は、昨日よりも前である。(2)は省略を補えば What's the story with the dark-haired woman **from** the Red Lion?ということであり、話し手がレッドライオンで Darcy に出会うという出来事が起きた時点は What's the story の参照時よりも前である。(3)は I'm crazy about the one from the summer of two thousand の意であり、情事の 2000 年の夏は、I'm crazy の参照時よりも前である。(4)に関しても同様に、中華料理を食べた時点（昨夜）は気分が悪くなっている時点よりも前の時点である。

このような観察から、NP_1 from NP_2 構文の〈意味〉は、「主節の参照時よりも前に生じた、NP_2 の指示する（または NP_2 と関連づけられる）出来事に参与していた entity としての NP_1」とまとめることができる。この〈意味〉が言わば合図（cue）となって聞き手は百科事典的知識を活性化させ、適切な解釈を得ることになる[1]。

3.当該用法の動機付け

3.1.「動機付け」は一つではない

このような意味特徴を持つ NP_1 from NP_2 構文は一体何に動機付けられているのだろうか。なぜ他の前置詞ではなく from が用いられるのか。NP_1 from NP_2 構文における from の使用が英語母語話者にとって自然に感じられているということは、from の他の用法との何らかの類似性が感じられているはずである。そしてその「他の用法」は一つではなく複数あると考えるべきである。

Lakoff (1987: 491-494)と Taylor (2004)が指摘するように、ある構文 C_1 がある言語の体系の一部として存在するとき、その構文 C_1 は他の複数の構文（C_2, C_3…）と関連性を持つ。そしてその「他の複数の構文（C_2, C_3…）」の数が多ければ多いほど、C_1 はその言語の母語話者にとって習得しやすく「しっくり来る」言語表現となる。言ってみれば、C_2, C_3…が C_1 に対して ‘ecological niche’ を与えているのである。たとえば、Taylor (2004)によれば、bang goes 構文（e.g., ***Bang goes*** *my weekend!*）が英語母語話者にとって「しっくり来る」のは、英語の言語体系の中に the deictic constructions（e.g., *There's Harry, wearing his new jacket.*）、the preposed directional/locatives（e.g., *Away ran the children./On the bed was lying the sleeping child.*）、動詞 go の〈引用〉用法（e.g., *The tune goes like this./'Yes, of course,' went the young man.*）、そのほか様々な言語表現が存在し、それらが共謀して ‘ecological niche’ を与えているからである。

では、NP_1 from NP_2 構文に ‘ecological niche’ を与えているのはどのような言語表現だろうか。ここではその答えとして from の四つの用法を指摘したい。

3.2.時間的起点用法

次の例に示したように、ある状態がいつから成り立っているかという情報を from で導くことができる。

(18) Cully asked Nagle to have a drink with him […] Nagle accepted and they were in the “Queen's Head” together **from** about seven. （小西 1976: 350）

この用法では from の補部名詞句が指示する時点が主節の表す事態の参照時よりも相対的に過去であるということが必ず成り立つ。これは、第 2.2 節で見た「NP_2 と結びついている出来事は、NP_1 from NP_2 という大きな名詞句を含んでいる節の参照時よりも相対的に過去に起こった出来事である、という特徴」と似た特徴である。従って、時間的起点用法は NP_1 from NP_2 構文の動機付けの一つとなっていると考えられる。

3.3.原因用法

次の例が示すように、ある状態が成り立っている原因を from で導くことができる。

(19) […] it's okay for the kids to run inside with bare feet and swimsuits wet **from** the pool […] (COCA)

(20) Then, all of a sudden, I got this idea. I took out my wallet and started looking for this address a guy I met at a party last summer, that went to Princeton, gave me. Finally I found it. It was all a funny color **from** my wallet, but you could still read it.
(J. D. Salinger, *The Catcher in the Rye*)

この用法では、from の補部名詞句の指示対象物と結びつく何らかの出来事が想起される。たとえば(19)ではプールで泳いだという出来事、(20)では財布から色が移るという出来事が想起される。その出来事が原因となって水着が濡れていたり住所のメモに変な色がつ

いていたりするのである。このように原因用法では、from の補部名詞句を出来事と結びつけるプロセスが関与する。これは、原因用法が NP_1 from NP_2 構文の動機付けの一つとなっている可能性を示唆している。第 2.2 節で見た通り、NP_1 from NP_2 構文の NP_2（出来事ないし出来事の場・時を指す名詞句）は本質的に出来事と結びついた形で概念化されるからである。

また、原因用法の from の補部名詞句が結び付けられる出来事が発生した時点は主節の参照時よりも相対的に過去に位置付けられる。たとえば(19)で子供がプールに入っていたのは家の中を走り回るよりも前のことであり、(20)で財布から住所のメモに色が移っていくプロセスはメモに変な色がついているという結果状態が観測された時点よりも過去に発生したものである。これは、第 2.2 節で見た「NP_2 と結びついている出来事は、NP_1 from NP_2 という大きな名詞句を含んでいる節の参照時よりも相対的に過去に起こった出来事である、という特徴」と似た特徴であり、原因用法を NP_1 from NP_2 構文の動機付けの一つと考える二つ目の根拠となる。

3.4.記憶用法

from には「記憶用法」と呼ぶべき用法が存在するが、これは一般的に定義されている用法ではないので、ここで筆者が「記憶用法」と呼ぶものがどのような用法かを簡単に説明したい。そのために、まず記憶とは何かを考えておく必要がある。

たとえば、私が「山田太郎という人の顔を覚えている」と言った場合、私は何を言っていることになるのか。その人の顔の大きさや輪郭などを思い浮かべる能力を発話時において持っているということを言っているわけだが、しかしその顔を実際に見るという出来事が生起した時点自体は発話時よりも前のはずである。そしてそのときに頭に焼きついた山田太郎の顔の鮮明な像は時間の経過とともに弱く、薄く、ぼやけたものになっていく。このことを踏まえれば「山田太郎という人の顔を覚えている」という主張は、概略、「山田太郎の顔を見るという過去に生じた出来事によって焼きついたイメージが今も（何らかの程度）残存しており、そのためその顔を思い浮かべることができる」の意の主張であると考えられる。

記憶の元になるこの「過去に生じた出来事」を導くのに from が用いられる。筆者はこれを from の「記憶用法」と呼ぶ（例(21)-(25)）。

(21) She is all apology […] for not having remembered Harry **from** the party […]

(22) The boat-cloaked figure stepped forward and extended one hand.
"Thomas? I'm Palmer. I trust you remember me **from** London?"
(COCA)

(23) For the next few minutes, Miss Emily went on reminiscing about different events **from** those days […]
(Kazuo Ishiguro, *Never Let Me Go*)

(24) Perhaps his presence gave the evening its peculiar quality of oppressiveness—it stands out in my memory **from** Gatsby's other parties that summer.
(F. Scott Fitzgerald, *The Great Gatsby*)

(25) I ask about his favorite memory **from** Pakistan […] (COCA)

(26) It is something of a revelation that this memory **from** over thirty years ago should have remained with Miss Kenton as it has done with me.
(Kazuo Ishiguro, *The Remains of the Day*)

この用法の from は、本稿の主たる分析対象である NP_1 from NP_2 構文と興味深い複数の共通性を見せる。まず、from の補部名詞句は必ず出来事との関連で理解される。より具体的には、from の補部名詞句の指示対象は出来事ないし出来事の場・時である。(21)の the party と(24)の Gatsby's other parties that summer は出来事であり、(22)の London と(25)の Pakistan は出来事の場であり、(23)の those days と(26)の over thirty years ago は出来事の時である。出来事でも出来事の場・時でもないものが補部に来ると from の使用が不自然になる（例(27)）。

(27) a. A memory **from** the rock concert flooded over him. ［出来事］

b. A memory **from** Philadelphia flooded over him. ［出来事の場］

c. A memory **from** last month flooded over him. ［出来事の時］

d. * A memory **from** my ex-husband's bad taste in music still disgusts me. ［それ以外］

e. * A memory **from** the blue guitar he used to use flooded over him. ［それ以外］

これは(12)-(17)で見た NP_1 from NP_2 構文の振る舞いと全く同じである。

次に、from の記憶用法には、from の補部名詞句と結びつけられる出来事が主節の参照時よりも相対的に過去であるという特徴が見られる（例(21)-(26)および(27a-c)参照）。これは第 2.2 節で見た NP_1 from NP_2 構文の時間的ずれの特徴と一致する。

さらに、記憶用法では NP_1 from NP_2 の部分が構成素をなすと考えることが可能な場合（例(23), (24)-(26), (27a-c)）も不可能な場合（例(21), (22)）もある[2]が、構成素をなしている場合はもちろんのこと、構成素をなしていない場合であっても NP_1 from NP_2 という語順は固定的である。次を参照されたい。

(28) a. He remembered the girl **from** his mother's birthday party.

b. * **From** his mother's birthday party, he remembered the girl.

(29) a. He remembers nothing **from** the happy days he spent with his wife.

b. * **From** the happy days he spent with his wife, he remembers nothing.

これは記憶用法の from と本稿が扱っている NP_1 from NP_2 構文との形上の類似性を示唆するデータである。

意味的にも、NP_1 from NP_2 構文は記憶用法と関連しているものと思われる。上で、NP_1 from NP_2 構文の〈意味〉は「主節の参照時よりも前に生じた、NP_2 の指示する（または NP_2 と関連づけられる）出来事に参与していた entity としての NP_1」とまとめることができる、と論じた。この〈意味〉は、言い換えれば、「主節の参照時よりも前に生じた、NP_2 の指示する（または NP_2 と関連づけられる）出来事に参与していた entity として記憶されている NP_1」ということである。それ以上でもそれ以下でもない。たとえば例(1)の The doctor **from** the football game という言い方から伺い知れるのは、話し手がその医者をサッカーの試合という過去の出来事に結びつけて記憶しているということだけであり、それ以上の具体的な意味指定はない。逆に、そのような記憶がないのであれば、話し手は(1)のようにして from を使うことはできない。このように NP_1 from NP_2 構文は、形の面では memory も remember も伴わないものの、その意味の背後に、言わば必要十分条件的に、記憶の意味を隠し持っているのである。

ただし、これらの一連の興味深い類似性に目を奪われるあまりに、NP_1 from NP_2 構文と記憶用法（の特に memory from …のタイプ）が全く区別のいらない同一の用法であると

結論してはいけない。NP_1 from NP_2 構文の NP_1 は NP_2 の指示する（ないし NP_2 と結び付けられている）出来事のフレームに含まれる参与者であるが、記憶用法の場合にはそうではない。たとえば(27a)の A memory **from** the rock concert を例に取ると、memory は the rock concert という出来事のフレームの参与者ではないだろう。

こうした事情から、NP_1 from NP_2 構文と記憶用法は極めて密接な関連を持つ別用法と捉えるのが妥当であるように思われる。

3.5.残存物用法 [3]

英語では、あるものがいつの残りものであるかという情報を from で導くことができる。この用法を from の「残存物用法」と呼ぼう（例(30)-(35)）。

(30) That was when it came home to me, looking around the band, that apart from me and Fabian, there was no one left in our line-up **from** that summer we'd met Tibor.

(Kazuo Ishiguro, *Cellists*)

(31) Eddie took what cash he had left **from** the army and spent it on the reception—roast chicken and Chinese vegetables and port wine and a man with an accordion.

(Mitch Albom, *The Five People You Meet in Heaven*)

エディーは軍隊時代の残りのなけなしの現金を手に取り、披露宴に使った。ローストチキンに中国野菜、ポートワインを用意し、アコーディオン奏者まで呼んだ。

(32) On the round table in the twilight of the dining room the dishes still sat **from** dinner.

(Steven Millhauser, *A Visit*)

(33) But a room's or a bag's contents, John's belongings or the leftovers **from** the previous day in a particular household are necessarily limited, defined, not only in place but also in quantity. (Wierzbicka (1988: 544))

(34) The car was a relic **from** my old life. I had no use for the thing in New York, but […]

(Paul Auster, *The Brooklyn Follies*)

(35) He is a remnant **from** an age when it was common to know people who had grown up in homes that did not have indoor plumbing. (COCA)

この用法の from は、しばしば leftovers [a relic, a remnant] など「残り物」を意味する名詞句と直接結合し、leftovers [a relic, a remnant] from …のようにより大きな名詞句を作る（例(33)-(35)）。このとき、*leftovers [a relic, a remnant] which are [were] from …のように which＋be 動詞を加えると非文になることに注意されたい。これは、leftovers [a relic, a remnant] from …が固定的な一つの構文をなしていることを示しており、本稿が分析対象としている NP_1 from NP_2 構文との関連性を示唆している。

さらに、(33)-(35)の leftovers [a relic, a remnant] from …の from の補部名詞句が指示している時が、主節の参照時よりも前の時点に位置付けられるという点も、本稿が分析対象としている NP_1 from NP_2 構文の特徴と一致する。

4.結語

本稿は、NP_1 from NP_2 構文の特徴を記述し、この構文が英語の体系の中でどのような表現に動機付けられているかを論じた。第 3 節であげたように from の様々な用法がこの構文と類似性を示す。動機付けとなる表現は一

つではないのである。だからこそ NP_1 from NP_2 構文は英語話者にとって「しっくりくる」表現と感じられるのだ。この立場は Lakoff (1987)と Taylor (2004)の想定する、言語体系内の 'ecological niche' という発想と軌を一にするものである。

注

1. このように〈意味〉を百科事典的知識の活性化への合図として捉える意味観（動的な意味観）については、Langacker (2008: 39) を参照されたい。
2. 例(21)(22)で NP_1 from NP_2 の部分が構成素をなしているとは考えられないことは、*Harry **from** the party was remembered.や*I **from** London am remembered.のように受け身にすると不自然になるということから確認できる。
3. 残存物用法は記憶用法と密接に関係しあっていると考えられる。残存物とは、ある時点において存在していた物体が時間の経過にともなって減少ないし縮小した結果として見せる姿のことである。そして記憶とは、ある時点において脳裏に鮮明に焼き付けられた像が時間の経過にともなって欠けたりぼやけたりしていったその結果として見せる姿のことである。ここには明確な類似関係が見出だせる。さらに、注意しなければならないことは、残存物と記憶の関係は単に似ているだけではないということである。人間がある物体を見て「これは残存物だ」とカテゴライズするような典型的・原始的な状況において、その人はそれが残存物でなかった時点（もっと数なり量なりが豊かだった時点）のことを少なくともある程度は思い出し想像している（記憶という能力を活用している）のである。これは、残存物用法と記憶用法の類似関係には経験的基盤が存在していることを意味する。

参考文献

Goldberg, Adele (1995) *Constructions: A Construction Grammar Approach to Argument Structure*, Chicago University Press, Chicago.

Goldberg, Adele (2003) "Constructions: A New Theoretical Approach to Language," *Trends in Cognitive Sciences,* 7:5, 219-24.

小西友七（1976）『英語の前置詞』大修館書店, 東京.

Lakoff, George (1987) *Women, Fire and Dangerous Things: What Categories Reveal about the Mind*, University of Chicago Press, Chicago.

Langacker, Ronald (2008) *Cognitive Grammar: A Basic Introduction*, Oxford University Press, Oxford.

Lindstromberg, Seth (1998) *English Prepositions Explained*, John Benjamins, Amsterdam.

Taylor, John R. (2004) "The Ecology of Constructions," *Studies in Linguistic Motivation*, ed. by Günter Radden and Klaus-Uwe Panther, 49-73, Mouton, Berlin.

Tyler, Andrea and Vyvyan Evans (2003) *The Semantics of English Prepositions: Spatial Scenes, Embodied Meaning and Cognition*, Cambridge University Press, Cambridge.

Wierzbicka, Anna (1988) *The Semantics of Grammar*, John Benjamins, Amsterdam.

コーパス

COCA = Davies, Mark. (2008-) *The Corpus of Contemporary American English: 450 million words, 1990-present*. Available online at http://corpus.byu.edu/coca/.

Syntactic Analysis for Passives and Causatives in English and Japanese*

Takashi Kayashima
Graduate School of Kyushu University

Keywords: voice, causative, passive, affectedness

1. INTRODUCTION

In English, HAVE causatives like (1) can be interpreted as passives. In Japanese, *-sase* causatives like (2) can have permissive meaning (not coercion).

(1) John had his students walk out of class.
(Ritter and Rosen 1993: 520)

(2) Sensei-ga seito-o/ni
teacher-NOM student-ACC/DAT
kyoushitsu-kara deteik-(s)ase-ta.
classroom-from go out-CAUSE-PAST.
"A teacher made his students go out of class."

In addition, we can notice such a contrast between English and Japanese as is shown in (3) and (4). What we can see from (3) is that two kinds of passive constructions, BE passives and HAVE passives exist in English. In HAVE passives where intransitive verbs are used verbs are used in the infinitive form and in HAVE passives where transitive verbs are used verbs are past participles. Because of this fact we can say that three kinds of passive constructions exist in English. (4) shows that in Japanese just one kind of passive construction-*rare* passives-exists.

(3) a. John **was** criticized by his students.
b. John **had** his students **walk** out of class.
c. John **had** his article **criticized** by his students.

(4) a. Sensei-ga seito-ni
teacher-NOM student-DAT
hihans-**(r)are**-ta.
criticize-PASSIVE-PAST.
"A teacher was criticized by his students."
b. Sensei-ga seito-ni
teacher-NOM student-DAT
kyoushitsu-kara
classroom-from
deteik-**(r)are**-ta.
go out-PASSIVE-PAST.
"A teacher had his students go out of class."
c. Sensei-ga seito-ni
teacher-NOM student-DAT
ronbun-o
paper-ACC
hihans-**(r)are**-ta.
criticize-PASSIVE-PAST
"A teacher had his paper criticized by his students."

In this paper, the reason why HAVE causatives and HAVE passives have the same construction is explained by the assumption that the same functional projection VoiceP exists in both constructions. The contrast between English and Japanese is explained with the same assumption. This paper is composed as follows. In section 2, I introduce Hale and Keyser's (1993) and Miyagawa's (2010) arguments for causative constructions and Ritter and Rosen's (1993, 1997) arguments for a unified analysis of causatives and passives, which I will make use of. In section 3, I define the syntactic function and phonetic character of VoiceP. In section 4, I

explain the fact that HAVE causatives and HAVE passives in English have the same representation. Also, the contrast between English and Japanese is explained in terms of the phonetic character of v and Voice in each language. In section 5 I sum up this paper.

2. PREVIOUS STUDIES

◆Hale and Keyser (1993), Miyagawa (2010)

According to Hale and Keyser (1993) and Miyagawa (2010), when a new argument is introduced by new a vP above a certain vP, the introduced argument is interpreted as a Causer, and the causative interpretation is guaranteed syntactically. Concretely, in (5), a syntactically lower vP expresses the event that students walk out of class. When a new argument, *John*, is introduced by a new vP, this argument is interpreted as a Causer, so this sentence is interpreted as a causative sentence.

(5) [$_{vP}$ John [$_{v'}$ v [$_{vP}$ his students [$_{v'}$ v [$_{VP}$ walk out of class]]]]]

(*cf.* Miyagawa (2010) Hale and Keyser (1993))

In this paper, I will modify this analysis. I assume that we can introduce a new argument by not only vP but also VoiceP. I define this functional projection in detail in section 3. Based on this, I argue that construction (5) is not enough to produce a causative interpretation syntactically. I discuss this issue in section 4.

◆ Ritter and Rosen (1993, 1997)

Ritter and Rosen (1993, 1997) provide a unified analysis for HAVE causatives and HAVE passives. According to them, *have* is an amalgam of two functional heads, which extend an event temporally expressed by VP. For instance, in (6), when the event where students walk out of class is aspectually extended backwards, we recognize *John* as a participant who took part in the event before it happened, which means that *John* is a Causer. In contrast, when the event is aspectually extended forwards, we recognize *John* as a participant who took part in the event after it happened, so *John* is an Experiencer.

(6) [$_{F1P}$ John [$_{F1'}$ F1 [$_{F2P}$ his students

[$_{F2'}$ F2 [$_{VP}$ ~~his students~~ [walk out of

class]]]]]]

(Ritter and Rosen 1997: 302, 316)

Although this analysis elegantly captures two different functions of *have*, it is not clear which functional heads correspond to which. If the functional heads are specific to *have*, this analysis is too stipulative to have explanatory adequacy. In this paper, I also assume that *have* is amalgam of two functional heads, but these functional heads are not specific to *have*. Concretely, *have* is amalgam of v and Voice. I define *have* in the next section.

3. PROPOSAL

In this chapter, I define VoiceP in detail. VoiceP in passives is the counterpart of vP in actives. While v assigns *agent* to a DP in its Spec, Voice assigns *theme* to a DP in its Spec. Note that this *theme* is different from the theta role which is assigned by V. From now on, we call the theta role which is assigned in VoiceP Spec the "affected theme," which will make us interpret the DP as a Benefactee or a Malefactee. VoiceP projects above VP in passives just like vP projects above VP in actives. It has already been shown by Merchant (2013) and Harley (2013) that different functional projections project in actives and passives. In English, as V is assumed to move to v to be a root form in actives, I also assume that V moves to

Voice to be a past participle in passives. In addition, as v and Voice cannot be realized alone phonetically, I assume that when V cannot move to v or Voice, Voice moves to v to be realized as *have*. The characterization of VoiceP is stated in (7).

(7) a. A DP in its Spec is assigned *affected theme*.

b. Voice head realizes as past participle with V and *have* with v.

For instance, let us clarify the function of VoiceP by looking at (8) which is a typical passive derivation. In (8), VoiceP projects above the VP. DP moves from the complement position to VoiceP Spec, where it is assigned *affected theme*. V moves to Voice to be a past participle.

(8) [$_{TP}$ DP [$_{T'}$ T [$_{VoiceP}$ ~~DP~~ [$_{Voice'}$ Voice [$_{VP}$ V ~~DP~~]]]]]

In this paper, as I assume VoiceP to be a counterpart of vP, just as vP can introduce a new argument as an *agent*, I assume that VoiceP can introduce a new argument as an *affected theme*.

4. ANALYSIS

4.1. Causatives and Passives in English

First, let us consider how we can capture the fact that *have* can express causative meaning and passive meaning employing the assumption in (7). As mentioned in section 2, I claim that structure (5) is not enough to produce a causative interpretation. When the lower vP projects, the event where students go out of class is expressed. When a new vP introduces an agent *John*, which is an initiator of the event, a permissive interpretation arises. In order to provide a causative interpretation, we have to guarantee that students had some coercion from John. In other words, the notion of causative is more complicated than the notion of permission, so (5) is not enough to guarantee a causative interpretation. The functional projection which ensures that the causee had some coercion in a certain causative sentence is VoiceP.

(9) a. John had his students walk out of class. (=(1))

b. [$_{TP}$ John [$_{T'}$ T [$_{vP}$ ~~John~~ [$_{v'}$ v [$_{VoiceP}$ his students [$_{Voice'}$ Voice [$_{vP}$ ~~his students~~ [$_{v'}$ v [$_{VP}$]]]]]]]]]

In (9b), VoiceP projects above the lower vP, and *his students* moves to the VoiceP Spec. At this point, *his students* is assigned *affected theme*. *his students* has also been assigned *agent* in the lower vP Spec, so the interpretation is that this argument had some coercion and as a result this argument went out of class. When the new argument *John* is introduced by new vP, the source of the coercion is attributed to *John*, so *John* is interpreted as a Causer. V has already merged with the lower v, so Voice moves to the higher v to be *have*.

Then, let us consider the derivation of (9a) when it is interpreted as a passive. In (10b), just like (9b), VoiceP projects above the lower vP. What is different from (9b) is that *his students* does not move to VoiceP Spec. Rather, *John* is merged here. As a result *John* is assigned *affected theme*, so the interpretation of the construction is that students went out of class and John had some affectedness because of this event. In sum, whether DP in vP Spec moves to VoiceP Spec or new DP is merged in VoiceP Spec determines the Voice of certain HAVE sentence.

(10) a. John had his students walk out of class. (=(1))

b. [$_{TP}$ John [$_{T'}$ T [$_{vP}$ v [$_{VoiceP}$ ~~John~~ [$_{Voice'}$ Voice [$_{vP}$ his students [$_{v'}$ v

[$_{VP}$]]]]]]]]

Next, I show the derivation of HAVE passives where transitive verbs are used. What is remarkable is that while verbs are root form when they are intransitive, they are past participle when they are transitive. In (11a), as two affected argument, *John* and *his article* exist, two VoicePs project. *his article* which is merged in the complement position of V moves to the lower VoiceP Spec to be assigned *affected theme*. V moves to Voice to be past participle. Then *John* is merged in the higher VoiceP Spec to be assigned *affected theme*. As both *his article* and *John* are assigned *affected theme*, we interpret this construction that an article was criticized and John had some affectedness by this event.

(11) a. John had his article criticized by his students. (=(3c))

b. [$_{TP}$ John [$_{T'}$T [$_{vP}$ [v [$_{VoiceP}$ ~~John~~

[$_{Voice'}$ Voice [$_{VoiceP}$ his article

[$_{Voice'}$ Voice [$_{VP}$ criticize ~~his~~

~~article~~]]]]]]]]]

Whether the verbs are root form or past participle is determined by whether vP or VoiceP project above VP. When verbs are intransitive, vP projects above VP, so the verb moves to v to be a root form. When verbs are transitive, VoiceP projects above VP, so the verb moves to Voice to be a past participle.

4.2. Causatives and Passives in Japanese

As I mentioned in section 3, v and Voice cannot be realized phonetically by themselves in English. In contrast, according to Murasugi and Hashimoto (2004), we can assume that v and Voice have individual phonetic form respectively in Japanese.

(12) a. Taroo-ga Hanako-o syasin-ni utu-**s**-(r)u.

b. Hanako-ga syasin-ni utu-**r**-(r)u

(Murasugi and Hashimoto 2004: 2)

(12) shows that transitive verbs and unaccusative verbs have different form in Japanese. This fact implies that v in Japanese has an individual phonetic form. As Voice in passives is assumed to be a counterpart of v in actives in this paper, I assume that Voice also has individual phonetic form in Japanese, "-rare."

Then, let us consider the derivation of causatives in Japanese first. As in (13b), the derivation is the same as English as in (9b). VoiceP projects above the lower vP, into whose Spec *seito* moves to be assigned *affected theme*. As this argument is assigned *agent* and *affected theme*, it is interpreted as a Causee. So when *sensei* is introduced by a new vP, it is naturally interpreted as a Causer. As a result, the whole construction is interpreted as a causative sentence.

(13) a. Sensei-ha seito-o kyoushitsu-kara deteik-(s)ase-ta. (=(2))

b. [$_{TP}$ sensei [$_{T'}$ [~~sensei~~ [$_{v'}$ [seito

[$_{Voice'}$ [~~seito~~ [$_{v'}$ [$_{VP}$] v]] Voice]] v]]

T]]

What should be noted is that we have assumed that v and Voice have individual phonetic form in Japanese. According to this assumption, the phonetic form of the verb in (13) should be "deteik-(r)are-(s)ase-ta," but in fact the appropriate form is "detei-(s)ase-ta." Let us return to this issue in 4.3.

The next issue is why we can interpret *–sase* causatives in Japanese as permissive sentences. In English, we have to use specific lexical items such as *allow* or *let* in order to express permissive

interpretation. This is because v cannot be realized by itself in English. In contrast, v has its own phonetic form in Japanese, so vPs can project in succession. A construction like (14) guarantees a permissive interpretation syntactically.

(14) a. Sensei-ha seito-ni kyoushitsu-kara deteik-(s)ase-ta. (=(2))

b. [$_{TP}$ sensei [$_{T'}$ [$_{vP}$ ~~sensei~~ [$_{v'}$

[vP seito [$_{v'}$ [$_{VP}$] v]] v]] T]]

Above the lower vP which expresses the event where students go out of class, the new vP projects to introduce the argument *sensei*. This argument, *sensei*, has no relationship to the event happening. The event occurs even if *sensei* does not do anything. Thus, *sensei* has only to allow the students to go out of class. In this way, we can guarantee a permissive interpretation syntactically by projecting vPs in a row in Japanese.

Let us consider passives in Japanese. First, as for direct passives, derivations are not different from that in English (see example (15)). VoiceP projects above VP, and *sensei* moves to its Spec to be assigned *affected theme*. Voice has the phonetic form *–rare*, so the construction in (15b) is realized as (15a).

(15) a. Sensei-ha seito-ni hihans-(r)are-ta. (=(4a))

b. [$_{TP}$ sensei [$_{T'}$ [$_{VoiceP}$ ~~sensei~~ [$_{Voice'}$

[$_{VP}$ ~~sensei~~ hihans] Voice]] T]]

Second, we look at indirect passives where intransitive verbs are used. While v helps the phonetic realization of Voice in English, Voice is realized by itself in Japanese, which means that the representation of indirect passives does not differ from that of direct passives.

(16) a. Sensei-ha seito-ni kyoushitsu-kara deteik-(r)are-ta. (=(4b))

b. [$_{TP}$ sensei [$_{T'}$ [$_{VoiceP}$ ~~sensei~~ [$_{Voice'}$

[$_{vP}$ seito [$_{v'}$ [$_{VP}$] v]] Voice]] T]]

Finally, consider indirect passives where transitive verbs are used. As in English, two VoicePs project in order to assign *affected theme* to two DPs.

(17) a. Sensei-ha seito-ni ronbun-o hihans-(r)are-ta. (=(4c))

b. [$_{TP}$ sensei [$_{T'}$ [$_{VoiceP}$ ~~sensei~~ [$_{Voice'}$

[$_{VoiceP}$ ronbun [$_{Voice'}$ [$_{VP}$ ~~ronbun~~

hihans] Voice]] Voice]] T]]

Here, the same phonetic problem that we saw with causatives also arises. If Voice has the individual phonetic form *–rare* in Japanese, the representation should be "hihans-(r)are-rare-ta". However, in fact the appropriate realization is "hihans-(r)are-ta". In the next section, we consider this phonetic problem.

4.3. Realization of Voice

As mentioned above, the structure in (17b) should be phonetically realized as (18).

(18) * Sensei-ga ronbun-o seito-ni hihans-(r)are-rare-ta.

However, (18) is ungrammatical. Rather, when we remove one *-rare*, the sentence become grammatical. Interestingly, the same problem is noticed in causatives where two instances of causation exist as pointed by Kuroda (1993).

(19) a. George-ga Naomi-ni
George-NOM Naomi-DAT
Ken-o
Ken-ACC
oki-sase-ru.
get up-CAUSE-PRESENT
"George makes Naomi make Ken get up."

(Kuroda 1993: 10)

b. [$_{TP}$ George [$_{T'}$ [$_{vP}$ ~~George~~ [$_{v'}$

[$_{VoiceP}$ Naomi[$_{Voice'}$ [$_{vP}$ ~~Naomi~~ [$_{v'}$

[$_{VoiceP}$ Ken [$_{Voice'}$ [$_{VP}$ ~~Ken~~ oki]

Voice]] v]] Voice]] v]] T]]

(*ibid.*)

In (19a), we can find two coercions. One is from Naomi to Ken, and the other is from George to Naomi. Thus, the derivation of (19a) should be (19b). First, a VoiceP projects above the VP which shows the event where Ken gets up. Then *Ken* moves to VoiceP Spec, which means that Ken had some coercion before he got up. Next, when *Naomi* is introduced by vP, it is decided that the person who awoke Ken is Naomi. After that another VoiceP projects, and *Naomi* moves to its Spec, which means that Naomi awoke Ken after she had some coercion. When another vP projects above it with *George* in its Spec, it is decided that the person who made Naomi awake Ken is George. Looking at (19b), we can notice two sets of v and Voice. Therefore, when (19b) is phonetically realized, the whole pronunciation should be (20).

(20) * George-ga Naomi-ni
George-NOM Naomi-DAT
Ken-o
Ken-ACC
oki-sase-sase-ru.
get up-CAUSE-CAUSE-PRESENT

(Kuroda 1993: 10)

However, (20) is not grammatical, and when we remove one *-sase* from it, it becomes grammatical. Regarding these facts, I propose the following generalization.

(21) Realization of v and Voice in Japanese
① v suppresses realization of Voice
②Only one of the same sound in succession is pronounced.

Phonetic realization of causatives follows (21①). Considering the existence of v and Voice, the sound we expect is "rare-sase". However, as v suppresses realization of Voice, only *–sase* is pronounced. This generalization also captures the phonetic characteristic of passives of causatives. When we passivize causatives, the whole morpheme of the verb is "sase-rare" because v suppresses one of the two Voices. As for indirect passives or double-causatives where we expect sounds like "rare-rare" or "sase-sase", one of them is suppressed following (21②). Of course this generalization needs appropriate explanation with clear evidence, which I leave for future work.

5. SUMMARY

In this paper, I have shown the close relationship between syntactic structure of passives and that of causatives, assuming that VoiceP assigns *affected theme* to DP in its Spec. I have also explained why HAVE causatives and HAVE passives have the same representation despite their different meanings. In addition, I have explained the contrast in terms of passives and causatives between English and Japanese with the same assumption. I show in (22) and (23) what interpretation we can guarantee syntactically in English and Japanese. Both of them can produce actives projecting vP above VP, passives projecting VoiceP above VP, and causatives projecting vP and VoiceP above VP. As for indirect passives, in Japanese the Voice head has individual phonetic form so the form is the same as direct passives while in English the Voice head has no appropriate phonetic form so it needs to make an amalgam with v, so indirect passives and causatives have the same representation. Only in Japanese can we guarantee a permissive interpretation syntactically

projecting vP in succession above VP while in English since we do not have the same method so we need specific lexical items such as *allow* or *let*.

(22) English

F1P	F2P	interpretation	example
	vP	actives	
	VoiceP	direct passives	(8)
vP	VoiceP	causatives indirect passives	(9) (10) (11)

(23) Japanese

F1P	F2P	interpretation	example
	vP	actives	
	VoiceP	passives	(15) (16) (17)
vP	VoiceP	casatives	(13)
vP	vP	permissives	(14)

NOTES

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REFERENCES

Hale, Kenneth and Samuel J. Keyser (1993) "On Argument Structure and the Lexical Expression of Syntactic Relations," *The View from Building 20: Essays in Honor of Sylvain Bromberger,* ed. By Hale Kenneth and Samuel J. Keyser, 53-108, MIT Press, Cambridge.

Harley, Heidi (2013) "External Arguments and the Mirror Principle: On the Distinctness of Voice and v," *Lingua* 125, 34-57.

Kratzer, Angelica (1996) "Severing the External Argument from its Verb," *Phrase Structure and the Lexicon*, ed. by J. Rooryck and L. Zaring, 109-138, Kluwer, Dordrecht.

Kuroda, S-Y. (1993) "Lexical and Productive causatives in Japanese: An Examination of the Theory of Paradigmatic Structure," *Journal of Japanese Linguistics* 15, 1-82.

Merchant, Jason (2013) "Voice and Ellipsis," *Linguistic Inquiry* 44, 77-108.

Miyagawa, Sigeru (2010) "Blocking and Causatives: Unexpected Competition Across Derivations," *Proceedings of the 5th Formal Approaches to Japanese Linguistics*.

Murasugi, Keiko and Tomoko Hashimoto (2004) "Three Pieces of Acquisition Evidence for the v-VP Frame," *Nanzan Linguistics* 1, 1-19.

Ritter, Elizabeth and Sara Rosen (1993) "Deriving Causation," *Natural Language and Linguistic Theory* 11, 519-555.

Ritter, Elizabeth and Sara Rosen (1997) "The Function of Have," *Lingua* 101, 295-321.

後続子音による母音長の変化：幼児・成人の日本語コーパス分析と成人の英語学習データ

(Durational Variations Caused by the Following Consonant: Corpus Analyses of Japanese Children and Adults, and Adult English Learners' Production)

北原真冬 (Mafuyu Kitahara)*
米山聖子 (Kiyoko Yoneyama)**

*早稲田大学 (Waseda University),
**大東文化大学 (Daito Bunka University)

キーワード：母音長，有声効果，言語獲得，第二言語，英語学習

1. はじめに

英語の母音が，有声子音の前では無声子音の前よりも持続時間が長いことは，これまでに多くの実験によって確かめられている(House, 1961; Mack, 1982)。これについて「硬音前での短音化(pre-fortis clipping)」という呼び名もあるが(Hattori, p.c.; Wells, 1990)，本稿では，これを有声効果(voicing effect)と呼ぶ(Chen, 1970)。

有声効果は成人の英語発話では約 1.5 倍にも及ぶと言われている(House, 1961)。例えば，"bed"と"bet"では前者の母音の長さは後者の 1.5 倍になるということである。英語話者の乳幼児でも同様の効果が見られるという報告もある(Ko, 2007)。また，韓国語，ロシア語，フランス語などにも，英語ほど顕著ではないが有声効果の存在が確認されている(Chen, 1970; Mack, 1982)。

したがって，有声効果は普遍的な音声メカニズムに起因するという考え方がある一方で(Ko, 2007)，英語の「1.5 倍」という効果の大きさには言語固有の文法が関係しているという見方もある(House, 1961)。

また，有声効果に関する音節の影響についても検討がなされている。いわゆる大きな有声効果が得られるのは単音節語同士の比較の場合であり，2 音節の単語では効果が著しく減少することが分かっている(Klatt, 1973)。

本稿では，まず普遍的な音声メカニズムに起因するという仮説を検討するため，幼児および成人の日本語話者における有声効果の有無を検証する。その上で，英語の大きな有声効果を英語学習者が獲得できるのかどうか，習熟度によって分けた 2 群の被験者の産出データから検討する。

2. 日本語音声コーパスの分析

2.1 乳幼児コーパス

NTT 乳幼児音声データベース(Amano et al., 2008)所収の音声データのうち，ラベリングが付されている 3 名分を使用して，有声効果の検討を行った。音声はいずれも家庭内での自然発話であり，出生からおよそ５歳までの期間が録音されている。ラベリングに従って，全ての母音について直後の子音環境ごとの持続時間の平均を図 1 に示す。なお，以降のグラフにおいても全て，グレーが有声子音環境，白が無声子音環境を表す。また縦軸は常にミリ秒を単位とし，標準誤差をエラーバーとして付している。

結果は，破裂音環境においても（$t=-12.96$, $df=6988$），摩擦音環境においても（$t=-4.75$, $df=1293$）有声効果は有意であった。また調音

法による主効果も有意であった(F[1,2] = 108.1, p<0.01)。

次に母音の高さによって分類したものを図2 に示す。いずれの場合も有声効果は有意に現れた(高母音: t=-8.72, df=3811; 中母音: t=-9.19, df=2470; 低母音: t=-6.66, df=2265)。また母音の高さによる主効果も有意であった(F[2,2]=22.13, p<0.05)。

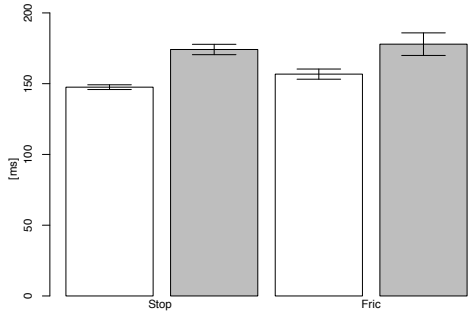


図 1: 破裂音と摩擦音環境における母音長

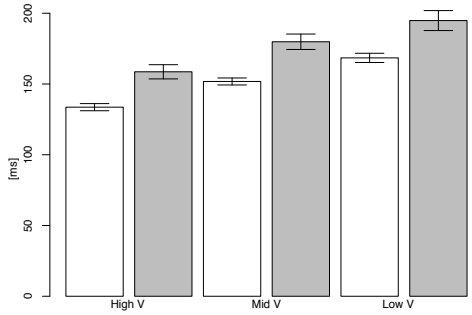


図 2: 母音の高さ別

次に，発達段階による母音長の変化を 10 ヶ月ごとに区切って表す。ラベリングにおいて短母音とされているものと長母音とされているものを，それぞれ図 3 と図 4 に示す。

短母音の場合，30-40 ヶ月の期間を除く全ての期間において有声効果は有意に現れた(以降 t 検定の結果は省略)。しかし長母音の場合は20-30 ヶ月および40 ヶ月以上の期間では有声効果が有意差を持たなかった。

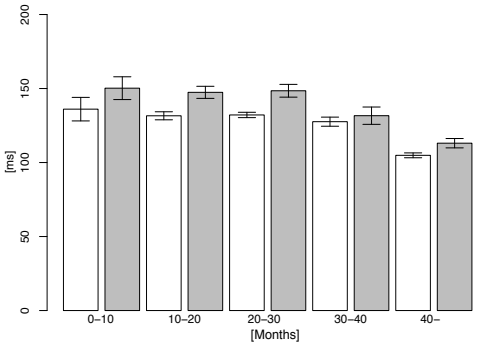


図 3: 10 ヶ月ごとの短母音の母音長

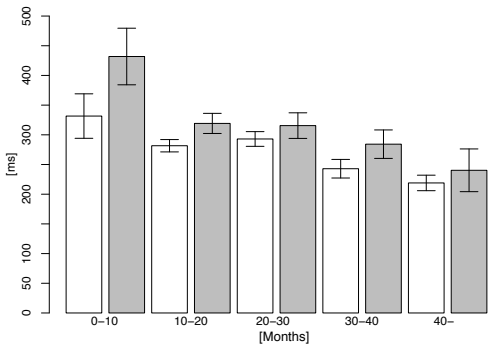


図 4: 10 ヶ月ごとの長母音の母音長

2.2 乳幼児コーパス分析の解釈

乳幼児コーパスのデータ分析において特筆すべきことは，日本人話者が日本語においても極めて初期から有声効果を示すという事実である。また，子音の調音法および母音の高さという調音的な特性によって母音の長さは全般に影響を受けるが，一貫して有声効果が現れる。これらの点を併せて考えると，有声効果には普遍的・音声的なメカニズムが強く関与していると考えられる。

また，短母音・長母音のいずれも，10 ヶ月ごとの大まかな傾向として短くなっている。特に長母音は 0-10 ヶ月と比べて 40 ヶ月以降には 2/3 程度の長さになっている。これは，日本語の音韻において弁別的な母音の長短というカテゴリーを確立していく過程を表していると推察できる。

2.3 成人コーパス

日本語話者の成人データとして Corpus of

Spoken Japanese (CSJ:　Maekawa, 2003)のいわゆるコアデータを用いた。これは201人の学会講演などを主とした自発音声にラベリングや種々の韻律情報が付されたものである。コーパスのラベルに従い，母音の長短，および後続子音の調音法および調音点で分類した母音長を図5と6に示す。

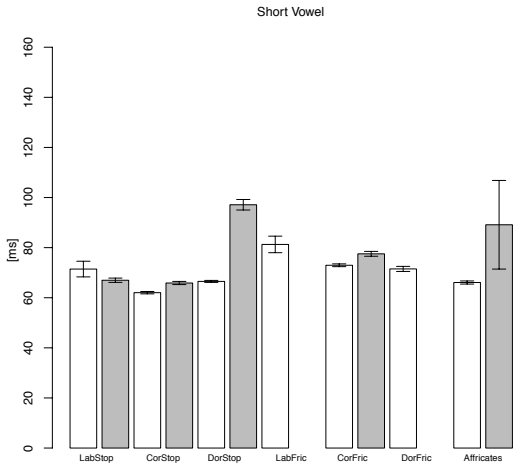


図5: 様々な子音環境における短母音

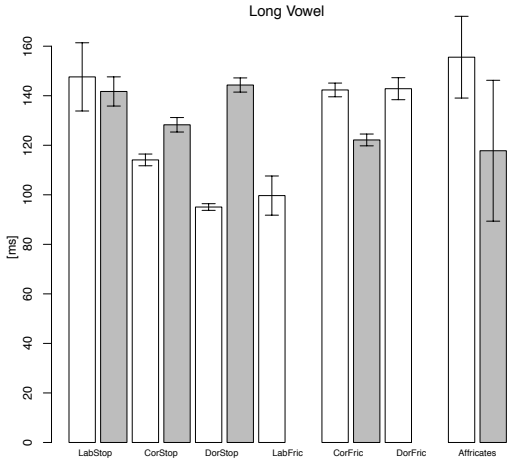


図6: 様々な子音環境における長母音

まず，短母音においては両唇破裂音(LabStop)において有声効果が逆転している。すなわち，無声子音環境の方が母音が長い。その他の調音法・調音点の分類においては，音韻体系上存在しない有声の両唇や軟口蓋の摩擦音との比較を除き，全て有声効果が現れている。

一方，長母音では両唇摩擦音の場合は有意差がなく，舌頂摩擦音(CorFric)と破擦音(Affricates)の場合には逆転が現れている。

2.4 成人コーパス分析の解釈

成人データの特徴は，有声効果が特に長母音の場合に一貫したものではないことである。一方で，データ全体を通じて，短母音は60-100ms，長母音は100-160msというカテゴリーが成立していることが分かる。これは乳幼児において現れていた音韻的な長短の弁別が完成した形であると解釈できる。乳幼児のデータの傾向と併せて考えると，普遍的・音声的な有声効果が，言語固有の長短弁別によって覆い隠されているのではないかと推察できる。

3.　英語学習者の産出実験

3.1 実験の手法

日本人の英語学習者において，有声効果は現れるのか否かを検証するために，24名の被験者について産出実験を行った。素材はbet-bed, beat-beadなど16の最小対をSay ___ nowというキャリア文に入れたものとした。それらを，Praat (Boersma & Weenink, 2013)のExperimentMFC機能を改変してPCスクリーンにランダムな順序で提示し，各単語について6回の発話を44.1kHz/16bitでデジタル録音した。音声分析もPraatを用い，まずText Grid (silences)機能を用いて閾値-25dB で自動的に分節した後に，スペクトログラムと波形を目視して測定箇所を決定した。

被験者は大学生および大学院生で，3ヶ月以上の英語圏滞在経験を持つ者を「上級」，3ヶ月未満を「標準」と分類した。「上級」の1名が録音時の不備によりデータを採用できなかったため，合計23名について分析を行った。

3.2 産出データの分析

まずは，標準・上級の区別なく被験者群全体での平均値を示す。後続子音の調音法，調音点によって分類したものを図 7 に，母音の高さと Tenseness によって分類したものを図 8 に示す。

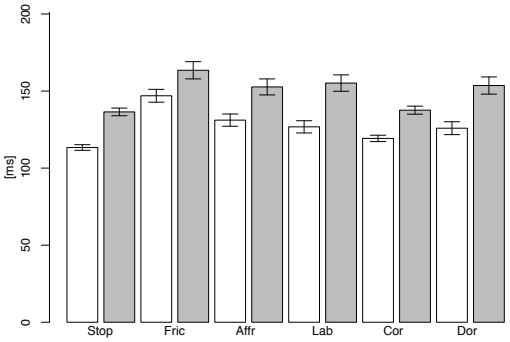


図 7: 子音環境による分類

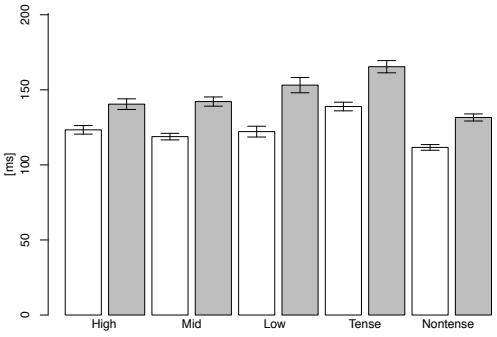


図 8: 母音の高さと Tenseness による分類

どちらの図においても，全ての分類において有声効果は有意に現れた。続いて標準と上級話者の比較を図 9 に示す。

グラフから明らかなように，上級の話者は標準よりも大きな有声効果を示す(習熟度と有声効果の交互作用は $F[1, 20]=18.55$, $p<0.01$ で有意)。しかしながら，有声効果の大きさは標準で 113% (無声環境での平均母音長 123.9ms, 標準偏差 41.7; 有声環境での平均母音長 148.3ms, 標準偏差 51.5)，上級で 125% (無声環境での平均母音長 135.9ms, 標準偏差 48.4; 有声環境での平均母音長 170.4ms, 標準偏差 58.9)であった。

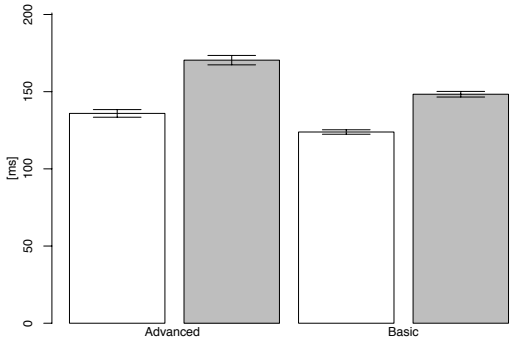


図 9: 習熟度別の比較

3.3 産出データの解釈

子音環境が様々でも，母音を場合分けしても一貫して有声効果が観察された。特に Tenseness の有無に関わらず有声効果が現れたことは，日本語の長短母音における有声効果の現れ方の違いと比べて非常に示唆的である。標準レベルの英語学習者の母音は，音価としては英語音素にはほど遠い場合が多いにも関わらず，Tense 母音と Nontense 母音については日本語の母音の長短をそのまま当てはめているのではないことが推測される。

また，上級の話者が英語の 150%という値に向かって近づいていることは，普遍的・音声的な有声効果が第二言語学習によって再び顕在化し，さらに促進されていると考えることができる。

4. まとめと展望

本稿では乳幼児および成人のコーパスデータと英語学習者の産出実験を分析し，母音長に対する後続子音の有声性の影響を見た。

第一言語としての日本語において，乳幼児期に有声効果が存在するということは，これまで指摘されたことがない発見である。さらに，その効果が成人の特に長母音においては

一貫しなくなるということも，これまで注目されてこなかった。これは，長短母音の音韻的確立に伴って，有声効果が何らかの形で抑制されていると考えることができる。

一方，第二言語学習においては，母語では抑制されていた有声効果が再び現れ，標準から上級に進むことで促進されたと考えられる。つまり，有声効果とは普遍的・音声的な基盤を持ちながらも，個別言語の音韻的特質によって抑制･促進されうるものではなかろうか。

今後の展望としては，この「抑制・促進」の機序について仮説を立て，より詳しいコーパス分析や実験によって検証していく必要がある。また，Klatt (1973)が指摘した音節の影響について，詳しく検討する必要がある。日本語はモーラを基本とする音節の連鎖によって成り立っており，単音節よりも多音節の単語が圧倒的に多い。しかし単音節の単語ではそもそも，有声性の弁別を持つ後続子音は存在しない。従って，本稿で見た日本語のデータを英語の多音節語の場合と比較する必要がある。

知覚において，このような音素レベル未満の差異をどのように処理しているのか，それが第一言語と第二言語ではどう違うのか，という問題についても，これから取り組んでいかなければならないであろう。

参考文献

Amano, S., T. Kondo, & K. Kato (2008) “Development of NTT Infant Speech Database”, *Technical report of IEICE*, 108(59), 29-34.

Boersma, P. & D. Weenink, *Praat: Doing Phonetics by Computer*, version 5.3.39 [Computer Program], University of Amsterdam, Netherlands. Online: http://www.praat.org/, retrieved on 6 January 2013.

Chen, M. (1970) “Vowel Length Variation as a Function of the Voicing of the Consonant Environment”, *Phonetica* 22, 129-159.

House, A. S. (1961) “On Vowel Duration in English”, *Journal of the Acoustical Society of America* 33, 1174-1178.

Klatt, D. (1973) “Interaction between Two Factors that Influence Vowel Duration”, *Journal of the Acoustical Society of America* 54, 1102-1104.

Ko, E-S. (2007) “Acquisition of Vowel Duration in Children Speaking American English”, *Proc. of Interspeech 2007*, 1881-1884.

Mack, M. (1982) “Voicing-dependent Vowel Duration in English and French: Monolingual and Bilingual Production”, *Journal of the Acoustical Society of America*, 71(1), 173-178.

Maekawa, K. (2003) “Corpus of Spontaneous Japanese: Its Design and Evaluation”, *Proc. of the ISCA & IEEE Workshop on Spontaneous Speech Processing and Recognition (SSPR2003)* [CD-ROM].

Tauberer, J. I. & K. Evanini (1999) “Intrinsic Vowel Duration and the Post-vocalic Voicing Effect: Some Evidence from Dialects of North American English”, *Eurospeech 1999* [CD-ROM].

Wells, J. C. (1990) “Syllabification and Allophony”, in S. Ramsaran (ed.), *Studies in the Pronunciation of English*, A Commemorative Volume in Honour of A.C. Gimson, London anKlad New York: Routledge, 76-86.

定冠詞の一意性理論に対する例外
(Some exceptions to the uniqueness theory of the definite article)

北村　久(Hisashi Kitamura)
北海道大学専門研究員(Hokkaido University)

キーワード：定冠詞、一意性、予測可能性、総称、個別性

１．はじめに

定冠詞の振る舞いの研究は多岐に渡るが、定冠詞はそれが付随する名詞句の familiarity を表すという説と定冠詞のある名詞句の指示対象は一意的に同定可能なものであるという説に大別される。両方の理論の紹介としては Lyons (1999)と Abbott (2004)が挙げられる。前者の理論では Christopherson (1939)、Jespersen (1943)、Heim (1982, 1983)などの研究がある。後者の理論では、Russell (1905)、Hawkins (1978, 1991)、 Kadmon (1990)、 Gundel et al. (1993)などの研究がある。

本研究は、Birner and Ward (1994)の議論に焦点を当てて、定冠詞の指示対象が一意的に同定可能であるという主張の例外は、その指示対象が区別されなかったり、関連する仕方で区別することができなかったりする場合であるという論点を批判的に検討して代替案を提示する。本研究は、当該の現象について三種類の方言を検討する。定冠詞がそれを保持した単数名詞句に対応する対象が複数ある状況で使われている発話出来事を考える。そのとき、以下の三点を主張する。

（１）ある方言では、単数名詞句の定冠詞がこの状況で適切に使用されるのは、定冠詞を持つ単数名詞句とそれに隣接する述語の結びつきがこれらの範疇に対する文脈と前提が伴う我々の慣習に基づいて十分に予測可能であり期待することができるものであるときかつそのときに限る。

（２）別の方言では、単数名詞句の定冠詞がこの状況で適切に使用されるのは、述語が肯定されてその行為が起こり、かつ、定冠詞を持つ単数名詞句とそれに隣接する当該の述語の結びつきがこれらの範疇に対する文脈と前提が伴う我々の慣習に基づいて十分には予測不可能であるときかつそのときに限る。

（３）もう一つの方言は、定冠詞の一意性理論の反例または定冠詞の総称用法の理論の例外を示す。

２．先行研究

Birner and Ward (1994)は、以下の例に注目する。

(4) [To spouse, in a room with three equally salient windows]
It's hot in here. Could you please open *the window*? (Birner and Ward (1994:93))

彼らは、この例に基づいて以下の論点が正しいと主張する。

(5) …whenever the referent is not uniquely identifiable on the basis of the definite NP it must be both undifferentiated and not relevantly differentiable in context. (Birner and Ward (1994:93))

つまり、彼らの主張に従うと、定冠詞付きの

名詞句の指示対象が一意的に同定可能であるという主張の例外は、その指示対象が区別されなかったり、関連する仕方で区別することができなかったりする場合であることになる。

今しがた、Birner and Ward (1994)の定冠詞の指示対象の一意性に関する例外的場合の一般化を見た。しかし、以下の例を見てほしい。

(6) [Suppose that there are three windows each of which differs with respect to the size and the form.] Could you please open *the window*?

今考慮中の方言ではこの例は完全に適切である。定冠詞の指示対象が、区別されなかったり、関連する仕方で区別することができかったりする場合でもその指示対象が一意的に同定可能でなければならないという主張の例外を観察することができる。

３．総称的用法を示す方言

３．１．一般化

当該の方言は、あるイギリス人話者に由来する。ここでは、以下の状況に於ける参与者にとって、一つの特定的な窓が問題になっていないものとする。

(7) [Suppose that there are three equally salient windows.]
John opened *the window*.
(8) [Suppose that there are three windows each of which differs with respect to the size and the form.]
John opened *the window*.

（４）と（６）から（８）の例は自然である。話者の報告ではこれは総称的用法であるという。これを客観的に示す必要があるが、これを将来の研究にゆだね、本研究はこれを前提する。

以下の例を見てほしい。

(9) [Suppose that there are three equally salient windows. Suppose that the speaker wants to know whether or not the hearer has a strong power.]
#Could you please destroy *the window*?
(10) [Suppose that there are three windows each of which differs with respect to the size and the form. Suppose that the speaker wants to know whether or not the hearer has a strong power.]
#Could you please destroy *the window*?
(11) [Suppose that there are three equally salient windows.]
#John destroyed *the window*.
(12) [Suppose that there are three windows each of which differs with respect to the size and the form.]
#John destroyed *the window*.

これらの例に（１）の一般化が考えられる。

この一般化と似た分析として、Fillmore (1977,1987)の言う frame を用いた定式化が考えられるが、こうしたタイプの分析と我々の一般化は異なる。その理由は、我々の一般化は文脈や前提を考慮に入れており、典型的な対象や出来事だけでなく、個別特定的な事象を反映した振る舞いもその予測の中に含めているからである。

３．２．暫定的説明

当該の例について、述語が表す事象と定冠詞付きの単数名詞句の指示との関連は予測可能であるから、その単数名詞句の指示は述語の指示と個別に関連させられるものではなくその述語との関係に関して一般的・総称的・任意的である。例えば、述語“open”と単数名詞句“the window”との結び付きは予測可能であるから構成要素“open the

window”が一般性を帯びた独立した単位として働き、そこに含まれる単数名詞句“the window”の指示はそれに応じて一般的・総称的・任意的なものになり得るわけである。その単数名詞句の指示対象は、その名詞句に適合し、かつ、話者と聞き手が接近できる対象であればどれでもよいことになる。よって、当該の場合に於いて、複数の指示対象の存在を許容され、その中のどの対象が選ばれてもよいということになる。

この用法は総称的用法であるから、定冠詞の用法の一つは一意的存在の用法であるという一意性理論の反例ではない。

４．一意的存在の用法を示す方言

４．１．一般化

アメリカ人のある話者は以下の直観を持っている。ここでは、以下の状況に於ける参与者にとって、一つの特定的な窓が問題になっていないものとする。

(13) [Suppose that there are three equally salient windows.]
?Could you please open *the window*?
(14) [Suppose that there are three windows each of which differs with respect to the size and the form.]
?Could you please open *the window*?
(15) [Suppose that there are three equally salient windows.]
?John opened *the window*.
(16) [Suppose that there are three windows each of which differs with respect to the size and the form.]
?John opened *the window*.
(17) [Suppose that there are three equally salient windows. Suppose that the speaker wants to know whether or not the hearer has a strong power.]
?Could you please destroy *the window*?
(18) [Suppose that there are three windows each of which differs with respect to the size and the form. Suppose that the speaker wants to know whether or not the hearer has a strong power.]
?Could you please destroy *the window*?
(19) [Suppose that there are three equally salient windows.]
John destroyed *the window*.
(20) [Suppose that there are three windows each of which differs with respect to the size and the form.]
John destroyed *the window*.

この方言では、（１９）と（２０）は自然である。ここでは動詞“destroy”がその文脈内での出現を十分予測できないので意味上の焦点が当たることになり、かつ、肯定されてすでに起こったことであることに注意してほしい。この例の動詞は、すでに起こったことだから、「窓」という名詞の指示対象の性質の一つを作り出す。従って、すでに起こった動詞の行為への焦点によって、その性質による名詞の「窓」の個別化が進み、一意的存在の用法の方言の下で、その一つの「窓」が選び出されて指示が達成される。疑問文の中で同じ動詞“destroy”が使われていている（１７）と（１８）では動詞の行為がすでに起こっていないので、この例の動詞は「窓」という名詞の指示対象の性質の一つを作り出さない。従って、一意的存在の用法の方言の下で、動詞に当たっている焦点が複数の「窓」から一つの「窓」を個別化して選び出すように働かない。よって、この例は不自然である。（１５）と（１６）の例では、動詞“open”はその文脈内での出現が十分予測できるために焦点化されず、一意的存在の用法の方言の下で、複数の窓から一つの窓を選び出すことにならない。よって、これらの例は不自然である。疑問文の（１３）と（１４）の例にも同じ議論が適用し、疑問文の性質からして、これらの例が不自然であるのはなお

さらである。ここでの一般化は上の（２）である。

４．２．暫定的説明

（１１）から（１５）の例では、無標の動詞が使われていている。このとき、複数の対象が存在する条件の下で、定冠詞付きの単数名詞句の使用は不適切になる。よって、この場合は当該の方言で定冠詞の一意的存在の用法が働いているという仮説を支持する。ここでこの仮説は（１９）と（２０）の例と整合的であることを主張する。これらの例では使われている動詞が文脈上予測不可能で焦点になるために複数の対象の中から一つの対象を個別化して選び出していることに注意してほしい。（１７）と（１８）の例は（１９）と（２０）の例を説明する焦点の理論の下に収まることに注意してほしい。この方言のすべての例に関する観察は定冠詞の一意的存在の理論と定冠詞付きの名詞句に対する焦点による個別化の理論から帰結する。

当該の例について、述語が表す事象と定冠詞付きの単数名詞句の指示との関連は予測不可能であるから、その単数名詞句の指示は述語の指示と個別に関連させられるものであり、その述語との関係に関して個別的・特定的になる。例えば、述語“destroy”と単数名詞句“the window”との結び付きは予測不可能であるから構成要素“destroy the window”が個別性を帯びた独立した単位として働き、そこに含まれる単数名詞句“the window”の指示はそれに応じて個別的・特定的になるわけである。その単数名詞句の指示対象は、その名詞句に適合し、かつ、話者と聞き手が特定的に接近できる対象でなければならない。よって、当該の場合に於いて、動詞の焦点の働きによって、複数の指示対象の中から一つの対象が選ばれることになる。

この用法は個別的用法であるから、定冠詞の用法を決定する要因は一意的存在の用法であり、この場合我々の例は一意性理論の反例ではない。

５．定冠詞の理論の例外を示す方言

あるアメリカ人の話者は（１３）から（２０）の例がすべて語用論的に自然であるという直観を持っている。前節で検討した定冠詞の総称的または個別的用法はこの方言で存在しないのであるから、この方言に於ける当該のデータは定冠詞の総称的用法かまたは定冠詞の一意性に対する反例となる。

６．先行研究のデータ

上の第３節の方言での一般化を支持する独立した例が先行研究にある。Birner and Ward (1994:100)は、以下の発話は一意性が欠けた状況で、通常の予め確立された path があるときにのみ、定冠詞は使われ得ると論じる。

(21) To get to Dr. Smith's office, I suggest taking *the bus* / #*the bike*. (ibid.)

この主張を再検討して、この対比が我々の一般化を独立に支持することを示す。Birner and Ward はこの例を他の例と関連させて統一的に扱っていないのに対して、我々はこの例を他の例と関係させて統一的な形で予測する。「スミス博士のオフィスへ行くために」という文脈の下で、通常の予め確立された path があるときには、それと関連する単数名詞句“the bus”と述語“suggest taking”との結びつきは、我々の慣習と当該の文脈に基づき十分予測できるものであるから、その指示対象が複数ある文脈で適切であると予測される。つまり、「スミス博士のオフィスへ行くために」という文脈と通常のバス便がある状況の下で、名詞「バス」と「それに乗ることを提案する」という述語は結びつくことが十分に期待されるわけである。事実、この例は適切であり、我々の一般化の下に収まる。この分析が正しいことを仮定して上の一

般化（1）の条件を使う。

それに対して、「スミス博士のオフィスへ行くために」という文脈の下で、通常の予め確立された path がない場合を検討する。通常の予め確立された path がない単数名詞句“the bike”と述語“suggest taking”との結びつきは、なぜ当該の乗り物がオートバイなのか理由がないから、一般化の条件（1）が含意する否定の形式を満たす。よって、この例は、その指示対象が複数ある文脈で不適切であると予測される。事実、この例は不適切であり、我々の一般化の下に収まる。我々の一般化は我々の例とは独立にこれらの対比で支持されるわけである。

これらの分析は次の例にも当てはまる。

(22) To get to Ludington, we took *the ferry* / ?*the boat*. (Birner and Ward (1994:101))

この対比を再検討して、この対比が我々の一般化を独立に支持することを示す。Birner and Ward はこの例を他の例と関連させて統一的に扱っていないのに対して、我々はこの例を他の例と関係させて統一的な形で予測する。適切さの低い「ボート」の例の方では、彼らは、話者が当該のボートを所有しているか確立されたボート便があるときに適切になると述べているようである(ibid.)。つまり、この場合では、単数名詞句“the boat”と述語“took”との結びつきは、話者がボートを所有しているときと確立されたボート便があるときには得られ、一般化の条件（1）を満たす。事実、この場合は適切であり、我々の一般化を支持する。他方、こうした文脈がないときには、なぜ「ボート」が関わるのか指定する理由がないので、適切さが低いと予想される。事実、この場合はあまり適切ではなく、我々の一般化を支持する。適切さに問題のない「フェリー」の例の方では、確立されたフェリー便があることが通常の読みであり、この場合では、単数名詞句“the ferry”と述語“took”との結びつきは、確立されたフェリー便があるという通常の読みから得られ、一般化の条件（1）を満たす。事実、この例は適切であり、我々の一般化を支持する。よって、我々の一般化は我々の例とは独立にこれらの対比で支持されるわけである。

以下の発話は、どのペンが指示対象として選択されたとしても最適な仕方で関連するにも拘らず定冠詞の使用は不適切であると論じられている(Birner and Ward (1994:96))。つまり、Birner and Ward は、以下の例を、定冠詞の使用に対する関連性理論の立場に対して問題となる例として使っている。

(23) I went to class today but I forgot my backpack and had nothing to write with. Fortunately, the guy sitting next to me had three identical pens on his desk. Before I could say anything, #he gave me *the pen*. (ibid.)

この例は、単数名詞句“the pen”と動詞“give”との結び付きは、「ペン」は「与える」という行為を期待される値として持たないことと「与える」という行為は文脈上唐突であることを考え合わせると、この場合は一般化の条件（1）が含意する否定の形式を満たす。事実、この例は不適切であり、我々の一般化を支持する。

以下の適切な発話は、一意性が定冠詞の適切性を保証しない例であると論じられている(Birner and Ward (1994:98))。

(24) As soon as my cousin arrived in Santiago, she broke her foot and had to spend a week in *the hospital*. (ibid,)

この例は、直前の文“she broke her foot”のために、単数名詞句“the hospital ”と述語“had to spend a week in”との結び付き

は、条件（１）を満たす。事実、この例は適切であり、我々の一般化を支持する。しかし、以下の不適切な発話は、「大きな病院」はもはや他の病院と区別されないものではないから彼らの指摘する適切性の条件を満たしていないことを示すものとして挙げられている(ibid,)。この分析と異なる分析を以下で提示する。

(25) #While in Santiago, Bill broke his foot and was rushed to *the big hospital*. (ibid,)

この例は、不適切であると予測される。なぜなら単数名詞句“the big hospital ”と述語“was rushed to”との結び付きは、なぜ病院が大きいのでなければいけないのか理由がないために、我々の慣習に基づき十分予測できるものではないからである。事実、この例は不適切であり、我々の一般化を支持する。

以下の適切な発話は、Fillmore（1977, 1987)の言う frame という概念にとって決定的な典型的な出来事の関与が定冠詞の指示対象の一意性に対する例外の事象にとって無関係であることを示すのに使われている(Birner and Ward (1994:99))。

(26) Somebody left their shopping cart outside here where it could roll into a car. As a good citizen, I'll take it inside. I'll only be a minute; I'll just leave it up front near *the cash register*. (ibid.)

この例は、cash register が複数ある文脈で適切である。ここで、典型的な出来事や frame という概念が問題の現象に関わってこないという彼らの主張には賛成する。しかし、この例は、「買い物カートを外から中に入れる」という先行文脈が単数名詞句“the cash register”と述語“leave it up front near”との結び付きを十分予測できる範囲に収まるものとするように働く。「買い物カートを外から中に入れる」という先行文脈のために、「（話者の近くにある）金銭登録機」と言う名詞と「その買い物カートを中のそうした金銭登録機の近くに置く」という述語の結び付きは、一般化の条件（１）を満たす。事実、この例は適切であり、我々の一般化を支持する。

Birner and Ward (1994:100)は、以下の発話は三つの異なる形や大きさの窓のある部屋のもとで発話されたという状況の下でも適切であると主張し、その適切さは進行中の会話の目的に関して当該の名詞句に対応する窓が区別されないからだと述べる。

(27) It's stuffy in here. Can somebody please open *the window*? (ibid.)

（２７）に対する彼らの分析で、当該の名詞句に対応する窓が形や大きさで異なるのにも拘らず、進行中の会話の目的という限定の下で指示対象の窓が区別され得ないという論点が幾分アドホックであると思われる。これに対して以下の例を見てほしい。

(28) [Suppose that there are three windows each of which differs with respect to the size and the form.] John opened *the window*.

この場合、“It's stuffy in here”という言い回しによって指定される目的がなくても、並行する例は適切である。しかし、この例の適切性は、暗黙のうちに、“It's stuffy in here”という言い回しによって指定される目的のようなものに決定的な仕方で依存するかもしれないと論じる人もいるだろう。より一層文脈をコントロールしてこの例の適切さの要因は何かを探究する必要がある。この問題を将来の研究にゆだねる。いずれにせよ、これらの例の適切さは我々の一般化を用いて

予測することができるということは明らかである。指示対象の窓が外見で区別され得るかどうかは問題ではないという彼らの分析は正しく、我々が一般化を説明するときに指摘する「定冠詞付きの単数名詞句の総称性」や「その指示対象の任意性」に通じるものがある。しかし、我々は、問題の例の定冠詞の使用の適切さの原因は、名詞句“the window”と動詞“open”との結び付きが、我々の慣習に基づき十分予測できるものであることにあると考え、そして、この予測可能性の要因が「定冠詞付きの単数名詞句の総称性」や「その指示対象の任意性」をもたらすものであると上で論じた。

７．おわりに

本研究は、Birner and Ward (1994)の議論に焦点を当てて、その論点を批判的に検討して代替案を提示した。

参考文献

Abbott, Barbara (2004) “Definiteness and Indefiniteness,” in Laurence R. Horn and Gregory Ward eds., *The Handbook of Pragmatics*, pp.122-149. Oxford: Blackwell Publishing.

Birner, Betty and Gregory Ward (1994) “Uniqueness, Familiarity, and the Definite Article in English,” BLS 20: pp.93-102

Christphersen, P. (1939) *The articles: A study of their theory and use in English*. Munksgaard: Copenhagen.

Fillmore, Charles J. (1977) “Scenes-and-frames semantics,” in A. Zampolli, ed., *Linguistic Structures Processing. Fundamental studies in computer science, volume 5*, pp.55-81. Amsterdam: North-Holland Publishing.

Fillmore, Charles J. (1987) “A private history of the concept ‘frame’,” in R. Dirven and G. Radden, eds., *Concepts of case*, pp.28-36. Tübingen: Narr.

Gundel, Jeanette, Nancy Hedberg and Ron Zacharski. (1993) “Cognitive status and the form of referring expressions in discourse.” *Language* 69: pp.274-307.

Hawkins, John A. (1978) *Definiteness and Indefiniteness: A Study in Reference and Grammaticality Prediction*. London: Croom Helm.

Hawkins, John A. (1991) “On (in)definite articles: implicatures and (un)grammaticality prediction,” Journal of Linguistics 27: pp.405-442.

Heim, I. (1982) *The semantics of definite and indefinite noun phrases*. Ph.D. dissertation, University of Massachusetts.

Heim, I. (1983) “File change semantics and the familiarity theory of definiteness,” in R. Bäuerle et al., eds. *Meaning, use, and interpretation of language*, pp. 164-189. New York: Walter de Gruyter.

Jespersen, Otto. (1943) *A Modern English Grammar: On Historical Principles: Part VII*. Oxford: The Alden Press.

Kadmon, N. (1990) “Uniqueness,” Linguistics and Philosophy 13: pp.273-324

Lyons, Christopher (1999) *Definiteness*. Cambridge: Cambridge University Press.

Russell, Bertrand (1905) “On denoting,” Mind 14: pp.479-493.

Body Part *Off* 構文の継承関係*

(The Inheritance Relation of Body Part *Off* Constructions)

工藤　俊 (KUDO Shun)
筑波大学大学院 (University of Tsukuba)

キーワード：Body Part *Off* 構文、結果構文、強意解釈、構文文法、継承

1. はじめに

本稿は、(1)のようないわゆる Body Part *Off* 構文(Body Part *Off* Constructions, BPOCs)と、それに類似した構文との関連性を、Goldberg (1995)の構文文法アプローチに基づいて明らかにする。

(1) a. Susan worked / swam / danced her head off last night.
b. Sam programmed / yelled his heart out.
(Jackendoff (1997b:551))

BPOCs は、[NP V NP off (out)]といった統語形式を持つ。[1] この形式をみる限りは、結果構文との類似性によって、有界的な事象を表すと予測される。たとえば(1a)を例にとると、「働く／泳ぐ／踊るといった行為の結果、スーザンの頭がもげた」という解釈が予測される。しかし、このような出来事が現実世界で起こることはありえず、実際は「頭がもげるほど必死に」といった非有界的な解釈を得る。このような BPOCs 特有の解釈は、強意解釈もしくは誇張解釈と呼ばれる。

BPOCs の意味的・統語的特徴は、Jackendoff をはじめとした近年の構文研究によって、徐々に明らかになってきている。それらの研究では、当該構文の形式や意味解釈から、BPOCs は構文レベルの慣用句、つまり構文イディオムであるとみなされることが多い。Jackendoff の一連の研究においても、BPOCs を構成する要素が個別に語彙目録に登録されているわけではなく、1 つのイディオム表現として登録されていると述べられている。BPOCs が構文イディオムであることを裏付ける証拠のひとつに、当該構文は非完結的な事象を表すことがあげられる。

(2) Sue worked her butt off for / *in an hour.
(Jackendoff (2010:244))

Tenny (1994)も述べているように、前置詞 in を伴う時間的副詞句は、「1 時間以内に」といった出来事の完了を表す。そのため、完結的な出来事を表す文と共起できる。一方、前置詞 for を伴う時間的副詞句は、出来事の継続を表す。そのため、非完結的な出来事を表す文と共起する。(2)の例は in 句との相性は悪く、反対に for 句と共起できることから、BPOCs が表す出来事は非完結的であると考えられる。

BPOCs が表す事象が非完結的であることのさらなる傍証として、副詞 completely と共起できないことが挙げられる。

(3) *He laughed his butt off completely.
(Espinal and Mateu (2010:1403))

副詞 completely は、動詞が表す出来事が完結したことを明示する副詞であるので、BPOCs と共起できないということは、当該構文の非完結性を示唆している。

BPOCs が構文イディオムとしてみなされるさらなる理由として、統語的凍結性が挙げられる。従来の phrasal idiom 研究では、統語的凍結性と意味的透明性の関連性が議論されてきた(cf. Glasbey (2003, 2007), Jackendoff (1997a, b, 2002))。つまり、語順が固定されていると、他の解釈を許さないという関係が成り立つ。BPOCs の統語的凍結性について Sawada (2000)

は、動詞に後続する名詞句と不変化詞 off の語順は、置き換えが不可能であると述べている。

(4) a. *Susan worked off her head. (Jackendoff (1997b:551))
b. *They worked off their butts (when they were young). (Sawada (2000:366))

(4)の元々の語順は、Susan worked her head off.、They worked their butts off.であった。これらの目的語と不変化詞 off の語順を入れ替えると、文法性が著しく下がる。このことから、BPOCs は統語的な凍結性が高く、一見、意味的にも強意解釈以外の解釈を許容しないイディオム表現であると考えられる。

ここまで概観してきたように、近年の構文研究により、BPOCs の意味的・統語的特徴がある程度解明されてきていることは確かである。ただ、BPOCs の構文的特徴としては、結果構文の亜種であるという簡潔な結論が出ているだけで、それ以上の議論の積み重ねはない。しかし、BPOCs の特徴、とりわけ解釈についてさらに調査すると、結果構文だけでなく、今まで焦点が当てられなかった他の構文との関連性も見えてくる。そこで本稿は、BPOCs とそれに類似する構文との関連性を、Goldberg (1995)が提唱する構文文法の立場から明らかにする。そして、BPOCs は結果構文に動機付けられた構文ではなく、使役移動構文から継承された構文であることを、実例をもとに主張する。

2. BPOCs における 2 通りの解釈とその継承関係

2.1. BPOCs の字義的解釈

本節では、BPOCs の強意解釈以外の可能性について考察する。前節で述べたように、先行研究では、BPOCs の解釈は「身体部位がとれるほど懸命に」といった強意解釈に限定されると考えられている。森藤(2011)は、(2)の in-phrase との共起不可能性や、(3)の副詞 completely との相性の悪さ以外に、(5)を挙げている。

(5) She <u>cried and cried</u> her heart out until her eyes turned red. （森藤 (2011:161)）

影山・由本(1997)によれば、活動(activity)を意味する非能格自動詞が反復されると、その活動の意味がさらに強められる。(5)の場合、動詞 cry の反復が可能であることから、この構文が有するアスペクトは activity であると、森藤(2011)は結論付けている。

しかし、BPOCs が特定の文脈に現れた場合、解釈は変化する。

(6) a. The android worked / danced / laughed its head off, and it fell to the ground.
b. The robot talked its butt / ass off, and the people around it were very surprised.

(6a, b)共に、BPOCs が科学小説の文脈に生起した例である。この場合、「アンドロイドは働く／踊る／笑うという行為の結果、実際に頭がもげた」、「ロボットは話をした結果、おしりがとれた」といった、結果構文と類似した解釈を得る。このような解釈は字義的解釈と呼ばれる。

この字義的解釈を裏付ける第一の証拠として、特定の文脈に現れた BPOCs の、in-phrase との共起可能性が挙げられる。

(7) a. The robot pitched its arm off *in* an hour, and finally it broke down.
b. The android danced its feet off *in* an hour, and finally it broke down.

従来、(2)のように、BPOCs は出来事の継続を表す for-phrase との相性がよく、構文が表す出来事は activity であるとされてきた。しかし、文脈による解釈の変化が、構文固有の事象アスペクトに影響を及ぼす。(7a)の例文は、in-phrase と共起することが可能で、「1 時間以内に腕がもげ

た」という、出来事の完了を表す。

BPOCs の字義的解釈を裏付ける二つ目の証拠として、特定の文脈に現れた BPOCs は、動詞の反復が不可能になることが挙げられる。

(8) a. *The robot *pitched and pitched* its arm off, and finally it broke down.
b. *The android *danced and danced* its feet off, and finally it broke down.

(5)とは対照的に、科学小説の文脈に生起した BPOCs は、非能格自動詞の繰り返しを許さない。(8)の振る舞いも、(7)と同様、BPOCs が完結的な出来事を表しうることを示唆している。

最後は副詞 completely との共起可能性である。

(9) a. The android worked / danced / laughed its head off *completely*, and it fell to the ground.
b. The robot talked its butt / ass off *completely*, and the people around it were very surprised.

(3)では、副詞 completely は BPOCs と共起できないことをみたが、科学小説の文脈に現れる BPOCs はその限りではない。(9)も、BPOCs が完結的な出来事を表すことが可能であることを物語っている。

以上、特定の文脈に現れる BPOCs について概観した。一口に BPOCs といっても、強意解釈の BPOCs のアスペクトと、字義的解釈のそれの間には、顕著な差が認められる。それゆえ、BPOCs には解釈を基準とした下位分類が必要である。以下では、字義的解釈の BPOCs を Literal BPOCs (LBPOCs)と呼び、強意解釈の BPOCs を Figurative BPOCs (FBPOCs)と呼ぶ。2.2 では、これらの構文的関係を、構文文法の視点からさらに詳しく考察する。

2.2. LBPOCs と FBPOCs の継承関係

前節でみたように、LBPOCs と FBPOCs の解釈に関する差は文脈が影響する。(10a)は LBPOCs、(10b)は FBPOCs の例である。

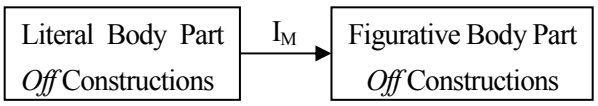
(10) a. The robot talked its butt / ass off.
b. The robot talked its butt / ass off, and the people around it were very surprised.

このような字義的解釈と強意解釈の差に関連して、Espinal and Mateu (2010)は、字義的解釈から強意解釈に転写されるメタファーとして、(11)を提案している。

(11) (AN EXTREME) INTENSITY IS (AN EXCESSIVE) CHANGE OF LOCATION
(Espinal and Mateu (2010:1406))

これは、「特定の動作の強度を、身体の譲渡不可能な部分を切り離したり、蕩尽したりするという、極端な状況に関連付ける（cf. 吉川・五十嵐 (2011)）」といったメタファーである。Espinal and Mateu は、このメタファーを介して、字義的解釈と強意解釈が関連付けられることを提案している。彼らの提案を本論に取り込むと、FBPOCs は LBPOCs からのメタファー継承によって生まれた構文であるといえる。そのことを図示したのが(12)である。[2]

(12) Inheritance Relation between LBPOCs and FBPOCs



以上、2 節では BPOCs の事象アスペクトと解釈を概観した。本節の要点は以下の 2 点である。1 点目は、BPOCs には字義的解釈が可能で、その場合の事象アスペクトは FBPOCs のそれらとは対称的であるということ。そして 2 点目は、FBPOCs は LBPOCs から(11)のメタファーを介

して継承された構文であること。以上の 2 点が、本節の主な論点である。[3]

3. BPOCs の比較対象としての結果構文 —継承関係と解釈—

本節の主な考察対象は、先行研究で BPOCs の比較対象とされてきた結果構文である。先に述べたように、BPOCs は結果構文の亜種であるという見解が、従来の BPOCs 研究では多数を占めている。実際、Jackendoff も以下のように述べている。

(13) "an idiomatic specialization of the resultative construction" (Jackendoff (1997a:171))

本節では、BPOCs と他構文との構文的関連性をさらに深く探るきっかけとして、結果構文の構文的特徴を見直す。3.1 では、構文文法の枠組みにおける結果構文の位置づけについて、Goldberg (1995)の分析を簡単に概観する。そして 3.2 では、結果構文の解釈について、構文文法の枠組みの中で議論する。

3.1. 使役移動構文と結果構文の継承関係

本節では、結果構文の継承関係について、Goldberg (1995)の主張を簡単にまとめる。

(14) a. Dean laughed / danced himself crazy / si1ly. (Jackendoff (1997b:552))
b. The joggers ran the pavement thin. (Goldberg (1995:184))

(14)は非能格自動詞を含む結果構文の例であるが、Goldberg によれば、結果構文は(15)のような使役移動構文(Caused-Motion Construction, CMCs)からのメタファー継承である。

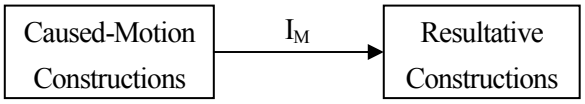
(15) a. They laughed the poor guy out of the room.
b. Frank sneezed the tissue off the table. (Goldberg (1995:152))

紙幅の都合上、両構文の継承に関する詳細は、Goldberg (1995)に譲るが、この継承には以下のメタファーが関与している。

(16) STATES ARE LOCATIONS

状態と位置を結びつける(16)のメタファーを介して、位置変化を表す使役移動構文から、状態変化を表す結果構文へ継承される。(17)は、両構文の継承関係を示した図である。

(17) Inheritance Relation between CMCs and RCs



3.2. 字義的結果構文と強意結果構文の継承関係

続いて、結果構文の解釈について概観する。いくつかの先行研究で指摘されているように、非能格自動詞を用いた結果構文は、字義的解釈以外に「激しく～する」という強意解釈も可能である(cf. Goldberg (1995), Jackendoff (1997b), Miyata (2004))。Goldberg によると、先に挙げた(14a)は、「ディーンは笑う／踊るといった行為の結果、実際に狂った」という結果読み以外に、「狂うほど激しく笑った／踊った」という強意読みが可能である。文脈の必要性という点では異なるものの、BPOCs の場合と同様、解釈に顕著な差が認められる。これを踏まえて本論では便宜上、字義的解釈の結果構文を Literal Resultative Constructions (LRCs)、強意解釈の結果構文を Figurative Resultative Constructions (FRCs)と呼ぶことにする。

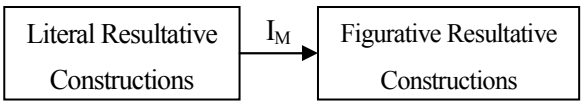
この 2 つの構文を関連付けるものは、BPOCs 同様、メタファーである。BPOCs と解釈の点で共通するので、Espinal and Mateu の提唱する(11)に挙げたメタファーが、そのまま LRCs と FRCs の継承にも関与していると思われるかもしれ

ない。しかし、結果構文は元来、状態変化を表す構文である。したがって、物理的変化に特化された(11)のメタファーは適用できない。そこで、(16)の STATES ARE LOCATIONS が、(11)のメタファーと融合した、(18)のメタファーが適用される。

(18) (AN EXTREME) INTENSITY IS (AN EXCESSIVE) CHANGE OF STATE

(18)のメタファーを介することで、LRCs から FRCs へ継承される。(19)はこの継承関係を図示したものである。

(19) Inheritance Relation between LRCs and FRCs



以上、3 節では結果構文の継承関係と、その解釈について簡単に概観した。本節のポイントは以下の 3 点である。1 点目は、結果構文は CMCs からのメタファー継承であること。2 点目は、非能格自動詞を含む結果構文には、BPOCs 同様、字義的解釈と強意解釈の両方が可能であること。そして 3 点目は、FRCs は LRCs から、(18)のメタファーを介して継承された構文であるであること。以上の 3 点が、3 節で論じた内容の要点である。

4. BPOCs が表す出来事と他構文との関係

前節までの議論を踏まえ、本節では BPOCs、RCs、CMCs の関係について考察する。前述のとおり、BPOCs は結果構文の特殊ケースであるというのが、従来の見解である。確かに表層的な形式と意味だけをみれば、その見解は妥当といえる。しかし、Goldberg (1995)が主張しているように、そもそも結果構文は CMCs からのメタファー継承であるという事実がある。この、結果構文と CMCs の継承関係を踏まえると、BPOCs は結果構文から継承された構文なのか、それとも CMCs から継承された構文なのか、といった疑問が生じる。

この疑問を解消するため、結果構文と CMCs の構文的意味を今一度確認しよう。

(20) a. X CAUSES Y to BECOME Z
b. X CAUSES Y to MOVE Z
(Goldberg (1995:3))

(20)からも明らかなように、結果構文は抽象的な状態変化を表す一方、CMCs は物理的な位置変化を表す。では、BPOCs の構文的意味は位置変化と状態変化のどちらを表すのであろうか。このことを明らかにするため、以下では各構文が字義的解釈を得る場合、移動を含意するか否かを考察する。[4]

まずは、CMCs の目的語位置に生起する要素について検証する。

① CMCs

(21) a. The audience laughed the poor guy off the stage.
OK 'The poor guy actually moved off the stage.'
b. Frank sneezed the tissue off the table.
OK 'The tissue actually moved off the table.'

使役移動構文という名称が示唆するように、この構文は移動を表すことが、(21)の検証からもわかる。(21a)を例にとると、あわれな男がステージから降りたこと、つまり移動したことが、この文の含意を表した'The poor guy actually moved off the stage.'が容認されることから明らかである。[5] (21b)も同様である。

続いて、LRCs の目的語位置に生起する要素について考察する。[6]

② LRCs

(22) a. He talked himself hoarse.
* 'He actually moved.'

b. He pounded / hammered the metal flat.
* 'The metal actually moved.'

CMCs とは対照的に、LRCs は移動を含意しないことが(22)からわかる。(22a)において、声がしわがれるという状態になったのは、あくまでも動詞が表す行為の「結果」であり、移動とは無関係である。[7] (22b)も同様に考えられる。

最後に、LBPOCs についてみてみよう。

③ LBPOCs

(23) a. The android worked / danced / laughed its head off, and it fell to the ground.
OK 'The head of android actually moved off.'

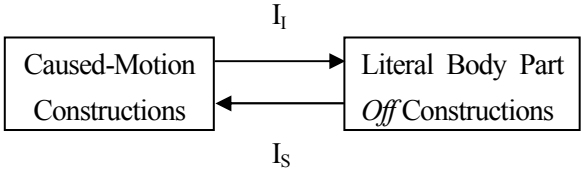
b. The robot pitched its arm off, and finally it broke down.
OK 'The arm of robot actually moved off.'

'X actually moved'という型を用いて、LBPOCs の含意を調べたところ、当該構文は移動を含意するという結果が出た。(23a)は、働く／踊る／笑うという行為の結果として、アンドロイドの頭がもげたことを表している。つまり、目的語要素は実際に移動したことになる。(23b)も同様に、投げるという行為の結果として、ロボットの腕がもげるという意味になる。

ここまでの議論をまとめると、CMCs と LBPOCs は移動を含意するのに対し、LRCs は含意しない。この結果から、LBPOCs の構文的意味は LRCs よりも CMCs により近いと結論付けることができる。

各構文の構文的意味とそれらの関連性が明らかになったところで、CMCs と LBPOCs を関連付ける継承のタイプについて検証する。ここで着目したいのは、両構文の目的語位置に生起する名詞句の選択制限である。CMCs の目的語位置に生起する名詞句は、自由に選択が可能である。一方、BPOCs のそれは身体部位に限定される。このことから、BPOCs、とりわけ LBPOCs は CMCs からの具体例継承(Instance Inheritance, I_I)であると考えられる。また、LBPOCs が CMCs の具体例であることは、必然的に LBPOCs は CMCs の部分を成す。つまり、CMCs と LBPOCs は、部分継承(Subpart Inheritance, I_S)によって関連付けられる。

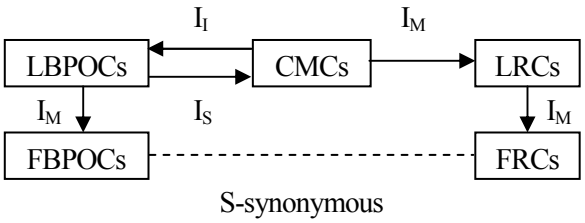
(24) Inheritance Relation between CMCs and LBPOCs



5. 結論

本稿では、Body Part *Off* 構文とそれに関連する諸構文の関連性を、構文文法の枠組みを用いて比較してきた。本稿で取り上げた諸構文の継承関係をまとめると、以下のようになる。

(25) Inheritance Relation among BPOCs, CMCs, and RCs



LBPOCs は、物理的な移動という構文的意味を持つので、結果構文からの継承ではなく、CMCs からの具体例継承によって関連付けられる。さらに、(11)のメタファーを介して、FBPOCs への構文拡張が起きる。一方 LRCs は、STATES ARE LOCATIONS を経た、CMCs からのメタファー継承である。そして、(18)のメタファーを介して、LRCs から FRCs へ継承される。なお、

FBPOCs と FRCs の間に直接的な継承関係はないが、「強意解釈」という点で類似しているため、S(emantically)-synonymous の関係が結ばれる。

以上、BPOCs の構文的特性と他構文との関連性を、構文文法の観点から考察してきた。その結果、従来の BPOCs 研究とは異なる見解を得ることができた。本研究の最終的な知見及び主張は、以下のとおりである。

Body Part *Off* 構文の構文特性は、結果構文のそれと比較する形で研究されてきたが、実際は使役移動構文との結び付きがより強い構文である。

本論では、構文文法の観点から BPOCs 及び関連構文を考察することで、構文間の新たな関係性を見出すことが可能になるという、BPOCs 研究の新たな方向性を提案した。なお、結果構文には他動詞タイプ(e.g. John broke the door open.)のようなタイプも存在するが、本論では字義的解釈と強意解釈の両方が可能である、非能格自動詞タイプを主に扱った。他動詞タイプの結果構文については、稿を改めて議論したい。

* 本稿は日本英語学会第 31 回大会（2013 年 11 月 10 日、福岡大学）において、「Body Part *Off* 構文の継承関係」の題目で口頭発表した原稿に、加筆・修正を施したものである。発表当日の質疑応答で有益なコメントをくださった岩田彩志先生、金澤俊吾先生、金谷優先生、西原俊明先生に深く感謝申し上げる。なお、本稿における不備はすべて筆者の責任によるものである。

[1] ここで不変化詞 off 以外に out も BPOCs の構成要素としてみなすのは、off と同じく out も出来事の delimiter として機能するからである。

[2] I_M の I は Inheritance、M は Metaphor の頭文字である。

[3] たしかに、実際の言語使用という観点からいえば、LBPOCs の使用頻度は著しく低い。しかし、LBPOCs が構文としてのステータスを確立していることと、実際の使用頻度あるいは解釈の選択というのは、あくまでも別問題であることに留意しなければならない。

[4] 強意解釈を考慮の対象外にする理由は、ここではあくまでも各構文が移動を含意するか否かを調べるためである。各構文の強意解釈は、すべて「激しく～する」という構文的意味になるので、意味的な有意差は生まれない。

[5] 移動を含意していることは、上付きの OK で示している。

[6] (22)の LRCs は強意解釈が可能であるが、ここでは字義的解釈のもとで文法性判断を行った。

[7] 移動を含意していないことは、上付きのアスタリスクで示している。

SELECTED REFERENCES

Espinal, T, and J. Mateu (2010) "On Classes of Idioms and Their Interpretation," *Journal of Pragmatics* 42, 1397-1411.

Goldberg, A. (1995) *Constructions: A Construction Grammar Approach to Argument Structure*, University of Chicago Press, Chicago.

Jackendoff, R. (1997a) *The Architecture of the Language Faculty*. MIT Press, Cambridge, Mass.

Jackendoff, R. (1997b) "Twistin' the Night Away," *Language* 73, 534-559.

Jackendoff, R. (2002) *Foundations of Language: Brain, Meaning, Grammar, Evolution*, Oxford University Press, Oxford, New York.

Jackendoff, R. (2010) *Meaning and the Lexicon: The Parallel Architecture 1975-2010*, Oxford University Press, New York.

影山太郎・由本陽子 (1997) 『語形成と概念構造』 研究社, 東京.

森藤庄平 (2011)「Body-Part *Off* 構文について—結果構文との違いを中心に—」, 『英語語法文法研究』第 18 号, 158-172, 開拓社.

Sawada, S. (2000) "The Semantics of the 'Body Part *Off*' Construction," *English Linguistics* 17 (2), 361-385, Kaitakusha.

吉川裕介・五十嵐海理 (2011) 「V *the hell out of* 構文とイディオム性」, *JELS* 28, 183-189.

Answers to Japanese Multi-unit Questions with Explicit Assumptions

Masanobu Masuda
Koshien University

Keywords: multi-unit questions, conversation analysis, organization of answers, resistance by respondents

1. Introduction

Multi-unit questions (MUQs), questions delivered together with other question(s) or statement(s), are employed in complex communicative projects. The present paper employs conversation analytic methods to explore MUQ-answer sequences in Japanese interview dialogues, and describes (1) how answers are organized as to respond to each unit in MUQs and (2) how question recipients resist assumptions which are stated explicitly in MUQs, when the assumptions do not hold true for them. To be precise, the word *resist* is deployed here to refer to question recipients' disaligning stance marking when they respond in ways that do not meet the questioners' expectations.[1]

2. Previous Studies

The framing function of MUQs has been pointed out in a variety of previous studies (e.g. Sandén et al. 2001, Clayman and Heritage 2002, Heritage 2002, Linell et al. 2003). Questions are prefaced with one or more statements, which set the agenda for, or give background to, the questions. Most MUQs are employed in this way in order to focus or specify aspects to be answered, and often used by dominant parties in institutional interaction where there is asymmetry of knowledge or power among participants.

Linell et al. (2003) present another aspect of description. They outline how some MUQs generalize possible answers, and argue that both particularizing and generalizing components of MUQs serve the purpose of securing responses. The former secures precise and adequate responses, while the latter secures anything that could count as an acceptable response.[2]

Concerning the organization of answers, i.e. how components in answer turns are placed in the turn, Sacks (1987 [1973]) points out the preference for contiguity. When a question turn and an answer turn each consists of multiple units, a question is placed, among the units, at the end of the question turn, and an answer is placed at the beginning of the answer turn.

3. Data

Thirty-two two-party interview dialogues in the *Corpus of Spontaneous Japanese*, each of which lasts for 10 to 15 minutes, have been investigated. Among the many kinds of MUQs, the analysis is limited to those in which the assumptions of the questioners are explicitly stated, typically with the thinking verb *omou* 'think.' The number of such MUQs amounts to 24. In the excerpts below, the assumptions and questions are marked

respectively with the arrows 1 and 2, single arrows (→) for the interviewers' utterances and double arrows (⇒) for the interviewees' ones. The transcription follows the system devised by Gail Jefferson.[3] Each excerpt is followed with an English translation. Since the line numbers in the excerpts and the translations do not match, the line numbers referred to in the analysis pertain to the Japanese transcripts.

4. Analysis

Four types of answers are found in the 24 answers examined: (a) contiguous organization (n=11), (b) non-contiguous organization (n=5), (c) responding only to questions and not to assumptions (n=6), (d) avoiding answering (n=2). (a) is prominent in number as Sacks (1987 [1973]) has argued. This paper describes the organization of types (b) and (d), which have been less focused on in previous studies.[4]

4.1. Non-contiguous Organization

In excerpt (1), an interviewer (IR) asks how an interviewee (IE) felt about the recording conducted preceding to the interview (lines 1-10). In the recording, the IE made a speech for about 10 minutes. The recording was conducted twice, and the IR is asking about the second one.

```
(1)[D03F0036_0:59-1:20]
01 1→ IR: naruho[do:: .hhh] ne::=
02    IE:        [  u:::n   ]
03 1→ IR: =ano: shaberu tte yuu no
04 1→     wa kekkoo kitsui to omou
05 1→     n desu keredo[mo .h]h =
06    IE:              [ha:i ]
07 2→IR: =(.) ano: nikaime
08 2→    yararete (.)[(.)] doo=
09    IE:            [hai]
10 2→IR: =deshita
11       (.)
12 1⇒IE: .hhh soo:: desu yone
13 1⇒    juppun te n: no nagai
14 1⇒    yoo desu kedo[: .hh=
15    IR:             [u::=
16 2⇒IE: =↑de]mo kekkyoku=
17    IR: = n ]
18 2⇒IE: =ano:::: (.) honegumi
19 2⇒    shikkari kunde kureba
20 2⇒    [(.)shabereru no ka]na:=
21    IR:[  ee  ee  ee  ee:   ]
22 2⇒IE: =to yuu huu ni=
23    IR: =°soo de[sune:°]
24 2⇒IE:          [  ee   ] omoi
25 2⇒    mashita kedo

01 1→ IR:I se[e:: .hhh] You kno::w=
02    IE:    [ Ye:::s ]
03 1→IR: =we:ll I think talking
04 1→    is fairly har[d .h]h =
05    IE:              [Ye:s]
06 2→IR: =(.) We:ll how did you
07 2→    feel (.)[(.)] about the=
08    IE:         [Yes]
09 2→IR: =second time
10       (.)
11 1⇒IE: .hhh Ye::s ten minutes
12 1⇒    seems lo[:ng .hh ↑bu]t=
13    IR:        [ Y e : : s ]
14 2⇒IE: =after all we:::ll (.)
15 2⇒    if you had prepared
16 2⇒    a firm scheme
17 2⇒    [(.) it seemed li]:ke=
18    IR:[Yes yes yes ye:s]
19 2⇒IE: =you could talk=
```

```
20      IR: =°Y[e:s°]
21 2⇒IE:     [Yes ] I thought so
```

In her answer turn, the IE first responds to the assumption stated at lines 1-5, and then answers the question asked at lines 7-10, which does not meet the preference for contiguity. The assumption in the IR's MUQ is *shaberu tte yuu no wa kekkoo kitsui* 'Talking is fairly hard.' The IE evaluates the time allotted for her preceding speech, ten minutes (*juppun* at line 13), as long (*nagai* at line 13), and thereby confirms the IR's assumption. It is after that that the IE answers the question. She explains what she thought at lines 16-25, which comprises the answer.

Next, let us consider how the IE deals with the assumption in the MUQ. As mentioned above, the IE confirms the assumption. However, this confirmation should be regarded as a token one. The IE does not follow the word *kitsui* 'hard' in the assumption (line 4) and replaces it with *nagai* 'long' in her response (line 13). This constitutes a transformation of the subjective evaluation into an objective description. In addition, the IE presents this description as an indirect assertion by employing an auxiliary verb *yoo desu* 'seem' (line 14). By designing her response in this manner, the IE formulates the IR's assumption as a general one and distances herself from it. This response is regarded as a variation of transformative answers (Stivers and Hayashi 2010), a way for question recipients to resist a question's constraints.

In excerpt (2), an IR has mentioned in the preceding utterance that language is a mere means of communication, which is referred to by a demonstrative *sooyuu* 'that kind of,' *sono* 'that' and *soko* 'there' at lines 2-3.[5]

```
(2)[D03M0037_4:59-5:46]
01    IR: (0.6) .hhh (0.8) watashi
02        wa sooyuu(n) sono: s-
03        u(h):nu soko wo kangaeru
04       koto ga sugo ookute [.h a]=
05    IE:                    [n:. ]
06 1→IR: =↑gengo: niwa sugoi
07 1→     rimitto ga aru na: tte
08 1→     o°mou n desu kedo:°=
09    IE: =n:.=
10 2→ IR: =.hhhh (0.6) doo omoi masu
11 2→     ka¿ [hhhh (0.5) .h[h h]
12 1⇒IE:      [.hhh (0.3)    [ma:]
13 1⇒     so ironna (0.5) seegen ga
14 1⇒     ari masu yone¿:.=
15     IR: =u:[:n.]
16 1⇒IE:     [ano]:. (1.2)
17 1⇒     gurafi<k>ku ni kurabereba
18 1⇒     ne¿
19        (0.2)
20    IR: soo: [soo nan desu yone?]
21    IE:      [ u:n. (.) ironna ]
22        seegen ga (0.6) aru no wa
23        tashika de[su yone¿]
24    IR:           [ u : : ]n
25        (0.6)
26 2⇒IE: °.hhh° >demo yappari<
27 2⇒    .hhh°h° kotoba: nashi niwa
28 2⇒    kangae rare nai tte >yuu
29 2⇒    yoo na< tokoro mo:. (0.7)
30 2⇒    atte ne¿

01    IR: (0.6) .hhh (0.8) I quite
02        often think about that(n)
03        tha:t th- uh(h)m there
```

```
04 1→     [.h um] I think ↑language=
05     IE:[ mm.]
06 1→ IR: =is really limited=
07     IE: =mm.=
08 1→ IR: =.hhhh (0.6) What do you
09 1→     think¿ [hhhh (0.5) .h[h h]
10 1⇒IE:        [.hhh (0.3)[We:ll]
11 1⇒     yes there are various (0.5)
12 1⇒     limits on it¿:.=
13     IR: =Ye:[:s.]
14 1⇒IE:       [ We]:ll. (1.2)
15 1⇒     compared with graphics¿
16         (0.2)
17     IR: Ye:s [ that's  right? ]
18     IE:      [Ye:s. (.) indeed]
19         there are (0.6) various
20         limi[ts¿ ]
21     IR:     [Ye::]s
22         (0.6)
23 2⇒IE: °.hhh° >But as we know<
24 2⇒     .hhh°h° there are some
25 2⇒     aspects in which we cannot
26 2⇒     think withou:t. (0.7)
27 2⇒     language¿
```

In his answer turn, the IE first confirms, at lines 12-18, the assumption stated at lines 6-8, that language is limited. It is after line 26 that he answers the question asked at lines 10-11 by telling her own idea about language. Therefore, the preference for contiguity is not met.

The confirmation at lines 12-18 adopts virtually the same wording as that of the stated assumption, as if the IE fully agreed with the assumption. However, as is projected by a hedging adverb *ma(a)* 'well' (line 12), it is a partial agreement. The IE backs down at lines 16-18. The assumption is relativized by comparing language with graphics, and therefore weakened. After the following agreement token by the IR (line 20), the IE repeats his statement at lines 13-14 that there are various limits, but this time follows it with the format *...wa tashika desu* 'indeed...' (lines 21-23), which projects a counter claim following. In other words, via this format, the statement is posed as a qualified agreement. As Pomerantz (1984) argues, a qualified agreement is a device that can introduce disagreement. The IE actually counters, with his following statement lead by a contrast conjunction *demo* 'but' (lines 26-30), the IR's negative view on language that language is really limited. In his utterance just after excerpt (2) (which is not shown here), he even upgrades his stress on the significance of language, by adding to his formulation at lines 26-30 the words *kanari no ryoo de- wariai de* 'in a fair amount- rate.' In this manner, although the IE first confirms the IR's assumption, he displays a stepwise shift in his stance, and resists the assumption.

4.2. Avoiding Answering

In the sequence preceding excerpt (3), an IR and an IE are talking about language. Just prior to (3), the IR has made public her idea that writing in order to convey something carries considerable responsibility. The demonstrative *soo* 'so' at line 1 refers to this idea.

```
(3)[D03F0006_11:21-11:46]
01 1→ IR: .h[h soo omo[u n desu=
02     IE:    [.hh      [u:n:=
03 1→ IR: =yone¿: .h]h=
```

```
04      IE: =un  un:. ]
05  2→  IR: =moo dakara >sore wo<
06  2→      bunseki shiyoo >tte yu<u
07  2→      no wa dooshite .hhh °soo
08  2→      natta no kana: tte.°=
09      IE: =nh(h)u:n.
10          (0.2)
11      IR: °(omoi ma[su) yo.]°
12  1⇒IE:            [soo ↑mo]tto
13  1⇒      sooyuu: .hh sono
14  1⇒      tsutawari kata (yo)- wo
15  1⇒      juushi shite bunse<ki>
16  1⇒      shiteru hito mo:=
17      IR: =u[n::  ]
18  1⇒IE:     [.hh a]no: (0.3)
19  1⇒      takusan iru n desu kedo:=
20      IR:=u[   :    n       ]
21  2⇒ IE:   [watashi no baai] wa .hh
22  2⇒      nanka, koo mukashi kara
23  2⇒      nanka rekishi- rekishi to
24  2⇒      yuuka nank°a° koo
25  2⇒      ka↑watte iku mono to yuu
26  2⇒      [no ni .hh kekkoo kyo]omi=
27      IR:[    u   n   :   :    ]
28  2⇒ IE: =ga (0.2) aru.=
29      IR: =hee::::
```

```
01  1→ IR: .h[h I thi[nk so¿:=
02      IE:   [.hh     [Ye:s: yes=
03      IR: =    .h]h=
04      IE: =ye:s.]
05  2→ IR: =So I wonder why .hhh
06  2→      you've come to analyze
07  2→      it.=
08      IE: =Oh(h):.
09          (0.2)
10      IR: °(I wonder [why ). ]°
11  1⇒IE:              [Yes the]re
12  1⇒      are: .hh well many people
13  1⇒      who put emphasis on how
14  1⇒      messages are conve:yed=
15      IR: =Ye[: : s ]
16  1⇒IE:      [.hh we]:ll (0.3)
17  1⇒      in the analysis bu:t=
18      IR: =Ye[  :  s   ]
19  2⇒IE:     [in my ca]se .hh
20  2⇒      well, I've always been
21  2⇒      interested in history-
22  2⇒      history or somethin°g°
23  2⇒      well ↑chang[ing .hh=
24      IR:            [Ye::=
25  2⇒IE: =qui]te (0.2) a bit.=
26      IR: = s ]
27      IR: =Reall::::y
```

In (3), the IR presents at lines 1-3 her assumption that writing to convey something carries considerable responsibility. The IE begins her answer turn by responding to this assumption. *Tsutawari kata* 'how (something) is conveyed' at line 14 is understood as, in this context, referring to how messages are conveyed via writing. It is after line 21 that the IE responds to the question asked at lines 5-8, namely why the IE has come to analyze language. Therefore, as in excerpts (1) and (2), the preference for contiguity is not met.

Watashi no baai wa 'in my case' at line 21 is a pivotal point in the IE's organization of her response. There she focuses on herself. This individualized focus corresponds to that of the question, in the sense that the question is asked *about* her (not only *of* her).[6] However, what the IE is doing after line 21 is distancing herself from the responsibility of writing which is mentioned in the IR's assumption, and thereby locating herself out of the

scope of the assumption, rather than answering the question. It also should be noted that she is avoiding either affirming or denying the IR's assumption. In this manner, she is avoiding answering the IR's MUQ.

5. Conclusion

This paper has analyzed MUQ-answer sequences through a conversation analytic approach in order to describe (1) how answers are organized as to respond to each unit in MUQs and (2) how question recipients resist assumptions stated explicitly in MUQs when the assumptions do not hold true for them.

Concerning the former, the paper has pointed out four types of design and described the organization in two of them. However, motivation for non-contiguous organization is something that must be left for future research. It may be a part of turn organization concerning disagreement as Sacks (1987 [1973]) argues, or it may be better analyzed in relation to the logical order of the units in the turns as Linell et al. (2003) argue.

Concerning the latter, the practice of resistance (respondents' disaligning stance marking against the questioners' expectations) has been described in MUQ-answer sequences. In excerpts (1) and (3), the IEs locate themselves out of the scope of assumptions which do not hold true for them. In excerpt (2), the IE first prefaces his disagreement with a confirmation of the assumption, and through a stepwise shift of his stance, eventually resists the assumption.

These findings contribute to a closer understanding of complex communicative phenomena in MUQ-answer sequences.

Notes

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[1] For review and discussion on *resistance* in this sense, see Stivers and Hayashi (2010).

[2] Puchta and Potter (1999) also point out these two aspects.

[3] Transcription symbols used in this paper are shown below. In addition, note that words are transcribed as close as possible to actual sounds, and therefore do not necessarily follow the canonical writing system.

- = turn transition with no pause between them, or continuous utterances by the same speaker
- [overlap onset
-] end of overlap
- : prolongation (the more colons, the longer the prolongation)
- – cut-off
- (number) pause (number indicates the length by the second)
- (.) micropause (less than 0.2 second)
- h aspiration or laughter (the more h's, the longer the duration)
- .h inhalation (the more h's, the longer the duration)
- (h) aspiration or laughter within a word

↑word intonation rise
? rising intonation (not necessarily questioning)
¿ rising intonation (rise weaker than "?")
, continuing intonation
: stressed intonation rise at ending
>word< quickened speech
<word> slowed speech
word stressed syllable
°word° quiet speech
(word) uncertain hearing

[4] Type (c) has been under-analyzed in previous studies as well, but the analysis on it is left for future study.

[5] *Sono* at line 2 is ambiguous. It may not be a demonstrative but a filler.

[6] It is possible to consider this question as the IR's expressed uncertainty about linguists in general, and not solely about the IE. However, since both the IR and the IE know that it is apparent to the IR that the IE is a linguist, it will be relevant for the IE, a linguist and a participant of this conversation, to provide what she thinks as an answer on the matter.

References

Clayman, Steven E. and Heritage, John. (2002) "Questioning Presidents: Journalistic Deference and Adversarialness in the Press Conferences of U.S. Presidents Eisenhower and Reagan," *Journal of Communication* 52(4), 749-775.

Heritage, John (2002) "Designing Questions and Setting Agendas in the News Interview." In: Glenn, Phillip, LeBaron, Curtis and Mandelbaum, Jenny (eds.), *Studies in Language and Social Interaction*, Lawrence Erlbaum Associates, New Jersey, 57-90.

Linell, Per., Hofvendahl, Johan and Lindholm, Camilla (2003) "Multi-unit Questions in Institutional Interactions: Sequential Organizations and Communicative Functions," *Text* 23(4), 539-571.

Pomerantz, Anita (1984) "Agreeing and Disagreeing with Assessments: Some Features of Preferred/Dispreferred Turn Shapes." In: Atkinson, J. Maxwell and Heritage, John (eds.), *Structures of Social Action*, Cambridge University Press, 57-101.

Puchta, Claudia and Potter, Jonathan (1999) "Asking Elaborate Questions: Focus Groups and the Management of Spontaneity," *Journal of Sociolinguistics* 3, 314-335.

Sacks, Harvey (1987 [1973]) "On the Preferences for Agreement and Contiguity in Sequences in Conversation." In: Button, Graham and Lee, John R. E. (eds.), *Talk and Social Organisation,* Multilingual Matters, Clevedon, 54-69.

Sandén, Inger, Linell, Per, Starkhammar, Hans and Larsson, Ullabeth S. (2001) "Routinization and Sensitivity: Interaction in Oncological Follow-up Consultations," *Health* 5(2), 139-163.

Stivers, Tanya and Hayashi, Makoto (2010) "Transformative Answers: One Way to Resist a Question's Constraints," *Language in Society* 39, 1-25.

The Morphology of Deadjectival Nominals and Verbs in Japanese*

Chigusa Morita
Aoyama Gakuin University

Keywords: adjective, comparative, Distributed Morphology, nominalization, verbalization

1. Introduction

In Japanese, an adjectival stem is nominalized by attachment of nominalizing suffixes, such as *-sa*, *-me*, and *-mi*.[1] Each nominalizer has a different selectional restriction (Morita (2012)). The nominalizer *-sa* can attach to all gradable adjectives. The nominalizer *-me* can follow relative adjectives (i.e., gradable adjectives with totally open scales), but cannot follow closed-scale adjectives. The nominalizer *-mi* has the strictest selectional property; it only attaches to a few adjectives.

This paper clarifies the selectional properties of the deadjectival nominalizer *-mi*, and reveals a correlation between deadjectival nominalization with *-mi* and deadjectival verbalizations. It also claims that the deadjectival nominalizer *-mi* and verbalizers *-me-* and *-mar-* contain the same morpheme, which is related to the comparative and the vertical dimensions.

2. *Mi*-nominalization

2.1 The Patterns of Nominalization with -mi

The nominalizing suffix *-mi* serves to form a noun denoting the degree or the state of being A of a given adjective A. But this nominalization process is not productive; it is restricted to certain semantic types of adjectives. First, the nominalizer *-mi* cannot attach to either closed-scale adjectives or nongradable adjectives.

(1) Absolute adjective
massugu-na 'straight' → *massugu-mi
taira-na 'flat' → *taira-mi
anzen-na 'safe' → *anzen-mi
kiken-na 'dangerous' → *kiken-mi

(2) Nongradable adjectives
nihon-no 'Japanese' → *nihon-mi
ki-no 'wooden' → *ki-mi
ame-no 'rainy' → *ame-mi

Second, the nominalizer *-mi* cannot follow all relative adjectives; it only attaches to adjectives related to the semantic classes such as HEIGHT, WIDTH, WEIGHT and TEMPERATURE.[2]

(3) Relative adjectives
a. SIZE
ookik- 'big, large' → *ooki-mi
tiisak- 'small' → *tiisa-mi
b. LENGH
nagak- 'long' → *naga-mi
mizikak- 'short' → *mizika-mi
c. HEIGHT
takak- 'high' → taka-mi 'a height'
hikuk- 'low' → *hiku-mi
d. SPEED
hayak- 'fast' → *haya-mi
osok- 'slow' → *oso-mi
e. DEPTH
hukak- 'deep' → huka-mi 'the depth(s)'
asak- 'shallow' → *asa-mi
f. WIDTH
hirok- 'wide' → *hiro-mi
semak- 'narrow' → *sema-mi, *seba-mi
g. WEIGHT
omok- 'heavy' → omo-mi 'weight'
karuk- 'light' → *karu-mi

h. TEMPERATURE
atuk- ‘hot’ → *atu-mi
samuk-‘cold’ → *samu-mi
atatakak- ‘warm’ → *atataka-mi
suzusik- ‘cool’→ *suzusi-mi

i. AGE
huruk- ‘old’ → *huru-mi
atarasik- ‘new’ → *atarasi-mi
wakak- ‘young’ → *waka-mi

Some deadjectival nominals in (3) express locations as well as the degree or the state of the property denoted by the base adjective. The nominals derived from the positive members of pairs of HEIGHT and DEPTH adjectives, *taka-mi* and *huka-mi*, have the meanings such as ‘an eminence’ and ‘the depths.’ The deadjectival nominals derived from other adjectives, on the other hand, lack the meanings of locations. The nominals derived from adjectives of WEIGHT and TEMPERATURE, *omo-mi* ‘heaviness’ and *atataka-mi* ‘warmth,’ only denote the degree or the state. In this paper, I only deal with the deadjectival nominals that have the meanings expressing locations, i.e., the nominals derived from HEIGHT and DEPTH adjectives.

Adjectives of HEIGHT and DEPTH are referred to as dimensional adjectives. The positive member of pairs of dimensional adjectives can appear in measure phrase constructions, while other semantic classes of adjectives cannot (cf. Schwarzschild (2005)).

(4) a. HEIGHT: twenty meters high/*low
b. DEPTH: 1.2 meters deep/*shallow
c. WIDTH: five meters wide/ *narrow

(5) a. SIZE: *2 inches big/small
b. WEIGHT:*6lbs heavy/light

Notice that adjectives of WIDTH are also dimensional, since the positive member can co-occur with a measure phrase. As observed above, however, nominalization with *-mi* does not apply to the adjectives *omok-* ‘heavy’ to derive a nominal denoting a location. This fact seems to come from a conceptual difference of HEIGHT and DEPTH from WIDTH; HEIGHT and DEPTH are used to refer to the vertical dimensions, while WIDTH is used to refer to the horizontal dimension. In consideration of this point, it can be said that the nominalizer *-mi* only attaches to the positive members of pairs of vertical dimensional adjectives.

In summary, only the positive members of pairs of HEIGHT and DEPTH adjectives undergo the deadjectival nominalization process with *-mi* to derive nominals denoting locations.

2.2. Correlation of Deadjectival Verbalizations with Mi-*nominalization*

This subsection reveals a correlation between deadjectival nominalization with *-mi* and verbalizations with *-me-* and *-mar-*.[3]

Deadjectival verbs are formed by attachment of the verbalizers *-me-* and *-mar-*. The verbalizer *-me-* attaches to an adjectival stem to form a transitive verb, while *-mar-* attaches to form an intransitive verb. Like the nominalizer *-mi*, the verbalizers *-me-* and *-mar-* can only attach to the positive member of a pair of dimensional adjectives.

(6) SIZE
a. ookik-‘large’
*ooki-me- ‘to enlarge (transitive)’
*ooki-mar- ‘to enlarge (intransitive)’
b. tiisak- ‘small’
*tiisa-me- ‘to make smaller’
*tiisa-mar- ‘to get smaller’

(7) LENGTH
a. nagak- ‘long’
*naga-me- ‘to lengthen (transitive)’
*naga-mar- ‘to lengthen (intransitive)’

b. mizikak- ‘short’
*mizika-me- ‘to shorten (transitive)’
*mizika-mar- ‘to shorten (intransitive)’

(8) HEIGHT
a. takak- ‘high’
taka-me- ‘to heighten’
taka-mar- ‘to raise’
b. hikuk- ‘low’
hiku-me- ‘to lower (transitive)’
??hiku-mar- ‘to lower (intransitive)’

(9) SPEED
a. hayak- ‘fast’
haya-me- ‘to hasten, to quicken’
haya-mar- ‘to quicken (intransitive)’
b. osok- ‘slow’
oso-me- ‘to slow (transitive)’
oso-mar- ‘to slow (intransitive)’

(10) DEPTH
a. hukak- ‘deep’
huka-me- ‘deepen (transitive)’
huka-mar- ‘deepen (intransitive)’
b. asak- ‘shallow’
*asa-me- ‘to shallow (transitive)’
*asa-mar- ‘to shallow (intransitive)’

(11) WIDTH
a. hirok- ‘wide’
hiro-mer- ‘to spread (transitive)’[4]
hiro-ma- ‘to spread (intransitive)’
b. semak- ‘narrow’
seba-mer- ‘to narrow’
seba-ma- ‘to get narrow’

(12) WEIGHT
a. omok- ‘heavy’
*omo-mer- ‘to make heavier’
*omo-ma- ‘to get heavy’
b. karuk- ‘light’
*karu-mer- ‘to lighten (transitive)’
*karu-ma- ‘to lighten (intransitive)’

(13) TEMPERATURE
a. atuk- ‘hot’
*atu-me- ‘to heat (up)’
*atu-mar- ‘to get hot’
b. samuk- ‘cold’
*samu-me- ‘to cool’
*samu-mar- ‘to get cold’
c. atatakak- ‘warm’[5]
*atataka-me- ‘to warm (up)’
*atataka-mar- ‘to get warm’
d. suzusik- ‘cool’
*suzu-me- ‘to cool’
*suzu-mar- ‘to get cool’

(14) AGE
a. huruk- ‘old’
*huru-me- ‘to age (transitive)’
*huru-mar- ‘to age (intransitive)’
b. atarasik- ‘new’
*atarasi-me- ‘to renew (transitive)’
*atarasi-mar- ‘to renew (intransitive)’
c. wakak- ‘young’
*waka-me- ‘to make young
*waka-mar- ‘to become young’

The observations on nominalizations with *-mi* and verbalizations with *-me-* and *-mar-* are summarized in (15).

(15)

Semantic Class		Nominalization with *-mi*	Verbalization with *-me-*	Verbalization with *-mar-*
a. SIZE	Pos	*	*	*
	Neg	*	*	*
b. LENGTH	Pos	*	*	*
	Neg	*	*	*
c. HEIGHT	Pos	ok	ok	ok
	Neg	*	*	??

d. SPEED	Pos	*	ok	ok
	Neg	*	ok	ok
e. DEPTH	Pos	ok	ok	ok
	Neg	*	*	*
f. WIDTH	Pos	*	(*)	(*)
	Neg	*	(*)	(*)
g. WEIGHT	Pos	*	*	*
	Neg	*	*	*
h. TEMPERATURE	Pos	*	*	*
	Neg	*	*	*
i. AGE	Pos	*	*	*
	Neg	*	*	*

Several differences can be observed between *mi*-nominalizations and verbalizations with *-me-* and *-mar-*. The nominalization with *-mi* cannot apply to SPEED adjectives. Nor can it apply to the negative member of the pair of HEIGHT adjectives (i.e., the adjective *hikuk-* 'short, low'). The verbalizations with *-me-* and *-mar-*, on the other hand, can apply to these adjectives. These are the points to be considered, but I leave them open in this paper.

3. The Morpheme *-M-*

As observed in the previous section, there is a correlation between the nominalizer *-mi* and the verbalizers *-me-* and *-mar-*. Notice that all of them include the consonant /m/. Assuming that /m/ is an independent morpheme, the verbalizers *-me-* and *-mar-* could be decomposed as *-m-e-* and *-m-ar-*, respectively. This is confirmed by the fact that many transitive and intransitive verbs in Japanese are derived by attachment of the transitivizer *-e-* and the intransitivizer *-ar-* to a verbal stem (Jacobsen (1992)).

(16)

	Transitive	Intransitive
√ag-	ag-e- 'to raise'	ag-ar- 'to rise'
√atum-	atum-e- 'to collect'	atum-ar- 'to gather'
√hazim-	hazim-e- 'to begin'	hazim-ar- 'to begin'
√mag-	mag-e- 'to bend'	mag-ar- 'to bend'
√sag-	sag-e- 'to lower'	sag-ar- 'to get low'
√tom-	tom-e- 'to stop'	tom-ar- 'to stop'

It is *-e-* and *-ar-* that derive a verb from an adjectival stem. In other words, the morpheme *-m-* does not participate in verbalizing an adjective stem.

The same applies to deadjectival nominalizations with *-mi*; the morpheme *-m-* also does not participate in determining the category of the stem. The following examples show that the morpheme *-i* functions as a nominalizer. In (17), it attaches to a verbal stem to derive a nominal.

(17)

Verbal stem	Nominalization with *-i*
ayum- 'walk'	ayum-i 'walking'
kuras- 'live'	kuras-i 'life'
nayam- 'worry'	nayam-i 'worry'
omow- 'think'	omo(w)-i 'thought'
yom- 'read'	yom-i 'reading'

Thus, *-mi* should be decomposed into the morpheme *-m-* and the nominal suffix *-i*.

A question arises as to what the morpheme *-m-* is. One possibility is that it is the overt exponent of the comparative. According to Bobalijk (2012), the representation of a deadjectival change-of-state verb must contain the comparative; (18a) is a possible representation, while (18b) is disallowed.

(18) a. [[[ADJECTIVE] COMPARATIVE] V_{Δ}]
b. *[[ADJECTIVE] V_{Δ}]

Given that the comparative is contained in the representations of deadjectival verbs with *-m-e-*

and *-m-ar-*, it seems that the morpheme *-m-* is the overt realization of the comparative in Japanese. Since deadjectival nominals with *-m-i* also have the morpheme *-m-*, it would follow that the comparative is also contained in the representation of a deadjectival nominal with *-m-i*.

It makes sense from the semantic point of view that the comparative is embedded in the representations of deadjectival verbs with *-m-e-* and *-m-ar-*. Deadjectival verbs may have the meanings that imply a comparison with the standard. The deadjectival verbs *taka-m-e-* 'to heighten' and *taka-m-ar-* 'to raise,' for example, can be paraphrased as 'make something higher' or 'become higher.'

The same is true for deadjectival nominals; deadjectival nominals might also have the readings connoting a comparison with the standard. For example, the nominal *huka-m-i*, which is derived from the adjective *hukak-* 'deep,' denotes 'the location that is deeper than the standard.'

As observed in the previous section, however, deadjectival nominals with *m-i* and verbs with *-m-e-* and *-m-ar-* are formed only from the positive members of pairs of vertical dimensional adjectives. If the morpheme *-m-* is simply the overt exponent of the comparative, it would be unclear why it could not attach to other gradable adjectives. Rather than assuming that *-m-* is not just the overt realization of the comparative, let us suppose that it is the phonological realization of both the comparative and the (vertical) dimension with the positive value, as in (19).

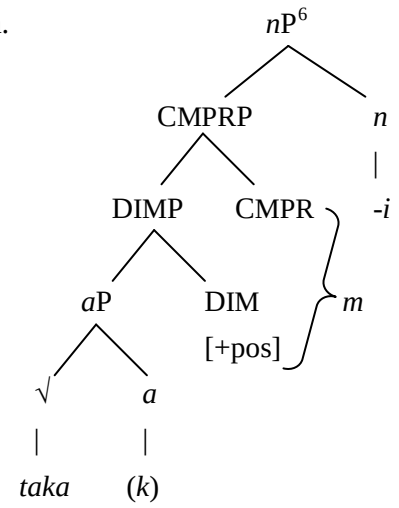
(19) The morpheme *-m-* is the overt exponent of the comparative and the (vertical) dimension with the positive value.

Adopting the framework of Distributed Morphology (Marantz (2001)), the phonological representation /m/ is assigned by the vocabulary insertion rule in (20), where CMPR is the functional head of the comparative and DIM is the head of the functional category related to the (vertical) dimensions. A dimensional adjective has the [+pos(itive)] feature when it is the positive member of the antonym.

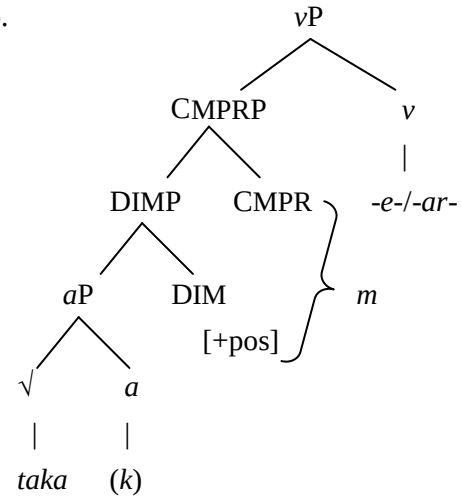
(20) {DIM[+pos], CMPR} ←→ /m/

The deadjectival nominal *taka-m-i* 'a height' and verbs *taka-m-e-* 'to heighten' and *taka-m-ar-* 'to raise' have the following internal structures. In (21), *a* and *v* are the functional heads to form an adjective and a verb, respectively. The DIM head is closer to *a*P than the CMPR head, since it contributes to determining the core semantics of an adjective.

(21) a.



b.



To sum up, the representations of deadjectival nominals with *-m-i* and verbs with *-m-e-* and

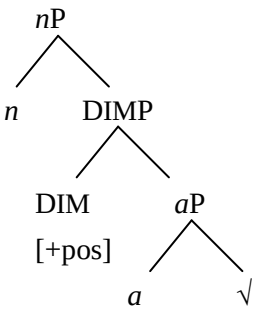
-m-ar- contain the comparative. Based on the observation that the morpheme *-m-* attaches only to the positive members of pairs of vertical dimensional adjectives, I have proposed that the morpheme *-m-* is the overt exponent of the comparative and the dimension with the positive feature.

3.2. Some Implications

Before closing this paper, let us explore some implications of the analysis presented above.

First, the assumption of the DIM head can give an account for nominalizations of dimensional adjectives in English. In English, the positive members of pairs of dimensional adjectives are nominalized by attachment of the suffix *-th*, not a different suffix such as *-ness*. This fact can be explained by assuming that the functional head *n* is overtly realized only as /th/ if it is projected above DIMP with the [+pos] feature. The internal structure of a deadjectival nominal with *-th* is illustrated in (22).

(22)



Second, the comparative morpheme is not overtly realized in comparative constructions in Japanese, as shown in (23).

(23) a. Fujisan-wa yarigatake-yori takai.
Mt.Fuji-Top Mt.Yari-than high
'Mt. Fuji is higher than Mt. Yari.'

b. Tazawako-wa biwako-yori
Lake.Tazawa-Top Lake.Biwa-than
hukai.
deep
'Lake Tazawa is deeper than Lake Biwa.'

Since the positive members of pairs of dimensional adjectives appear in comparative constructions, the vocabulary insertion rule in (20) would require the morpheme *-m-* to be overtly realized on these adjectives. Taking the observation in (23) into account, the vocabulary insertion rule in (20) should be modified as follows.

(24) {DIM[+pos], CMPR} ←→ /m/ / __ *n*/*v*

The morpheme *-m-* is the overt exponent of the DIM head with the [+pos] feature and the CMPR head only if the category-determining functional head *n* or *v* appears above CMPRP; otherwise, the CMPR head is realized in a phonologically null form.

4. Summary

This paper has demonstrated a correlation between deadjectival nominalizations with *-m-i* and deadjectial verbalizations with *-m-e-* and *-m-ar-*. It has also proposed that the morpheme *-m-* of deadjectival nominals with *-m-i* and verbs with *-m-e-* and *-m-ar-* is the overt exponent of the comparative and the (vertical) dimensions with the positive feature. The findings of this paper imply that the semantic classes affect the overt morphology, but further investigation is required to clarify the exact relationship between the semantics and the morphology.

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[1] Deadjectival nominalizations with *-sa*, *-me*, and *-mi* differ not only in their productivity, but also in their semantic properties. Deadjectival nominals with *-sa* and *-me* denote the degree of the state of being A of a given adjective A.

Nominals with *-mi*, on the other hand, have various meanings, such as feelings and locations.

[2] The nominalizer *-mi* can also attach to other semantic classes of adjectives, such as evaluative, psych and color adjectives.

(i) a. Evaluative adjectives
amak- 'sweet' → ama-mi
tuyok- 'strong' → tuyo-mi
sinsen-na 'fresh' → sinsen-mi

b. Psych adjectives
arigatak- 'grateful' → arigata-mi
itak- 'painful' → ita-mi
kanasik 'sad' → kanasi-mi

c. Color adjectives
akak- 'red' → aka-mi
aok 'blue' → ao-mi
sirok- 'white' → siro-mi

As mentioned later, some deadjectival nominals with *-mi* have the meanings of locations in addition to the meanings denoting the degree or the state. But the nominals in (i) only have the meanings of the degree or the state. In this paper, I do not deal with the deadjectival nominals which only denote the degree or the state.

[3] Sugioka (2002) points out that deadjectival verbalizations with *-me-* and *-mar-* are semantically correlated to nominalizations with *-me*, not nominalizations with *-mi*.

[4] When the adjective *hirok-* 'wide' is verbalized by attachment of *-me-* and *-mar-*, its verbalized forms, i.e., *hiro-me-* and *hiro-mar-*, do not have the intended meanings such as 'making something wide' and 'become wide.' In order to have these meanings, the different forms *hiro-g-e-* 'to widen (transitive)' and *hiro-g-ar-* 'to widen (intransitive)' need to be used. Notice also that a phonological change takes place on the adjective *semak-* 'narrow' when the stem is followed by *-me-* and *-mar-*, as in (11b). I suppose that adjectives of WIDTH undergo different verbalization operations.

[5] The transitive and intransitive verbs 'to warm' in Japanese are *atatam-e-* and *atatam-ar-*, respectively. Notice the verbs *atatam-e-* and *atatam-ar-* are not derived from the adjective *atatakak-*. It seems that the adjective *atatakak-* and the verbs *atatam-e-* and *atatam-ar-* are all derived from the verbal stem *atatam-*, which is no longer used. The verbalizers *-me-* and *-mar-* cannot attach to the adjective *atatakak-*, which is considered to be deverbal, since verbalization processes usually do not apply to deverbal adjectives.

[6] Nishiyama (1999) claims that the morpheme *-k-* is the predicative copula. As shown in (21), however, I suppose that it is the functional head *a* that forms a relative adjective. I also assume that in (21) /k/ is deleted for a phonological reason. See Morita (2010) for more details.

References

Bobalijk, Jonathan David (2012) *Universals in Comparative Morphology*, MIT Press, MA.

Jacobsen, Wesley M. (1992) *The Transitive Structure of Events in Japanese*, Kurosio, Tokyo.

Marantz, Alec (2001) "Words," Ms., MIT, MA.

Morita, Chigusa (2010) "The Internal Structure of Adjectives in Japanese," *Linguistic Research* 26, 105-117, The University of Tokyo.

Morita, Chigusa (2012) "A Note on Deadjectival Nominalizations and Verbalizations in Japanese," *Linguistic Research 28*, 111-126, The University of Tokyo English Linguistic Association.

Nishiyama, Kunio (1999) "Adjectives and the Copulas in Japanese," *Journal of East Asian Linguistics* 8, 183-222.

Schwarzschild, Roger (2005) "Measure Phrases as Modifiers of Adjectives," *Researches Linguistiques de Vincennes 35*, 207-228,

Shinmura, Izuru (ed.) (1998) *Kojien*, fifth edition, Iwanami Shoten, Tokyo.

Sugioka, Yoko (2002) "Keiyoosi kara Hasee-suru Doosi no Jitakootai o Megutte (On Transitive-Intransitive Alternation of Deadjectival Verbs)" *Bunpoo Riron: Rekisikon to Toogo* (*Grammatical Theory: Lexicon and Syntax*), ed. by Takane Ito, 91-116, University of Tokyo Press, Tokyo.

心理的変化を表す
使役移動構文における一考察
(A Study on the "Psychological" Caused-Motion Constructions)

中尾　朋子 (Tomoko Nakao)
大阪大学大学院 (Osaka University)

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1. はじめに

使役移動構文 (Caused-Motion Constructions) には、心理的変化を表すタイプがある(=(1))。

(1) a. The man *struck fear into* Mary.
b. The gunshot *struck terror into* the enemy's heart.

(1) のタイプの構文は、主語に、人間または無生物が見られ、経路句には経験者を表す名詞句が生起する。構文全体として心理述語 (動詞) 的な意味を表している。また、このタイプは斜格の位置に感情を経験する主体 (Experiencer) をとる心理述語とも考えられる。(1) は辞書で慣用表現として扱われることもある。

本稿では、心理的変化を表す使役移動構文を対象とし、構文文法 (Construction Grammar) と用法基盤モデル (Usage Based Model) の観点より考察する。以下では、この構文の特徴を物理的な使役移動構文と心理動詞と比較することで確認する。そして、 [strike fear into NP] が中心となって、使用が拡張していることを指摘する。さらに、コーパスの実例を基に検証することで中心例からの使用の拡張と構文カテゴリー全体の性質についても明らかにしていく。

2. 先行研究

2.1 心理動詞の研究

本稿で対象とする使役移動構文は、心理的な意味を表すため、心理動詞について従来議論されている特徴を概観することにする。

まず、心理動詞は大きく 2 種類に大別できる。

(2) a. Bill fears ghosts. (Pesetsky 1995:18)
b. Ghosts frighten Bill. (*ibid.*1995:18)

経験者が主語に生じるタイプ(=(2a)) と経験者が目的語に生じるタイプ (=(2b)) がある。このうち、後者の経験者目的語動詞のタイプについては strike fear / terror into NP と表す意味が類似するため、その特徴をさらに概観する。この経験者目的語タイプの主語は、動作主 (Agent) または、原因 (Cause) を表すことができる。

(3) Harry (deliberately) frightened Bill.
(Jackendoff 1990:140)

例えば (3) で、主語は意図的に働きかける場合は動作主となるが、主語は認識対象であり何らかの心理的な変化を引き起こすと捉える場合、原因となる。

また、Hatori (1997) は、経験者目的語タイプの動詞を 2 種類の動詞に意味的に分類できることを提案する。

(4) a. awe, frighten, impress, move, scare, etc.
b. He awed them into obedience.
(5) a. amuse, annoy, delight, touch, etc.
b. His songs touched the people.

まず、1 つ目の動詞タイプは動詞が表す感情が動的である。(4a) に見られる動詞で (4b) のように経路表現をとることができ、概念的にその経験者は主題 (Theme) と捉えられるという。2 つ目の動詞タイプは表す感情が比較的静的であり、(5a) に見られる動詞で、経路表現をとることができない。このタイプの動詞は、概念的に経験者は場所 (Location) で捉えられるという。Hatori (1997) は心理動詞の意味を空間的な概念で捉えており、本来空間移動を表す使役移動構文の意味の捉え方と関連性があると考えられる。Hatori (1997) の分類を、心理的変化を表す使役移動構文を特徴付けることへの視点の一つとしていきたい。

2.2 構文文法

本稿では、構文文法の観点で分析を行う。構

文文法の観点では、形式と意味の全体を構文として捉えられるため、本稿の対象の心理動詞的な意味を表す使役移動構文を分析するのには利点がある。構文の構成素だけでは捉えられない意味や役割を提示でき、また、結果として構文の部分の構成性が保たれていることも想定されている (Goldberg and Jackendoff 2004, et passim)。

本稿では、構文と動詞の用法との動機付けに関して、Boas (2003) を概観する。Boas (2003) は、本来は自動詞である sneeze の生起 (=(6a)) が使役移動構文に可能であるのは、一般的な使用の blow の生起 (=(6b)) が動機付けとなっていることを論じている。

(6) a. Mary <u>sneezed</u> the napkin off the table.
b. Lars <u>blew</u> the napkin off the table.
(Boas 2003: 272)

(6)で見られる動詞に共通しているのは空気を放出するという意味である。元々の blow の用法とのこれらの意味的な類似から sneeze の生起が可能となるという。つまり、ある典型例から特殊な動詞の生起例が可能になると考えられる。Boas (2003) は、動詞等，語の意味を重視する構文文法の立場である。本稿でも，この立場を採り、全体の心理動詞的な意味 (構文の意味)と生起する動詞 (構成素) の両方向の役割を想定した考察を行い、心理的変化を表す使役移動構文の特徴を示す。

3. 心理的変化を表す使役移動構文の特徴

3.1 使役移動構文における strike の生起

物理的な使役移動構文での動詞 strike は、使役移動構文では特殊な振る舞いを見せている。物理的な事態を表す場合では他動詞として 1 つの目的語を表すことができる。しかしながら、物理的な使役移動を strike で表すことが難しい。

(7) a. The man struck the ball.
b. *The man struck the ball into the field.
(adapted from Jackendoff 1990:144)
c. Jennifer Sclater [...] struck the ball into the back of the net. (BNC)

ただし、(7c) のように、世界知識あるいは百科事典的な知識が関わり、いくつかの種類のスポーツの場面においては strike の使用が容認される例も見られる。(7c) はホッケーの描写である。一般的に使役移動構文での strike の容認性は困難である。

心理的な変化を表す場合は、物理的な使用とは逆となる。目的語に感情語 fear / terror が生起する場合、(8a) のように容認が困難である。

(8) a. ??The man struck {fear / terror}.
b. The man struck {fear / terror} into Mary.

心理的変化を表す場合、strike は他動詞構文では使用が一般的ではないが、使役移動構文では容認され完全に可能な形式となる。この事実より、心理的変化を表す使役移動構文は経路表現が必要である使役移動構文であるといえる。つまり、strike の使用は物理的な使役移動では困難であるが、心理的変化を表し、メタファー的に感情を移動物と捉えられる場合に成立することがわかる。

3.2 心理動詞 frighten との比較

2.1 節で、strike fear / terror into NP は frighten と類似する意味を表すことをみた。そこで、意味的に類似する動詞 frighten と心理的変化を表す使役移動構文とを比較することで、特徴を明らかにしたい。

まず、主語の特徴について考察したい。心理動詞の経験者目的語タイプでは、2.1 節で参照したが、主語が動作主の場合と原因の場合が見られる (=(9))。心理的変化を表す使役移動構文では、(10) のように示すことができる。

(9) <u>The large man</u> frightened Mary.

(10) a. <u>The man</u> (deliberately) struck fear into his enemy.
b. <u>Her presence</u> strikes fear into this large man.

(10a) では、主語が意図的に働きかける場合、動作主となり、主語が認識対象を表す場合、原因となる。また、(10b) の主語は、認識対象を表すので原因となる。つまり、経験者目的語タイプの心理動詞と同様に、主語は動作主と原因

の場合が見られる。

次に、経験者の捉え方の特徴を確認する。そこで、経験者の位置に身体部位語が生起するかどうかについて考察する。心理動詞 frighten は、(11a) のように、身体部位語を経験者とすると容認性が低くなる。Hatori (1997) の指摘では、これは心理動詞の意味しか持たない動詞の特徴であるという。一方、(11b) のように使役移動構文では身体部位語が経験者の位置に生起することができる。

(11) a. ??His story frightened my heart.
(Hatori 1997:33)
b. His story struck {fear / terror} into my heart.

(11) に見られる違いは、経験者をメタファー的に空間･場所として捉えられるかということに差があると考えられる。つまり、身体を容器と捉えるメタファー <BODY as CONTAINER> が関係する。(11b) の使役移動構文では、前置詞 into の後の感情語 fear / terror を入れる容器であると捉えられている。この場合、使役移動構文は場所へ移動するという意味構造であるので経験者を場所 (Location) としてみることができる。ここで、使役移動構文が、Hatori (1997) の動詞分類に基づくと、(5) でみた、経験者を場所と捉える動詞タイプと捉え方に共通する部分があると考えられる。一方、frighten は Hatori (1997) では動的な感情を表す動詞タイプ (=(4))であり、経験者は主題 (Theme) と概念的に捉えられる。このことから、経験者の概念的な捉え方の違いが身体部位語の共起性に関しての違いを見せているとも考えられる。

最後に、使役移動構文と心理動詞の表す全体的な意味の違いを考察する。使役移動構文の意味的な特徴として程度の最終点を表す (Goldberg 1995)。つまり、使役移動構文では程度表現の修飾語を付加することが困難である。

(12) a. The man frightened his son *a bit*.
b. ??The man struck fear into his son *a bit*.
c. ??The man threw a trash into the box *a bit*.

心理動詞 frighten では程度表現を表す修飾語を付加できる (=(12a))。(12b) の心理的変化を表す使役移動構文は、(12c) の物理的な使役移動構文と同様に程度表現の付加が難しい。心理的変化を表す使役移動構文は、心理状態の尺度の最終点を含意していると考えられ、心理動詞とは異なり、使役移動構文の基本的な意味を継承していることを示唆する。

3.3 他の打撃動詞の使用可能性

この節では、頻出する動詞 strike の意味に注目をして、他の類似する打撃動詞の共起について考察を行う。(13a) の動詞部分に生起可能な打撃を表す動詞を(13b) に挙げる。

(13) a. V [fear] into NP
b. shoot, hit, slap. knock, beat,
*kick, *bang, *tap, *swat

同じ打撃を表す動詞の中でも生起に違いが見られる。この差異は、動詞の表す意味要素が異なると考えられる。例えば、kick であれば、「足で」という打撃の手段の指定があり、bang は「音の放出」という様態が指定されている。打撃動詞であっても、特定した手段･様態の指定があると (13a) での生起が困難になるようである。また、tap は、「軽く叩く」という意味であり、打撃の程度の意味が異なるため使用できないと考えられる。つまり、(13) に示す生起可能な動詞の種類は典型例の strike との何らかの意味要素を類推することで使用が可能になると予測する。

生起する動詞に類似する意味要素について考察する。まず、strike の表す意味を OED を参照すると、“to cause (a feeling) to fall or come suddenly”と定義されている。つまり、使役移動構文では「突然」という意味要素が strike から取り出す事ができると予測される。Kövesces (1990) によれば、strike は瞬間的な行為を表すので、strike fear into NP での恐怖の原因は強い恐怖の突然生じる危険や、即座に恐怖を生じさせる危険と考えられているという含意があるという。つまり、fear/terror を目的語として共起する場合の strike の意味が「突然」、「強い働

きかけ」、「速い働きかけ」という意味要素を示すと考えられる。また、これらの意味要素を共有する動詞類が心理的変化を表す使役移動構文に共起可能であるのかを分析していく必要がある。

まず、「突然」を表す意味要素に関しては、suddenly という修飾をすることができる。つまり、(14) のように他の打撃動詞についても「突然」という意味要素が表されている。

(14) a. Joe struck fear into Mary *suddenly.*
b. Joe {hit / beat / shot / slapped} fear into Mary *suddenly.*

突然である恐怖を表すことと、その生起可能な動詞が適合しているため、「突然」という意味要素が共通要素であると考える。

次に「強い働きかけ」という意味要素は (15) のように、その逆の意味を表す softly で修飾する事ができない。

(15) a. *Joe struck fear into Mary *softly.*
b. *Joe {shot / hit / slapped / beat / knocked} fear into Mary *softly.*

つまり、「強い働きかけ」を表すという意味要素を共通して strike と意味の類似する動詞が表している。動詞の表す共通する意味要素が心理的変化を表す使役構文の全体の意味と関係していると考えられる。

さらに、「速い働きかけ」という意味要素が関係している。この意味要素に関して、「速い働きかけ」と逆の意味を表す修飾語 slowly を付加する。

(16) a. *Joe struck fear *slowly* into Mary.
b. *Joe {hit / shot / slapped} fear *slowly* into Mary.
c. ??Joe {beat / knocked} fear *slowly* into Mary.

「速い働きかけ」の意味要素は全ての生起動詞と意味的な適合が見られず、(16ab) の動詞の生起は難しいことがわかる。インフォーマントによれば、(16ab) の動詞の使用は、速さの含意が見られるため slowly とは適合しないが、(16c) の動詞では連続性を含意するため、連続的に働きかけ、ゆっくり恐怖が生じるという意味になると容認性が上がるという。

そこで、「連続的な働きかけ」という意味要素についても考察する。この場合は連続的に働きかけるという意味で many times という修飾語を付加する。

(17) a. Joe struck fear into Mary *many times.*
b. *Joe {hit / shot / slapped} fear into Mary *many times.*
c. Joe {beat / knocked} fear into Mary *many times.*

ここでは、strike は連続的に働きかけて恐怖を生じさせるという意味を表す事ができるが hit, shoot, slap は動詞の意味には連続性の意味を見せないため使用できないと考えられる。

従って、[strike fear into NP]が中心例として機能し、strike の意味要素を共有する動詞が共起可能となるのである。反対に、動詞に「突然」や「強い働きかけ」などの意味要素を持たない動詞であると使用が難しくなるといえる。

3.4 まとめ

以上、心理的変化を表す使役移動構文は物理的な strike の用法では捉えられない、経験者を表す構文であること、主語について心理動詞と同様の特徴を表すこと、また使役移動構文の意味的特徴も受け継いでいるということを指摘した。動詞の生起に注目すると、strike の意味要素から他の打撃動詞の使用が類推されることを確認した。つまり、strike fear into NP は、[V fear into NP] 構文の中心例（プロトタイプ）として機能すると考えられる。次節では、コーパスの実例を基に、動詞の生起例を検証し、心理的変化を表す使役移動構文の全体的な意味要素の関連性と構文のカテゴリーを考察する。

4. コーパスデータの検証

4.1 コーパスでみられる動詞の生起例

前節の議論を踏まえ、2 つのコーパス: British National Corpus (以下表記 BNC)、 The Corpus of the Contemporary American English (以下表記 COCA) で生起例を、V [TERROR] into NP と V [FEAR] into NP について検証していく。結果は

それぞれ表 1、表 2 に示す。

表 1． V [TERROR] into NP の動詞の生起

BNC の結果 [総数 12]	COCA の結果 [総数 25]
strike[11] / instill [1]	strike [21] / bring [2] instill, send

表 2. V [FEAR] into NP の動詞の生起

BNC の結果 [総数 48]	COCA の結果 [総数 145]
put [24] / strike[20] instill [3] /drive	put [63] /strike [57] instill [4] , bring [4] inject [2], throw [2], send [2] / beat, build, carry, cast, drive, incite, inculcate, insert, leak, pump, shoot

表 1 では、明らかに strike の使用が多く、[strike **terror** into NP] がかなり定着している。(18) はその例の 1 つである。

(18) Its fearsome appearance strikes terror into the hearts of the Elves' enemies, [...]. (BNC)

次に、表 2 の V [FEAR] into NP の動詞の生起例では、terror 句と同様の動詞類の生起が見られるが、生起する動詞の種類も数も多い。両コーパスで同じ動詞類の生起例が見られる。最も注目すべき点は strike と put の生起数が他の動詞と比べてかなり多く見られることである。そしてその 2 つの典型例は以下に示す。

(19) a. [strike fear into NP]
b. [put [the fear of God] into NP]

(20) a. This always strikes fear into the hearts of would-be investors. (BNC)
b. He himself would put the fear of God into the professors of Königsberg and Breslau; [...]. (BNC)

(19a) は前節より考察した典型例であるが、(19b) は、put が生起し、目的語に特徴が見られる。この 2 種類の典型例の生起例はそれぞれ、(20) に示す。以下では、これらの典型例とそれに関連する V [FEAR] into NP 生起例を考察する。

4.2 strike [FEAR] into NP からの使用の拡張

前節で strike と意味要素を共有している動詞が類推され生起できるということを基に生起例を考察する。

まず、打撃動詞の生起例が見られる。(21) はそれぞれ、beat, shoot の例である。

(21) a. He shot fear into the hearts of all upstanding people and others [...].
b. [...] and they're going to beat fear into people, [...]. (いずれも COCA)

(21a) は、「突然」、「強い働きかけ」、「速い働きかけ」という意味要素を表すものである。また、(21b) は、加えて連続的な行為を表す意味要素を表している動詞が生起している。これらは、strike の動詞の意味と構文の形式の分析可能性より可能となる。また、drive の生起例については (22) の hit / push の意味での使用がある。

(22) The man drove a nail into the board.

この (23) の打撃の意味で (24) の心理的変化を表す使役移動構文に生じると考えられる。

(23) a. He is trying to drive psychological fear into the American people. (COCA)
b. He drove fear into the American people *many times.*

(23) では、何度も打撃を与えるという意味で many times を使用して修飾することができる。つまり、drive が連続的行為の意味要素を表しており、strike が示す意味要素を共有すると考えられる。

次に、感情発生を表す動詞の生起例が見られる。(24) は、漸次的な働きかけにより恐怖を移動させるような意味を表す。この場合は strike と共通する意味要素は連続的な行為である。

(24) 72 Hutu-controlled radio broadcasts instilled fear into the Hutu population in Rwanda. (COCA)

(25) The broadcasts instilled fear into the Hutu population in Rwanda *many times.*

(25) のように連続的に働きかける行為を示すために many times で修飾ができる。連続の意

味から心理的変化は漸次的に変化していく事を表す。また、興味深い事に、一般には使用されにくい作成動詞 build の使用が見られる。

(26) The 25, 30 years of movies from Hollywood about jaws and eating sailboats and light houses has built this fear into most people. (COCA)

(26) は心理的変化を表す使役移動構文の形式と連続的 (漸次)の意味から類推されて、感情発生の意味で作成動詞 build の使用が可能になると考えられる。また、作成のプロセスは漸次的に恐怖を入れていくというメタファーで捉えられると考えられる。

最後に、(27) に見られる使役移動動詞の生起例について考察する。インフォーマントによれば、使役移動動詞の構文の生起には、strike の意味要素である「突然」・「強い働きかけ」を表すような文脈や含意が必要であると指摘する。恐怖の意味と合うような文脈が必要となるため、strike の意味要素を表している文脈で理解されると考えられる。

(27) a. She leaks her fear into my mind without meaning to.

b. Sex and violence - these words bring fear into every parent's heart.

c. It was that voice that carried fear into her, intense and sharp [...].

(以上すべて COCA)

以上、strike の意味要素から V [FEAR] into NP での生起する動詞類が関連することから、[strike fear into NP] は V [FEAR] into NP のプロトタイプとして機能していると指摘する。

4.3 [put [the fear of God] into NP]のカテゴリー

もう一つの典型例である put the fear of God into NP に注目して、中心例 (プロトタイプ)としての特徴を指摘する。この目的語の[the fear of God] は使役移動構文での目的語位置の生起が比較的多く見られ、BNC では、24 例中 20 例 (83%) で、COCA では 86 例中 64 例 (74%)である。この使用は文字通りの意味ではなく強意表現として使用されているものである。さらに、[the fear of [God]]の分析可能性によって，応用・拡張した例が見られる。

(28) a. I put the fear of the Goddess into her.

b. I think he puts the fear of hell into everybody. (いずれも BNC)

(28a)では、経験者が女性であるので、Goddess に変えている。(28b) は hell という強意語で応用させている。つまり、元の表現から部分的に応用、拡張されているのである。また、動詞に注目すると、[V [the fear of God] into NP]の形式で他の動詞の使用が、BNC、COCA とも数は少しであるが、生起例が見られる。例えば、 (29) の strike の生起例は、[strike [FEAR] into NP]の形式と関わり、応用されていると考えられる。

(29) The real memories and exaggerated horror stories have combined to strike the fear of God into the Serbian minority in Croatia. (BNC)

このように、[put [the fear of God] into NP]は一つのカテゴリーの中心例として、応用･拡張されており、さらなる表現を作り出す元となっているとわかる。

4.4 構文カテゴリーの特徴

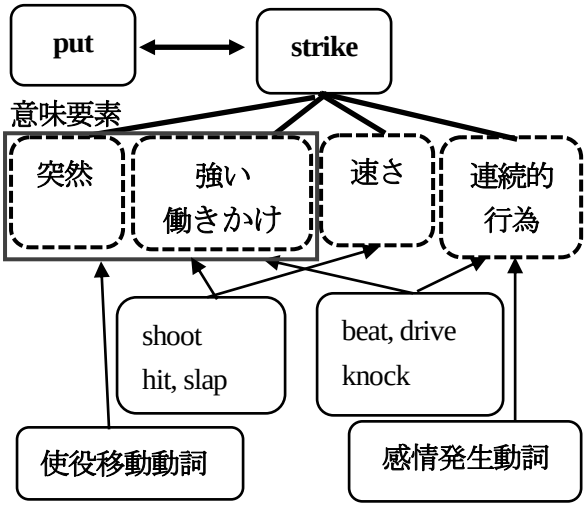
V [FEAR] into NP は大きく 2 種類の典型例があり、それぞれがプロトタイプとしての役割を果たし、その表現が応用、拡張されていることを指摘した。この構文に生起する動詞は部分的に意味要素を共有し、一つのまとまりとして家族的類似によって捉えられると考えられる。

図 1 に示すように、この構文カテゴリーに生起する動詞は部分的に意味要素が共通していることがわかる。打撃動詞は、strike の「突然」と「強い働きかけ」という意味要素を共有し、構文の生起例が見られる。また、使役移動動詞は文脈として意味要素を共有している。また、感情発生を表す動詞は「連続的行為」の意味要素が見られ、この構文に生起する。別の典型例である動詞 put と strike のようにそれぞれの具体事例が関連し合っている場合 (=(29)) もある。つまり、この構文カテゴリー全体は家族的

類似に基づいて構成されているといえる。

図.1

V [FEAR] into NP に生起する動詞の家族的類似



5. 結論

本稿では、構文文法と用法基盤モデルの観点より心理的変化を表す使役移動構文 V [FEAR/TERROR] into NP に関して、経験者目的語心理動詞と類似するが、物理的な使役移動構文の性質を表すことを指摘した。さらに V [FEAR] into NP は、プロトタイプ的構文 (strike fear into NP, put the fear of God into NP) が見られ、生起する動詞の意味要素が関わり、その類推から使用が拡張すると指摘した。この構文カテゴリー家族的類似に基づいて構成され、さらなる生産性を示唆する。

参考文献

Barlow, Michael (2000) "Usage, Blends and Grammar," *Usage-Based Model of Language*, ed. by Michael Barlow and Suzanne Kemmer, 315-345. CSLI Publications, Stanford.

Belletti, Adria and Luigi Rizzi (1988) "Psych-Verbs and θ Theory," *Natural Language & Linguistic Theory* 6, 291-352.

Boas, Hans C. (2003) *A Constructional Approach to Resultatives*. CSLI Publications, Stanford.

Dowty, David (1991) "Thematic Proto-Roles and Argument Selection," *Language* 67, 547-619.

Goldberg, Adele E. (1995) *Constructions: A Construction Grammar Approach to Argument Structure*. The University of Chicago Press, Chicago.

Goldberg, Adele E. and Ray Jackendoff (2004) "The English Resultative as a Family of Constructions," *Language* 80, 532-567.

Hatori, Yuriko (1997) "On the Lexical Conceptual Structures of Psych-Verbs," *Verb Semantics and Syntactic Structure*, ed. Taro Kageyama, 15-44. Kuroshio Publishers, Tokyo.

早瀬尚子・堀田優子 (2005)『認知文法の新展開』：カテゴリー化と用法基盤モデル』研究社, 東京.

Iwata, Seizi (1998) *A Lexical Network Approach to Verbal Semantics*. Kaitakusha: Tokyo.

Iwata, Seizi (2008) *Locative Alternation: A Lexical-Constructional Approach*. John Benjamins, Amsterdam and Philadelphia.

Jackendoff, Ray (1990) *Semantic Structures*. MIT Press, Cambridge, MA.

Kay, Paul (2013) "The Limits of (Construction) Grammar" *The Oxford Handbook of Construction Grammar*, ed. by Thomas Hoffman and Graeme Trousdale, 32-48. Oxford University Press, Oxford.

Kövesces, Zoltán (1990) *Emotion Concepts*. Springer-Verlag, New York.

Kövesces, Zoltán (2000) *Metaphor and Emotion: Language, Culture, and Body in Human feeling*. Cambridge University Press, Cambridge.

Pesetsky, David (1995) *Zero Syntax: Experiencers and Cascades*. MIT Press, Cambridge, MA.

田中茂範・松本曜 (1997)『空間と移動の表現』研究社, 東京.

コーパス、辞書

British National Corpus. (BNC)

The Corpus of Contemporary American English. (COCA)

Oxford English Dictionary 2nd edition. (OED)

「様態・結果の相補性」とその反例とされるものについての再検討*
(Reexamination of Apparent Counterexamples to Manner/Result Complementarity)

並木　翔太郎 (Shotaro Namiki)
筑波大学大学院 (University of Tsukuba)

キーワード：語彙意味、結果動詞、様態動詞、様態・結果の相補性、殺害様態動詞

1. 序

本稿は、Rappaport Hovav and Levin (2010)が提案する「様態・結果の相補性」仮説の経験的妥当性を検証することを目的とする。「様態・結果の相補性」とは、動詞が一度に語彙化できる意味的要素において、様態と結果が相補分布の関係にあることを指す。当該仮説は、動詞分類や言語類型など、語彙意味論研究の様々な分野において関係の深い、興味深いものであるといえる。

近年、いくつかの先行研究がこの仮説の反例を指摘している。本稿は、その中でも、特に盛んに分析されている「殺害様態動詞」と呼ばれる動詞類を取り上げ、詳細に分析する。そして、本稿の分析に基づけば、殺害様態動詞はあくまで様態のみを語彙化しているため、「様態・結果の相補性」仮説の反例には当たらないことを示す。

本稿の構成は次のとおりである。2 節では「様態・結果の相補性」仮説ならびに、結果と様態の定義について概観する。3 節では「様態・結果の相補性」仮説の反例として、先行研究で分析されている「殺害様態動詞」について概観し、続く 4 節でより詳細な分析を試み、殺害様態動詞が当該仮説の反例には当たらないことを示す。5 節は結語とする。

2. 様態・結果の相補性

LevinとRappaport Hovavの一連の研究では、動的動詞が、通言語的に、様態動詞と結果動詞の 2 種類に分類されることを観察している。

(1) a. *Manner Verbs*: nibble, scribble, sweep, wipe, flutter, laugh, run, swim, …
b. *Result Verbs*: clean, empty, fill, freeze, kill, melt, open, arrive, die, enter, faint, …

この観察の興味深い点は、様態動詞は結果を語彙的に表すことはなく、結果動詞も様態を語彙的に表すことはないという点である。例えば、日本語の様態動詞「拭く」が表す行為は、通常拭いたものがきれいになることを目的として行われる。しかし、「テーブルを拭いたが汚れがとれなかった」という具合に、「きれいになる」という結果は、明示的に打ち消すことが可能である。このことから、様態動詞「拭く」は、結果を語彙的に表していないことがわかる。同様に、日本語の結果動詞「壊す」も、「金槌で/投げつけて/踏みつぶして」など様々な様態を付加的に表すことが可能であることから、結果動詞も、様態を語彙的に表していないといえる。

上記のような観察を経て、Rappaport Hovav and Levin (2010)では、(2)にまとめたような語彙化に関する仮説を唱えている。

(2) *Manner/Result Complementarity*: Manner and result meaning components are in complementary distribution: a verb lexicalizes only one.

(2)によれば、様態と結果の意味は相補分布の関係にあり、動詞はどちらか一方しか語彙化することが出来ないことになる。

Rappaport Hovav and Levin (2010)は、この仮説の定式化を、(3)に示すような、彼女らの動詞意味論で試みている。

(3) a. [x ACT $_{<ROOT>}$]
b. [[x ACT] CAUSE
[y BECOME <*ROOT*>]]

c. * [[x ACT $_{<ROOT>}$] CAUSE
[y BECOME <*ROOT*>]]
d. * [[x ACT $_{<ROOT1>}$] CAUSE
[y BECOME <$ROOT_2$>]]

Levinらは、動詞の意味を2つのパートに分けて考える。1つは、ある動詞類が共有する意味的特性の形式的な表示で、event schemaと呼ばれている。そしてもうひとつは、それぞれの動詞がもつ固有の意味特性で、root と呼ばれている。様態動詞という動詞類は、総じて(3a)の event schemaを持っている点では違いはないが、rootによって動詞の意味が異なると仮定される。同じように、結果動詞は(3b)のように表示され、動詞個々の意味は、root によるものだと仮定されている。

この定式化の基では、(4)のような語彙化の制約が存在するLevinらは仮定している。

(4) A root can only be associated with one primitive predicate in an event schema, as either an argument or a modifier.

rootがACT述語かBECOME述語のどちらか一方にしか結びつくことが出来ないという制約から、(3c)のような、両方に root が結びついた表示は排除される。また、root が複数含まれる動詞を見たことがないという経験的事実から、(3d)の表示もLevinらは排除している。このように、Levinらは、「様態・結果の相補性」仮説は、event schemaとrootの結びつき方に関する制約によってフォローされる、と説明している。

次に、Rappaport Hovav and Levin (2010)の結果と様態の定義について概観する。Levinらは結果の概念を(5)のような、尺度変化(scalar change)として定義している。

(5) All result roots specify scalar changes, […] where a scalar is a set of degrees — points or intervals indicating measurement values — on a particular dimension (e.g., height, temperature, cost), with an associated ordering relation.

(Rappaport Hovav and Levin (2010:28))

尺度変化には(6)のような段階性のあるものや、形容詞 dead のような段階性を持たないものが含まれる。

(6) I warmed the soup ≈ the degree of warmth of the soup increased.

また、Levin らは様態の概念を、(7)のように、非尺度変化(nonscalar change)として定義している。

(7) A nonscalar change is any change that cannot be characterized in terms of an ordered set of values of a single attribute […]. The vast majority of nonscalar changes […] involve complex changes — that is a combination of multiple changes — and this complexity means that there is no single, privileged scalar of change.

(Rappaport Hovav and Levin (2010:32))

例えば、jog などの移動様態動詞が表す事象は、経路句が共起しない限り、位置変化などを表すことはない。

(8) John {jogged/waltzed} in the park.

様態の定義は、その名が示すように、様態と結果の相補性に基づいていると思われる。従って、当該仮説と独立した、十分な定義とは言い難いが、定義の修正は次回に譲り、(7)の定義に基づいて以下議論を進める。

最後に、「様態・結果の相補性」仮説の重要な点を2つ述べておきたい。1つは、「様態・結果の相補性」仮説は、様態と結果を同時に語彙化する動詞が指摘されていない、という経験的事実から導き出されているという点である。従って、様態と結果の意味を同時に語彙化していると思しき動詞が指摘された場合は、詳細に分析する必要があるということになる。

2つ目の重要な点は、「語彙化」の定義であ

る。Dowty (1991)が言うように、動詞がある意味を語彙化するならば、その意味はその動詞が用いられる文脈の影響を受けることなく表されるはずである。以下では、この二点、つまり、様態と結果の両方を語彙化していると思しき動詞について、如何なる文脈でもその意味が保持されるか、という観点から分析していく。

3.「様態・結果の相補性」の反例とされる例

3.1. Beavers and Koontz-Garboden (2012)

「様態・結果の相補性」仮説の反例に、(9)のような「殺害様態動詞」が挙げられている(Beavers and Koontz-Garboden (2012), Husband (to appear))。

(9) Shane {drowned/electrocuted/ guillotined} Sandy.

直感的に、(9)の例は「Shane が Sandy をどのように殺したか」を表しているように思える。この直観が正しいとすると、分析の焦点は「これらの動詞が「死んでいる状態」という意味を語彙化しているかどうか」という点に絞られることになる。

Beavers and Koontz-Garboden (2012)は、例えば、結果の打ち消しテストを用いて、殺害様態動詞が「死んでいる」という結果状態を語彙化していると判断している。

(10) a. # John broke the vase, but nothing is different about it.
b. John hammered (on) the vase, but nothing is different about it.

(10)は、主節の内容を、後続する節によって打ち消した際に、矛盾が生じるかを調べる言語テストである。(10a)のように、結果動詞が用いられる場合は、主節の内容と従属節の内容で矛盾が生じる。一方、(10b)のように、様態動詞が用いられる場合は矛盾が生じない。Beavers and Koontz-Garboden (2012) は、(11)のように、このテストを殺害様態動詞に用いている。

(11) a. # Jane just drowned Joe, but nothing is different about him.
b. # Jane just crucified Joe, but nothing is different about him.

Beavers and Koontz-Garboden (2012)は、(11)に示すように、殺害様態動詞が用いられる場合は矛盾が生じると判断している。このことから、彼らは、殺害様態動詞は結果の意味を含んでいると分析している。

ここまで、Beavers and Koontz-Garboden の分析を概観した。次に、殺害様態動詞に対して、より詳細な分析を行った Husband (to appear)を概観する。

3.2. Husband (to appear)

Husband (to appear)では、アスペクトの観点から、殺害様態動詞を2種類に分類している。(12a)のように、活動事象または達成事象を表す述語を形成する動詞を「クラス I」に、(12b)のように、到達事象を表す述語を形成する動詞を「クラス II」に分類している。

(12) a. *Class I manner-of-killing verbs*: electrocute, drown, poison, etc.
b. *Class II manner-of-killing verbs*: guillotine, decapitate, etc.

この分類は、少なくとも、以下 2 つの経験的事実によって支持される。1つは、for 句による「出来事の中断解釈」の可否に関する言語事実である。(13)ならびに(14)に示すように、クラスⅠの殺害様態動詞は for 句による「出来事の中断解釈」が可能であるが、クラスⅡの動詞はそのような解釈が得られない。

(13) a. The State of Florida electrocuted Ted Bundy for 30 seconds.
b. Joe Delaney drowned for 5 minutes.

(14) # King Luis XVI was guillotined for 30 seconds.

(13a)を例に取ると、「フロリダ州はテッド・バンディーを 30 秒間電気椅子の刑に処した」という解釈になり、30 秒後に電気椅子の刑を中断

していることが表されていることになる。従って、電気椅子の刑を30秒で中断したということは、まだテッド・バンディーは生きていることになる。このように、クラスⅠの殺害様態動詞は、for 句による「出来事の中断解釈」が容認される。つまり、クラスⅠでは、ある種の結果キャンセルが可能であるということになり、クラスⅠの動詞は、結果を語彙的には表していないという判断が適切に下される。一方、クラス II の殺害様態動詞は for 句との共起が許されないことから、結果を語彙化していることになると、Husband は分析している。

殺害様態動詞の下位分類を支持する2つ目の事実として、Husband は結果句 to death の生起可能性を挙げている。Husband によれば、クラスⅠの動詞は to death と共起可能である一方、クラスⅡの動詞は to death と共起できないと判断される。

(15) # Shane killed Sandy to death.
(16) a. The State of Florida electrocuted Ted Bundy to death.
b. Joe Delaney drowned to death.
(17) # King Luis XVI was guillotined to death.

英語では、(15)のように、動詞が表す結果状態と結果句が表す結果状態が同じ場合は、その結果句の使用は許されない。言い換えれば、殺害様態動詞が to death と共起可能な場合、その動詞は、「死んでいる」という状態を語彙化していないと看做される。(16)に示すように、クラスⅠの殺害様態動詞は to death と共起可能なことから、結果を語彙化していないことになる。対照的に、クラス II の殺害動詞は to death と共起不可能なことから、結果を語彙化していると、Husband は分析している。

3.3. まとめ

3 節では、まず、全ての殺害様態動詞は「結果」を語彙化している、という Beavers and Koonz-Garboden (2012)の分析を概観した。しかし、この分析は、Husband (to appear)の分析からわかるように、十分ではない。Husband の分析によれば、結果を語彙化しているのはクラス II の動詞 (*guillotine*) に限られるということになることがわかった。

4 節では、Husband の分析の問題点や新たな言語事実を基に、クラス II の殺害様態動詞でさえも、結果は語彙化していないことを明らかにする。

4. 殺害様態動詞の更なる分析

4.1. Husband (to appear)の問題点

Husband (to appear)では 2 つの経験的事実から、class II の殺害様態動詞は結果を語彙化していると結論づけていた。しかし、この分析には少なくとも 2 つの問題点が有ると考えられる。1つは、for 句による出来事の中断解釈の可否である。Husband の分析では、for 句による出来事の中断解釈が容認されない場合は、結果を語彙化している、というものであった。しかし、多くの研究者が様態動詞と看做している動詞の中にも、for 句の中断解釈が容認されない(18)のようなタイプが存在する。

(18) # Mary {knocked/kicked} the door for 30 seconds.
(19) # The executioner guillotined Kerberos for 30 second.

(18)の動詞は semelfactive verb と呼ばれ、特徴としては、瞬間的な行為を表す。(18)では、「ドアを複数回ノックする/蹴る」のような解釈矯正を行わない限り、容認されないのである。このような事実は、(19)のような、クラス II の殺害様態動詞でも同様で、反復の解釈でなければ容認されない。つまり、for 句による出来事の中断解釈が容認されないことが、当該の動詞に結果の意味が語彙的に含まれていることを必ずしも示していないのである。

semelfactive は、達成動詞と「瞬間的な出来事を表す」という点で類似している。しかし、達成動詞が結果を語彙的に含意する一方、semelfactive は結果を含意しないという点で区別される。この違いは、(20-21)に示すような、in X time 句の解釈の違いからも明白である。

(20) Bill arrived at the station in an hour.

(21) a. * Mary knocked the door in ten minutes.
b. * The executioner guillotined the prisoner in ten minutes.

(20)の達成動詞を含む述語と in X time 句が共起した場合、「スタートから一時間後に駅に到着した」という完了的な解釈になる。一方、(21)の semelfactive の場合は、in X time 句が起動相にかかる解釈、すなわち、「10 分経ってからドアをノックし始めた/ギロチンの刑を実行した」という解釈しか容認されない。in X time 句は、「始まり」や「終わり」といった出来事の意味的な境界を必要とする性質がある。このことを考慮に入れると、(21)の言語事実は、semelfactive に始まりの局面しか内在されていないため、(20)のような解釈が容認されない、と説明されるのである。つまり、guillotine には結果相が含まれていないといえる。

2 つ目の問題点は、結果句 to death の生起可能性に関する文法判断である。Husband (to appear)では、guillotine と to death の共起は容認されないと判断したが、(22)に示すように、発表者のインフォーマント 5 人全てが容認されるという判断を示している。

(22) The executioner guillotined King Luis XVI to death. (cf. (17))

ここで、Husband が用いている guillotine の例が全て受動文であることに注目されたい。特定の様態動詞が受動文などにおいて過去分詞形で用いられる場合、結果状態を表すという事実は、これまで多くの先行研究で指摘されている(Embick (2004))。受動文の形式において、guillotine が結果の意味を帯びているとすれば、(17)における to death の容認度の低さが動詞それ自体に原因があるとは言えないことになる。この点に関しては、4.3 節で再度触れることにする。

以上 2 つの問題点から、クラス II の殺害様態動詞も結果を語彙化しているとは言えないことが明らかとなった。

4.2. 本稿における分析

4.2 節では、さらに 2 つの経験的事実を提示し、クラス II の殺害様態動詞でさえも、結果は語彙化されていないことを明らかにする。

1つ目の経験的事実は、結果の打ち消し可能性に関するものである。3 節で見たように、Beavers and Koontz-Garboden (2012)では、殺害様態動詞は結果を打ち消す文脈では用いられないと判断されている。しかし、(23)に示すように、適切な文脈のもとでは、結果を打ち消す従属節が生起しても、矛盾が生じることはない。

(23) a. [Situation: The prisoner is an alien who is alive even without his head.]
The executioner guillotined the prisoner, but he didn't die.
b. [Situation: The prisoner is an alien who can change his skin to super-alloy.]
The executioner guillotined the prisoner, but his head couldn't be cut off.

(23a)が示すように、首を切っても死なない生物が被動者として生起する場合、結果の打ち消しは問題なく容認される。ここで、「殺害様態動詞 guillotine が語彙化している結果は、死んでいることではなく、切断されている状態である」と反論されるかもしれない。しかし、首が切れなかったという打ち消しも可能であることは、(23b)からも示される。なお、(24)のように、結果動詞は如何なる文脈が与えられても結果の打ち消しが許されないことから、guillotine で予測される如何なる結果も、語彙的に表されていないことは明白である。

(24) # [Situation: The prisoner is an alien who is alive even without his head.]
The executioner killed the prisoner by cutting off his head, but he didn't die.

2つ目の経験的事実は、結果句の in 句の生

起可能性についてである。Namiki (2013)では、結果動詞が用いられる(25)のような結果構文では、in pieces のような結果を表す in 句が生起可能であるが、(26)のような様態動詞の結果構文では結果を表す in 句の生起が容認されないことを指摘している。

(25) Bill broke the vase in pieces.
(26) a. * Bill hammered the vase in pieces.
b. * The tiger clawed the curtain in tatters.

殺害様態動詞が生起する結果構文(27)は、まさに様態動詞の結果構文と同じ文法判断が下される。

(27) * The executioner guillotined the prisoner in two pieces.

このような言語事実も、guillotine が結果を語彙的には表さない、様態動詞であると仮定すれば、自然に説明することができる。

なお、4.2 節で触れた、受動文と結果の意味の関係について、ここで補強証拠を示したい。Namiki (2013)では、in 結果句は結果の意味が語彙的もしくは構文的に保証されている場合に用いられることを明らかにした。もし、受動文という形式が結果の意味を表すとするならば、guillotine が受動文で用いられた場合、in 結果句と共起できると予測されるが、この予測が正しいことが(28)によって示される。

(28) The prisoner was guillotined in two pieces.

以上、2つの経験的事実から、クラスIIの殺害様態動詞でさえも、結果を語彙的に表してはいないことが明らかとなった。

5. 結語

本稿では、Rappaport Hovav and Levin (2010)等で提案された「様態・結果の相補性」仮説の妥当性を検証するべく、Beavers and Konntz-Garboden (2012) や Husband (to appear)で指摘された反例と思しき例である、殺害様態動詞について詳しく分析した。Husband は殺害様態動詞を2種類に分け、そのうちのクラス II の殺害様態動詞が結果を語彙化していると分析した。しかし、本稿の分析に基づくと、如何なる殺害様態動詞であっても、結果の意味は語彙化されていないと結論付けることができる。結果が強く含意されるのは、被動者の指示対象に対する百科事典的知識、例えば、「生物は首を切断されたら死ぬ」というような知識が影響していると考えられる(例えば Goldberg (2010)の cultural unit など)。しかし、様態と結果は同時に語彙化されることは、現時点ではないため、「様態・結果の相補性」仮説は妥当であると結論づけられる。

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参考文献

Beavers, John and Andrew Koontz-Garboden (2012) “Manner and Result in the Roots of Verbal Meaning,” *Linguistic Inquiry* 43-3, 331-369.

Dowty, David (1991) “Thematic Proto-Roles and Argument Selection,” *Language* 67-3, 547-619.

Embick, David (2004) “On the Structure of Resultative Participles in English,” *Linguistic Inquiry* 35-3, 355-392.

Goldberg, Adele E. (2010) “Verbs, Constructions, and Semantic Frames,” *Syntax, Lexical Semantics, and Event Structure*, ed. by Edit Doron, Malka Rappaport Hovav, and Ivy Sichel, 39-58, Oxford University Press, Oxford.

Husband, Matthew (to appear) "Rescuing Manner/Result Complementarity from Certain Death," *CLS* 47.

Levin, Beth and Malka Rappaport Hovav (1991) "Wiping the Slate Clean: A Lexical Semantic Exploration," *Cognition* 41, 123-151.

Levin, Beth and Malka Rappaport Hovav (1992) "The Lexical Semantics of Verbs of Motion: The Perspective from Unaccusativity," *Thematic Structure: Its Role in Grammar*, ed. by Iggy M. Roca, 247–269, Foris Publications, Berlin, New York.

Levin, Beth and Malka Rappaport Hovav (1995) *Unaccusativity: At the Syntax-Lexical Semantics Interface*, the MIT Press, Cambridge, MA.

Levin, Beth and Malka Rappaport Hovav (to appear) "Lexicalized Meaning and Manner/Result Complementarity," *Subatomic Semantics of Event Predicates*, ed. by Boban Arsenijevi'c, Berit Gehrke, and Rafael Marín.

Namiki, Shotaro (2013) "On the Occurrence of in Resultative Phrases in Argument Structure Construction-Based Resultatives," *JELS* 30, 152-158.

Rappaport Hovav, Malka and Beth Levin (2010) "Reflections on Manner/Result Complementarity," *Syntax, Lexical Semantics, and Event Structure*, ed. by Edit Doron, Malka Rappaport Hovav, and Ivy Sichel, 21-38, Oxford University Press, Oxford.

Talmy, Leonard (1991) "Path to Realization: A Typology of Event Conflation," *BLS* 17, 480-519.

生成文法と最適性理論の融合性について
―規則の簡潔性と傾向の観点から*―
(On the Fusion between Generative Grammar and Optimality Theory)

西原哲雄 (Tetsuo Nishihara)
宮城教育大 (Miyagi University of Education)

キーワード：規則、制約、簡潔性、傾向、文法理論

0. はじめに

近年、音韻理論の中心を担っているのは主に、Prince & Smolensky (2004)などによって提唱された最適性理論(Optimality Theory)という制約を基本概念とした理論であり、生成文法(Generative Grammar)に基づいて提案されたChomsky & Halle (1968)によるSPE理論(*The Sound Pattern of English*)などに代表される規則に基づく生成音韻論(Generative Phonology) とは大きく異なるものとして受け入れられている。この生成文法や生成音韻論におけるもう１つの重要な概念が「簡潔性の尺度(Simplicity Metric)」であり、この概念によって生成文法や生成音韻論はそれらの中で可能な文法から簡潔性の尺度に基づいて適切な１つの文法を選び出していた。

この簡潔性の尺度というものは、規則という概念を破棄し、違反可能な制約という概念を導入した最適性理論においても、生成文法と同様に重要な概念であることは疑う余地のない事であると受けいれられている。

しかしながら、本稿では、この２つの理論での共通概念である簡潔性の尺度というものは、確かに重要な役割を成していることは事実であるが、唯一この概念のみが可能な文法の選択をもたらしているのではなく、「傾向(Tendency)」という概念も、同時に考慮にいれる必要があり、これらの２つの概念の「融合（妥協）」が最適性理論においても重要な役割をしていることを論証するものである。

1. レキシコンの構造

まず、形態論におけるレキシコンでの語形成における派生や屈折においては、以下に見られるように、必ずしも、簡潔性の尺度という概念が最大限に適用されているとは言えない。

(1) a. Regular and irregular forms are derived by rule.
b. Regulars and irregulars are listed.
c. Regulars are derived by rule, irregular are listed.
(Say and Clahsen 2002)

上記の中で、簡潔性の尺度というもの最大限に反映しているものとしては、(1a)が挙げられることなるが、実際の言語現象からは、(1c)が最も実際の言語現象をうまく説明できるものとして考えられる。例えば、De Boer (1981)では、イタリア語の規則形及び不規則形のいずれの屈折接辞付加をされる語は、規則によって形成されていると主張している。しかし、その一方で、Burzio (1998) では、すべての屈折の過程を経た語はレキシコンに記載されていると述べている。

このようななかで、生成音韻論では、言語間や言語内での方言差による音韻現象や形態現象については、それぞれの言語固有の規則によって形成されるとしている。

2. 生成音韻論による分析

King(1969)では、上記の現象を、次にあげるような３つの音韻規則の構築の違いによって説明が可能であると指摘している。

(2) a. Rule Addition
b. Rule Loss
c. Rule Reordering
(King 1969)

このような考え方は、以下に挙げるような図式によって説明、表示が可能である。ここではある言語の標準語と方言間の相違というものを、基底表示である X からそれぞれ異なる音声表示形(Y1~Y4)が出力される事実を、(2)で挙げられた３つの規則(A,B,C)の配列の相違で説明できることを簡単に示している。

(3) (標準語) (方言１) (方言 2) (方言 3)

X	X	X	X
↓	↓	↓	↓
Rule(s)	Rule	Rule	Rule
	Addition	Loss	Reordering
(A-B)	(A-B-C)	(A)	(A-C-B)
↓	↓	↓	↓
Y1	Y2	Y3	Y4

生成文法や生成音韻論では、このような規則の定式化の配列の違いなどによって、言語間や特定言語内の標準語と方言との相異などを的確に説明できるとしているが、(3)で見られるような特定の規則の想定や、複雑な規則の設定などが要求されることになるので、その妥当性は疑わざるを得ないものである。

3. 最適性理論による分析

このような考え方に対して、最適性理論では、世界の言語における普遍的な特徴に基づく違反可能な制約の設定と、それらの制約の優先順位によって説明が可能であり、生成文法による規則に基づく説明よりも、より簡潔性の高い説明が可能となる。一般的に、最適性理論の制約の代表的なものとしては、Tesar & Smolensky (2000)にしたがえば、ONSET (Syllables have onsets : 頭子音を認める)や NoCODA (Syllables do not have codas : 尾子音は認められない)というようなものが挙げられ、この２つの制約を用いるだけで、世界の言語に関わる音節構造の妥当性がうまく説明ができるとされている。すなわち、このような２つの制約から、世界の言語の多くが開音節構造を基本としていることが、的確に説明されることになる。

しかしながら、最適性理論が登場した初期においては、上記で見られるような制約は世界の言語においての普遍的特徴であるという前提があったが、最適性理論の枠組みがさまざまな現象を説明してゆく上で、制約の大前提である普遍的特徴ではない制約によって、それぞれの言語の音韻現象の説明が行われるようになってきた。

例えば、ある言語における音習得の段階を最適性理論で説明する時には、言語において有標であるとされる軟口蓋閉鎖音である［ k ］の出現を阻止するような制約[*k] の設定は問題なく考えることができ、入力 (Input)と出力(Output)における同一性を求める制約である Faith (忠実性)を設定することで、次に挙げるように、ある言語における一般的な音習得の段階をうまく説明することができる。すなわち、子供の初期の段階では、[k] の出現を阻止するような制約[*k]が高い位置に配置されているために、[k] の出現は阻止されると説明できる。

(4) <Input: ki >　[*k]　>>　Faith

ki	*!	
☞ pi		*

(5) <Input: ki>　Faith >>　[*k]

☞ ki		*
pi	*!	

一方、(5)のように大人の段階になれば、上記の制約の序列化が変更されることによって、大人の音韻体系が構築されるというように説明が可能になる。

しかしながら、上記のような言語習得の段階における一般的な音変化とは相反するような現象も大人などの音韻変化において観察されることもある。そして、これら音韻変化を最適性理論の枠組みでの説明を試みると、非常に有標で ad hoc な制約である、普遍性の高い音である［ p]の出現を阻止するような制約である、[*p]というような制約を設定せざるを得ない場合が存在することになる。

(6) <Input: pi >　[*p]　>>　Faith

pi	*!	
☞ ki		*

このタブローでは、この言語における音韻現象を説明するために、有標性の概念からは認められず、制約の基本的概念である普遍的であるという特徴を破棄したような[*p]というような制約によって説明がなされている。しかし、原(私信) によれば、「その言語における音韻現象を最適性理論で説明する時には、そこで設定される制約は普遍性という特徴から逸脱して、特定の音の出現などを阻止するような ad hoc な制約の設定も必要である」という見解を示しており、(6) のような分析も妥当であると述べていた。

また、日本語における無声閉鎖音の帯気音(aspiration)が生起しないという現象は、[*p^h]という特定の制約を設定することで(ここでは、無声閉鎖音の帯気音を異音ではなく 1 つの音素と解釈する)、うまく日本語におけるこの現象を説明することができる。

(7)

<Input: p^h i>　[*p^h]　>> Faith(Ident-Voice)

p^h i	*!	
☞ pi		
bi		*!

ここまで見てきた言語現象の統括をすると、言語における形態論的過程や音韻変化の方向性を検討すると、いわゆる生成文法の基礎となる「簡潔性の尺度(Simplicity Metric)」なるものや、最適性理論における普遍性という特徴のみにて、選択されるべき文法が選らばれるのではなく、ある程度における特殊性や ad hoc な観点から、これらの言語現象を説明されるべきであると考えられる。

ゆえに、次節では、Scalise(1986)などで提唱されている生成形態論(Generative Morphology)における、形態部門における諸制約について概観することにする。

4. 形態部門の傾向

そこで、上記で見てきた、最適性理論による音韻論以外のその他の言語現象がどのようになっているのかを観察してみると、形態論における右側主要部の規則(Right-hand Head Rule: RHR)も絶対的な制約ではなく、以下に見られるように一定の傾向を示しているに過ぎないことがわかる。

(8) Right-Hand Head Rule (RHR)

a. R-Head (Germanic)
b. L-Hand (Romance)
c. R/H-Head (Vietnamese)

(Booij 2010)

上記から分かるように右側主要部規則は、一見して、語族によってパラミター的に説明が可能のように見えるが、ベトナム語のように、本来語は右側主要部であり、中国語由来の語は左側主要部であるという複雑な構造を持つ言語については適切に説明をすることが不可能である。

さらに、語彙音韻論(Lexical Phonology)においても、その形態的派生が以下のような階層化を破っている例が散見されており、以下に代表的な例を挙げる。

(9) Lexical Phonology

層 1：Class I Affixation
層 2：Class II Affixation
層 3：Compounding
層 4：Inflection

(Mohanan 1986)

(10) [re- [air condition]]
(*Compounding →Class II Affixation)

この例では、語彙音韻論における派生の階層の順序化が破られている代表的な例であり、Mohanan (1986)では層 3 から層 2 への逆行(Loop)という、とても ad hoc な解決方法を提案せざるを得なかった。

さらに、形態論一般に見られる、単語の派生と屈折における順序付けも、以下に見られるように一般的な制約が存在するが、実際にはその順序付けを守らないような実例が散見されることもまた、事実であり、これらは「傾向」という用語を用いることで処理がなされている。

(11) a. Word-Derivation-Inflection
b.*Word-Inflection-Derivation
(Scalise 1986)

(12) [B]ut this tendency can not be elevated to the status of a universal constraint.
(Bochner 1984)

5. 結語

以上、生成文法から最適性理論における理論的枠組みの移行というものにおいて、これらの文法理論は一見まったく正反対である両極にある言語理論と解釈されぎみであるが、実際にはこれらのいずれの言語理論も、「簡潔性と特殊性（複雑性）」の両方の概念を含んでいるものであり、この２つの理論において共通する中心的概念は、「傾向(Tendency)」という概念であり、「簡潔性と特殊性（複雑性）」という２つの概念の「融合（妥協）」が生成文法でも、最適性理論においても重要な役割をしていることが論証される。また、最適性理論における ad hoc な制約の設定も妥当なものであると言える。

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参考文献

Bochner, Harry (1984) “Inflection and Derivation,” *Linguistic Review* 3, 411-421.

Booij, Geert (2010) *Construction Morphology.,* London, Oxford University Press.

Burzio, Luigi (1988) “Multiple Correspondence, “ *Lingua* 104, 79-109.

Chomsky, Noam and Morris Halle (1968) *The Sound Pattern of English.*, Harper & Row, New York.

De Boer, Martin (1981) “The Inflection of the Italian Verb: A Generative Account,” *Journal of Linguistics* 2, 55-93.

King, Robert (1969) *Historical Linguistics and Generative Grammar,* Prentice-Hall, New Jersey.

Mohanan, Karuvannur (1986) *Lexical Phonology,* Ridel, Dordrecht.

Prince, Alan and　Paul Smolensky (2004) *Optimality Theory,* Blackwell, London.

Say, Tessa and Harald Clahsen (2002) “Words, Rules and Stems in the Italian Mental Lexicon,” *Storage and Computation in the Language Faculty,* ed. by Sieb. Nootemboom, Fred Weerman and　Frank Wijnen, 93-129, Kluwer, Dordrecht.

Scalise, Sergio (1986) *Generative Morpholgy,* Foris, Dordrecht.

Tesar, Bruce and Paul Smolensky (2000) *Learnability in Optimality Theory,* MIT press, Cambridge.

On Morphosyntactic Competition in Nominal Modification*

Kazuya Nishimaki
University of Tsukuba

Keywords: direct modification, A-N compounding, lexicalization, competition, realization pattern

1. Introduction

Ackema and Neeleman (2004) develop the Competition Theory, a unified theory of cross-linguistic and inter-modular comparison that crucially depends on the notion of morphosyntactic competition. This paper aims to demonstrate its validity by analyzing the difference in nominal modification between Japanese and English. Cross-linguistic comparison is very common in linguistic research. However, there are typological phenomena that cannot be properly explained unless we make morphosyntactic as well as cross-linguistic comparisons. One such phenomenon is the difference in question: it is only by adopting the Competition Theory that we can capture what exactly the difference is. Specifically, we show that this difference is attributable to interaction between morphosyntactic competition and typology.

Japanese and English differ notably in the use of indirect or direct modification for nominal modification. Sproat and Shih (1988) distinguish direct modification from indirect modification based on ordering restrictions on attributive adjectives and their non-intersective readings:

(1) a. {small square/*square small} table
(Sproat and Shih (1988: 465))

b. Olga is a beautiful dancer (intended reading: Olga dances beautifully).
(Yamakido (2005: 64))

(2) a. {tiisana sikakui/sikakui tiisan} ie
small square/ square small house
'small square house'
(Sproat and Shih (1988: 488))

b. Olga-ga utukusii odoriko-da.
Olga-Nom beautiful dancer-Cop
'Olga is a beautiful dancer (intended reading: Olga is beautiful and Olga is a dancer).'

English uses direct modification because attributive adjectives observe ordering restrictions, as in (1a), and can have non-intersective readings, as in (1b). In contrast, Japanese uses indirect modification because attributive adjectives have free orderings, as in (2a), and they are interpreted only intersectively, as in (2b).

The organization of this paper is as follows. Section 2 reviews previous studies and makes a new generalization about direct modification in Japanese. Section 3 outlines the framework of the Competition Theory. Section 4 proves the validity of this theory by showing that the generalization made in section 2 naturally follows from the relevant theory. Section 5 makes concluding remarks.

2. Generalization about Direct Modification in Japanese

Direct modification in Japanese is discussed in detail in the literature, such as Baker (2003), Yamakido (2005), and Watanabe (2012). This section examines the proposals in these works more closely and makes a generalization about direct modification in Japanese.

Baker (2003) attributes the possibility of direct modification to the presence of adjectival phi-features. Baker assumes that direct modification derives from adjective-noun direct merger, which requires feature-checking. According to Baker, direct modification is possible

in English due to adjectival phi-features, but it is impossible in Japanese in the absence of these features. Moreover, in Baker's categorial theory, only adjectives can qualify as direct modifiers. Nouns and verbs cannot be direct modifiers because their thematic information cannot be properly analyzed in direct modification configuration, with the result being that they violate the theta criterion.

Yamakido (2005) and Watanabe (2012) argue against Baker (2003). Yamakido (2005) argues that adjectives can be direct modifiers in Japanese based on their non-intersective readings:

(3) Peter-ga hurui tomodati-da.
Peter-Nom long.time friend-Cop
'Peter has been a friend for a long time.'
(Yamakido (2005: 67))

According to Yamakido, the adjective *hurui* 'long-time' in (3) has a non-intersective reading ('for a long time').

Furthermore, observing ordering restrictions on nominal modifiers, Watanabe (2012) claims that nouns of nationality/origin or material can qualify as direct modifiers in Japanese:

(4) a. hokuoo-no ki-no isu
North.Europe-Gen wood-Gen chair
'North European wooden chair'
b * ki-no hokuoo-no isu
wood-Gen North.Europe-Gen chair
(Watanabe (2012: 508))

In (4), the nouns *hokuoo* 'North Europe' and *ki* 'wood' conform to the ordering restriction. Watanabe notes that denominal adjectives of nationality/origin or material are not found in Japanese (e.g. *North European*, *wooden*) and that nouns with particle *-no* are instead used as modifiers.

Let us assess the validity of these proposals. In favor of Baker (2003), we eliminate the possibility of adjectival direct modification in Japanese, which is noted by Yamakido (2005). According to Watanabe (2012: 511, fn. 7), the use of *hurui* 'long-time' in (3) is highly indicative of translation of the intended reading. Given this, it is questionable whether the expression under discussion directly reflects Japanese grammar; (3) is not sufficient to conclude that Japanese adjectives can be direct modifiers. In fact, the impossibility of adjectival direct modification in Japanese is suggested in Table 1: direct modifiers in English correspond to nominal modifiers with *-no* (henceforth *-no* modifiers) in Japanese. An exception is *hurui* 'long-time' in *hurui yuuzin* 'old friend' (the following are quoted from *Taishukan's Unabridged Genius English-Japanese Dictionary* [TUGEJD]).

Table 1

English	**Japanese**
my old friend	watasi-no hurui yuuzin
Japanese ideas	nihon-no sisoo
a wooden box	ki-no hako
the following day	tugi-no hi
mathematical formulae	suugaku-no koosiki
religious liberty	sinkoo-no ziyuu

Furthermore, this correspondence indicates that *-no* marked nouns are more widely used for direct modification than Watanabe (2012) observes, as they are not restricted to nationality/origin or material.

In summary, we can make the following generalization about direct modification in Japanese:

(5) In Japanese, direct modification is possible for nouns (*-no* modifiers) and not for adjectives.

Sections 3 and 4 explain the underlying reason for this generalization within the framework of the Competition Theory.

3. The Competition Theory

The Competition Theory is very unique in unifying cross-linguistic and inter-modular morphosyntactic comparison. In this theory, direct modification can be viewed as syntactically realizing nominal modification. Morphosyntactic comparison means that this syntactic realization is

contrasted with its morphological counterpart. Our claim is that, for example, a Japanese A-N compound, e.g. *koku-ban* 'black board,' is a morphological counterpart of direct modification. In the literature, there has been little discussion on the relationship between direct modification and A-N compounding. However, the Competition Theory can address this relationship by contrasting these two realization patterns.

The Competition Theory hypothesizes that syntax and morphology compete for PF realization of a morphosyntactic representation. According to this hypothesis, languages are classified as either syntax-preferring or morphology-preferring languages. Based on the unattestedness of genuine verbal compounds, for example, * *to truck-drive* in English, Ackema and Neeleman assume that English belongs to syntax-preferring languages. The occurrence of * *to truck-drive* is blocked by the VP *to drive trucks*. In contrast, Japanese can be classified as a morphology-preferring language because verbal compounds are widespread in Japanese (e.g. *sen-sha(suru)* (V-N) 'to wash cars,' *tabe-hazimeru* (V-V) 'to begin to eat').

Morphosyntactic competition obtains under two conditions. One is that the same items are merged in syntactic and morphological realization. The other is that merged items establish the same semantic relationship in both realizations. Note that if there is no competing realization pattern, morphological realization is possible, even in syntax-preferring languages, and syntactic realization is possible, even in morphology-preferring languages. For instance, the morphological realization *truck-drive* is involved in the derivation of the synthetic compound *truck driver*. Ackema and Neeleman analyze it as [$_N$ [$_V$ truck drive] er], assuming that suffixes, e.g. *-er*, require morphological objects as bases. VPs cannot be competitors in word formation involving suffixes.

The next section considers the relationship between direct modification and A-N compounding within the framework of the Competition Theory. This consideration reveals that the generalization in (5) directly derives from this theory.

4. Completion-Theoretic Analysis

4.1. Direct Modification and A-N Compounding

According to the Competition Theory, the impossibility of adjectival direct modification in Japanese, which is generalized in (5), is due to its morphological preference: in Japanese, the morphological realization of nominal modification, i.e. A-N compounding, blocks its syntactic counterpart, i.e. direct modification. As Baker (2003) suggests, direct modification and A-N compounding are identical in that adjectives modify nouns through direct merger. Thus, in both realization patterns, the same items, i.e. adjectives and nouns, are merged, and they establish the same modifier-modifee relationship. In these respects, competition obtains between direct modification and A-N compounding.[1]

If the present analysis is valid, we can easily predict that competition results in the possibility of A-N compounding in Japanese and its impossibility in English. The Competition Theory leads us to another prediction that English and Japanese allow A-N compounding and direct modification, respectively, if there is no competition. Below, we show that these predictions are borne out.

4.2. Prediction in the Case of Competition

4.2.1. A-N Compounding in Japanese

It has been widely held that A-N compounds are observed in Japanese.[2] Some examples are given in Table 2 (i) (English expressions in Table 2 (ii) are quoted from TUGEJD).

Table 2

(i) Japanese A-N compounds	(ii) English counterparts
koku-ban	bláck bòard
rei-sen	cóld wár
sin-nen	néw yéar
roo-zin	òld mán
haku-syo	whíte bóok whíte pàper

Together with the generalization in (5) stating that Japanese adjectives are not involved in direct modification, it can be said that the Competition Theory successfully describes the realization patterns of the modifier-modifee relationship in Japanese.

We would like to note here that A-N compounding is highly productive in Japanese. Its high degree of productivity is observed from the fact that A-N compounding freely coins new words with consistent compound accents:

(6) yuru-kyara lit. 'loose-character'= 'mascot character,' sin-tookyoo-tawaa 'New Tokyo Tower,' zinkoo-tanoosee-kan-saiboo 'induced pluripotent stem cells,' kuro-taku lit. 'black-cab'= 'high-grade cab'

The high degree of productivity and consistent compound accents suggest its rule-governedness, and thus appear to be consistent with the Competition Theory.

4.2.2. Apparent A-N Compounding in English: Lexicalization Analysis

Let us turn to the impossibility of A-N compounding in English. Contradicting our prediction, expressions such as those given in Table 2 (ii) are often viewed as English A-N compounds. Seemingly, they correspond to Japanese A-N compounds in Table 2 (i). However, this is not the case. It has been claimed that A-N compounds in English are in fact not genuine compounds but lexicalized NPs (see Allen (1978), Liberman and Sproat (1992), and Spencer (2003), among others).

The essential difference between Japanese A-N compounds and their English counterparts is clear from phonology and productivity. Phonologically, inconsistent stress patterns of alleged A-N compounds in English contrast with the consistent compound accents in Japanese. In English, left-stressedness is a popular criterion for compoundhood, but alleged A-N compounds are infamously inconsistent in stress patterns, as shown in Table 2 (ii). This stress criterion is much less reliable in identifying compounds than is often thought. Furthermore, in contrast to Japanese A-N compounds, the English counterparts are unproductive (see Marchand (1969: 64) on the unproductivity).

The inconsistent stress patterns and unproductivity strongly suggest that alleged A-N compounds in English result from a non-rule-governed process, such as lexicalization. In fact, arguing against the stress criterion for compoundhood, Spencer (2003) analyzes the relevant expressions as lexicalized NPs. Due to the non-rule-governedness, lexicalization can be gradient. Thus, Liberman and Sproat (1992: 150-151) observe three stages of lexicalization: listedness in the lexicon, assignment of a lexical category, and loss of internal structure. It is not until the final stage that stress shift occurs. These considerations lead us to the reasonable conclusion that putative A-N compounds in English acquire lexical status from phrasal lexicalization and not from rule-governed A-N compounding.

Our discussion so far has revealed that Japanese and English employ A-N compounding and direct modification, respectively, to realize nominal modification. This is not at all accidental. Within the framework of the Competition Theory, this is a necessary consequence of the macroparametric distinction between the two languages: Japanese and English prefer morphological and syntactic realization, respectively.

4.3. Prediction in the Absence of Competition

The Competition Theory predicts that non-default realization patterns are available when there is no competition; English should allow A-N compounding in the absence of competition with direct modification. In contrast, Japanese should allow adjectival direct modification in the absence of competition with A-N compounding. This prediction is empirically verified.

4.3.1. A-N compounding in English

In English, A-N compounding occurs in such derived adjectives as *blue-eyed*. Following Beard's (1995) terminology, we call them Possessional adjectives. In general, Possessional adjectives are analyzed as in (7a) because they can be paraphrased as in (7b).

(7) a. [[blue-eye]-ed]
b. 'having a blue eye/blue eyes'
(Plag (2003: 153))

(7a) means that they are derived by *-ed* suffixation to constituents of adjectives plus nouns (e.g. *blue-eye* in (7a)). Our claim is that the adjective-noun constituents are A-N compounds. For convenience, we call the relevant constituents A-Ns. Recall our discussion from section 3 that suffixation allows verbal compounds in synthetic compounds (e.g. [$_N$ [$_V$ truck drive] er]). This is because suffixal requirement, according to which morphological objects must be suffixed, prevents competition with VPs. In the same way, A-N compounds are allowed in Possessional adjectives because the suffixal requirement prevents competition with direct modifications. The lexical status of A-Ns is corroborated by their syntactic indeformability. For example, they disallow internal plural inflections, as shown in (8).

(8) * many-eyesed (cf. many-eyed)
(Allen (1978: 253))

This syntactic indeformability is the defining property of words, which is formulated as the Lexical Integrity Principle (LIP) (see Di Sciullo and Williams (1987: 49)). Given these considerations, it is safe to conclude that A-N compounding is available within Possessional adjectives.

Importantly, in our competition-theoretic analysis, A-Ns are true A-N compounds and not lexicalized NPs such as those observed in section 4.2.2. A-Ns and lexicalized NPs contrast in productivity and semantics. A-Ns are very productive and semantically transparent:[3]

(9) two-handed, four-cornered, eight-sided
(Allen (1978: 253))

In contrast, lexicalized NPs are unproductive, and more or less opaque. Plausibly, this contrast reflects the difference in rule-governedness between A-N compounding and lexicalization.

4.3.2. Adjectival Direct Modification in Japanese

Turning to Japanese, the Competition Theory tells us that direct modification becomes possible if there is no competition with A-N compounding. We assume that direct modification by nouns, which is observed by Watanabe (2012), suits this situation and that this non-competition allows direct modification by *-no* modifiers, as generalized in (5).

Watanabe (2012) analyzes certain types of genitive nouns as direct modifiers, as we found in section 2. However, adopting Baker's categorial theory, we assume that *-no* marked direct modifiers, i.e. *-no* modifiers, are adjectives. Our assumption is motivated by a syntactic difference between typical genitives and *-no* modifiers:

(10) a. [{sono / tiisana} ki]-no hyoomen
'surface of {the / small} wood'
b. *?[{sono / tiisana} ki]-no isu
'chair made of {the / small} wood'

In (10a), *ki-no hyoomen* 'surface of wood' expresses a whole-part relationship, which is characteristic of genitives. In this case, the internal *ki* 'wood' can be modified. However, it is very difficult to modify the internal *ki* in (10b), which expresses material.

Now that the difference between genitives and *-no* modifiers becomes clear, let us consider the derivation of *-no* modifiers.

Nagano (2013) is very instructive in considering the derivation. Following Baker's categorial theory, Nagano comprehensively analyzes direct modification in English and Romance languages. According to her analysis, nouns become direct modifiers by incorporating into a certain type of functional head. This is because the operation, which creates X^0s, i.e. lexical categories, by a head movement, turns nouns into adjectival heads, i.e. A^0s. By applying this analysis to *-no* modifiers, we assume that *-no* is a functional head and that *-no* modifiers are A^0s formed by noun incorporation into the functional *-no*. If so, the difficulty with internal modification makes sense; as a result of incorporation, *-no* modifiers acquire lexical status to conform to the LIP.

On the assumption that the A^0 status qualifies *-no* modifiers for direct modification, let us consider why direct modification by *-no* modifiers does not compete with A-N compounding. Our competition-theoretic explanation for the reason is that it has no morphological competitor because *-no* modifiers cannot be compounded. In Japanese, canonical adjectives, which end with *-i* or *-na* in their attributive forms, utilize their bound forms to generate A-N compounds. For instance, in the A-N compound *koku-ban*, the adjectival nonhead *koku* is the bound form of the adjective *kuroi*. In contrast, in the case of *-no* modifiers, no bound morpheme is available for A-N compounding. Thus, there is no morphological competitor with the relevant direct modification, which means non-competition.

Note that the following cannot compete with direct modifications with *-no* modifiers:

(11) <u>hokuoo</u>-kagu 'North European furniture,' <u>mok</u>-kyoo 'wooden bridge'

These compounds are similar in semantics to direct modifications with *-no* modifiers. In this respect, the former appear to be morphological competitors with the latter. However, this is not the case. We assume that expressions such as those given in (11) are N-N compounds. Certainly, the underlined nonheads in (11) express nationality or material, but they are nouns and not adjectives. The above compounds are mergers of two nouns, whereas direct modifications with *-no* modifiers are mergers of adjectives with nouns. The same lexical categories are not merged in these two types of modification. Thus, direct modification by *-no* modifiers does not compete with N-N compounding.[4]

In summary, the Competition Theory states that A-N compounding blocks direct modification by canonical adjectives in Japanese because of its morphological preference. Nevertheless, direct modification is possible for *-no* modifiers, as generalized in (5), regardless of its adjectival status. Our competition-theoretic explanation for the reason is that direct modification by *-no* modifiers has no morphological competitor because these modifiers have no form available for A-N compounding. Beyond a mere generalization, we can ultimately derive the fact given in (5) from the Competition Theory.

5. Concluding Remarks

This paper has proved the validity of the Competition Theory, which involves the notion of morphosyntactic competition. For proof, we have shown that this theory can explain the difference in nominal modification between Japanese and English. The former and the latter select A-N compounding and direct modification, respectively, for nominal modification. Within the framework of the Competition Theory, each selection is a theoretical consequence in that it results from morphosyntactic competition. The selection of A-N compounding in Japanese is due to its morphological preference, whereas the selection of direct modification in

English is due to its syntactic preference.

This theory points to the possibility that seemingly unrelated phenomena may be attributed to the same principle of morphosyntactic competition. In this respect, the Competition Theory is very promising.

FOOTNOTES

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[1] Note that direct and indirect modification do not compete because of their different underlying structures. Sproat and Shin (1988) view indirect modification as modification by relative clauses.

[2] Japanese A-N compounds consistently exhibit compound accents, which indicate their full integration into a phonological unit (see Kageyama (1993))

[3] Possessional adjectives are very productive (see Marchand (1969: 265)), which entails the productivity of their internal A-Ns.

[4] This is parallel to non-competition between the compound *truck driver* and the NP *driver of trucks*. According to Ackema and Neeleman (2004: 61), the non-competition is due to merger of different items. In the compound, the noun *truck* and the verb *drive* merge, and the resultant verb merges with *-er*. In the NP, the two nouns *driver* and *truck* merge.

References

Ackema, Peter and Ad Neeleman (2004) *Beyond Morphology: Interface Conditions on Word Formation*, Oxford University Press, Oxford.

Allen, Margaret (1978) *Morphological Investigations*, Doctoral dissertation, University of Connecticut.

Baker, Mark C. (2003) *Lexical Categories: Verbs, Nouns, and Adjectives*, Cambridge University Press, Cambridge.

Beard, Robert (1995) *Lexeme-Morpheme Base Morphology: A General Theory of Inflection and Word Formation*, State University of New York Press, Albany.

Di Sciullo, Anna-Maria and Edwin Williams (1987) *On the Definition of Word*, MIT Press, Cambridge, Mass.

Kageyama, Taro (1993) *Bunpoo to Gokeisei* (Grammar and Word Formation), Hituzi Syobo, Tokyo.

Liberman, Mark and Richard Sproat (1992) "The Stress and Structure of Modified Noun Phrases in English," *Lexical Matters*, ed. by Ivan A. Sag and Anna Szabolcsi, 131-181, CSLI, Stanford.

Marchand, Hans (1969) *The Categories and Types of Present-Day English Word-Formation: A Synchronic-Diachronic Approach*, 2nd edition, C. H. Beck'sche Verlagsbuchhandlung, München.

Nagano, Akiko (2013) "Morphology of Direct Modification," *English Linguistics* 30, 111-150.

Plag, Ingo (2003) *Word-Formation in English*, Cambridge University Press, Cambridge.

Spencer, Andrew (2003) "Does English Have Productive Compounding," *Topics in Morphology*, ed. by Geert Booij, Janet DeCesaris, Angela Ralli, and Sergio Scalise, 329-341, IULA, Barcelona.

Sproat, Richard and Chilin Shih (1988) "Prenominal Adjectival Ordering in English and Mandarin," *NELS* 18, 465-489.

Watanabe, Akira (2012) "Direct Modification in Japanese," *Linguistic Inquiry* 43, 504-513.

Yamakido, Hiroko (2005) *The Nature of Adjectival Inflection in Japanese*, Doctoral dissertation, Stony Brook University.

Long-Distance Phenomena and Phase Theory

Megumi Nishimura
Fukuoka University

Keywords: phase, long-distance, NPIs, multiple *wh*-questions

1. INTRODUCTION

The aim of this paper is to give a derivational approach to Negative Polarity Items (NPIs) licensing phenomena as in (1). Specifically, I claim that long-distance licensing phenomena such as (2) can be dealt with under Phase Theory, by assuming my new mechanism; that the phase head takes over the interpretable feature of an unlicensed element at each phase level.

(1) a. John did not eat *anything*.
b.*John eat *anything*.

(2) He doesn't believe that *anyone* attended the party. (Nishioka (2007: 129))

This paper is organized as follows: Section 2 reviews theoretical assumptions of Phase Theory and its problems with regard to NPI licensing. Section 3 provides two proposals. Section 4 shows that the current proposal can handle NPI licensing, multiple *wh*-questions, and Japanese *wh*-questions. Section 5 is the conclusion of this paper.

2. PHASE THEORY AND NPI LICENSING

The recent minimalist program of linguistic theory assumes the syntactic structure is built up step by step at the phase levels. The phase, which is regarded as CP and v*P, is built as in (3a), and its complement is transferred to the semantic component and the phonological component cyclically as in (3b), which is called *Transfer*.

(3) a. $[_{HP}$ ZP [H (=the phase head) $[_{XP}$ X…]]]
b. $[_{HP}$ ZP [H $[_{XP}$ X…(*Transfer*)]]]

*PIC

(cf. Chomsky (2004, 2007, 2008)

As a result, transferred elements cannot get engaged in any syntactic operations under the Phase Impenetrability Condition (PIC). Thus, in this system, it is supposed that there is no LF, which has been traditionally assumed. Furthermore, Chomsky (2007, 2008) claims that all of the syntactic operations should be activated by the phase head in terms of feature inheritance.

Under these assumptions, however, there arises a problem with regard to NPI licensing, which is how *anyone* in the embedded clause as in (2) can be licensed by a negative element in the matrix clause. Given Transfer, the embedded TP including an NPI has been transferred when a negative element occurs in the matrix clause. Though it is assumed that NPIs are licensed by being c-commanded by an overt negative element, *anyone* cannot satisfy this condition in this case, because it does not occur in the same phase as a negative element.

On the other hand, even though it might be assumed that an NPI might move up to the same phase as a negative element via phase edge positions, this explanation cannot deal with this issue. The fact in (4) shows that an NPI can occur within the syntactic island.

(4) a. A good therapist should never lie [when counseling *anyone*]. (Yoshimura (1999: 244))
b. I never met [a man [who *anybody* tried to kill]. (ibid.: 245)
c. I don't believe [that *anyone* is coming

to the party]. (Nishioka (2010: 66))

As discussed in Nishioka (2010), within the framework of the current Minimalist Program, we cannot discriminate between overt and covert movement with regard to syntactic constraints.[1] Given this, we cannot say that the movement analysis is appropriate, because the examples in (4) show that NPI can be licensed without depending on syntactic movement.

On the basis of assumptions of Phase Theory, the next section will offer my proposals of this paper, which can overcome this issue.

3. PROPOSAL

Given that an NPI can be licensed by a negative element which it has some semantic sharing with, we will propose a licensing condition in terms of c-command for such elements in (5), which is a syntactic prerequisite for a proper interpretation at the Interface.[2]

(5) *Licensing Condition for Elements Requiring Some Semantic Sharing*

The licensing relation can be built between a licenser and a licensee sharing the same/relevant interpretable feature in terms of c-command.

In addition, I propose an operation *TAKE-OVER* in (6) which functions in the phase-based system, based on Nishimura (2013).

(6) *Make-up Strategy (TAKE-OVER)*

(cf. Nishimura (2013: 28))

A phase head of H takes over the interpretable feature [F] of a syntactically unlicensed element requiring some semantic sharing, when it transfers its domain which contains such an element.

Even if an unlicensed element is transferred to the Interface, the derivation cannot achieve a proper interpretation. Then, I assume this as a Make-up Strategy to save such a situation. Extending Chomsky's (2007, 2008) idea that all syntactic operations should be activated by the phase head, I claim that the interpretable feature of the unlicensed element will be taken over to the phase head until the licensing condition in (5) is satisfied.

Let us look at how the operation in (6) can function in detail, as illustrated in (7).

(7) a. $[_{HP}$ H $[_{XP}$ ..Licensee$_{[F]}$ (=unlicensed)…]]

b. $[_{HP}$ $\boxed{H}$ $[_{XP}$… Licensee$_{[F]}$…]]

[F] ◄------ [F] (*TAKE-OVER*)

When a phase HP is built as in (7a), its phase domain will be transferred as in (7b). If it includes an unlicensed licensee which requires some semantic sharing, the phase head H will take over its interpretable feature [F] at Transfer. Thus, syntactic information of the unlicensed element could remain in the syntax, participating in further syntactic derivation. Then, H carrying [F] can build a new licensing relation with a new higher licenser. If any unlicensed feature finally remains in the derivation, it will be ill-formed. Thus, I will present a derivational approach to licensing for elements requiring some semantic sharing. The next section will demonstrate that my phase-based proposals can deal with long-distance licensing phenomena.

4. ANALYSIS

4.1 NPI LICENSING

In this section, I will demonstrate how I can explain NPI licensing phenomena under my proposal. Firstly, based on (5), the licensing condition for NPIs will be given as in (8).

(8) *Licensing Condition for NPIs*

A syntactic object (SO) carrying [NPI] must be licensed by being c-commanded by a negative element (NE) with [NEG].

[**NE**$_{[NEG]}$… **SO**$_{[NPI]}$ …] (NE$_{[NEG]}$ > SO$_{[NPI]}$)

Let me explain how my licensing mechanism can function. Firstly, I will look at the

derivation of (1a), as illustrated in (9).

(9) a. **not** [$_{v*P}$ John [v*-eat [eat ***anything***]]]
(not$_{[NEG]}$ > anything$_{[NIP]}$) ⇒ (8) ok
b. not [$_{v*P}$ John [v*-eat [eat *anything*]]]

At the stage of (9a), *anything* can be c-commanded by *not* within v*P, and then (8) can be satisfied. Therefore, the derivation will be legitimate, and consequently *anything* can be properly interpreted as NPI at the Interface.

As for long-distance licensing in (2), moreover, its derivation can be shown as in (10).

(10) a. [$_{CP}$ C-that [$_{TP}$ *anyone* [$_{v*P}$ (anyone) v*-attended [attended the party]]]]
b. [$_{CP}$ C-that [$_{TP}$ *anyone* [$_{v*P}$...]]]
[NPI]◄- - - [NPI]
c. **not** [$_{v*P}$... [$_{CP}$ **C-that** [$_{TP}$ ...]]]
(not$_{[NEG]}$ > C-that$_{[NPI]}$) ⇒ (8) ok

When CP is built at the embedded clause in (10a), TP including unlicensed *anyone* is transferred in (10b). Then, the C-head will take over the interpretable feature [NEG] of *anyone* at Transfer in terms of (6). When *not* with [NEG] occurs in the matrix clause, it c-commands the C-head in the embedded clause. As a result, (8) can be satisfied and the derivation will be legitimate. Thus, we can explain its grammaticality of (2).

In the same fashion, the derivation of (4a) will also be illustrated as in (11).

(11) a. [$_{CP}$ when [C [$_{TP}$ counseling *anyone*]]]
b. [$_{CP}$ when [C [$_{TP}$ counseling *anyone*]]]
[NPI] ◄---------- [NPI]
c. **never** [$_{vP}$ …[$_{CP}$ when C [...]]]
(never$_{[NEG]}$ > C $_{[NPI]}$) ⇒ (8) ok

At the stage of (11b), the C-head takes over [NPI] of unlicensed *anyone*, so that the condition of (8) can be satisfied at the stage of (11c) and this can be interpreted properly. Thus, its grammaticality can be captured.

Furthermore, my analysis can also account for the case in (12) that an NPI is embedded within the subject. Assuming that *pictures of anyone* has the DP structure and DP is a phase as discussed in Oba (1999), the derivation of (12) is shown as in (13).

(12) Pictures of *anyone* did not seem to be available. (Boeckx (2000: 362))

(13) a. [$_{DP}$ [D [$_{NP}$ pictures of *anyone*]]]
b. [$_{DP}$ [D [$_{NP}$ pictures of *anyone*]]]
[NPI] ◄---------- [NPI]
c. **not** [$_{vP}$ v-seem [seem [$_{TP}$[$_{DP}$ D [$_{NP}$ pictures of *anyone*]] to be ([$_{DP}$…]) available]]]
(not$_{[NEG]}$ > D$_{[NPI]}$) ⇒ (8) ok

When DP is built at the stage of (13a), NP will be transferred at the next stage of (13b). The D-head takes over [NPI] of unlicensed *anyone* at Transfer. Since *not* c-commands the D-head at the stage of (13c), the condition in (8) can be satisfied at this stage. Finally, *anyone* can achieve a proper interpretation as an NPI to result in its grammaticality. Hence, my approach can capture grammaticality of NPI licensing by my new mechanism.

4.2 MULTIPLE *WH*-QUESTIONS

Next, I will argue that my analysis can also explain the syntactic derivation of English multiple *wh*-questions in (14) under Phase Theory, by focusing on grammatical similarity between them and NPI licensing.

(14) a. Who saw what?
b.*You saw what? (non-echo reading)

Notice that *wh*-in-situ phrases need another *wh*-phrase in a sentence, and they do not show island effects in (15), as pointed out by Stroik (1992, 1996).

(15) a. Who got jealous because I spoke about what? (Stroik (1992: 134))
b. Who likes books that criticize what? (Stroik (1996: 86))
c. Who believes that who is going to leave? (ibid.)

This fact indicates that *wh*-in-situ phases can be licensed without covert movement, as well as NPIs. Given this, I will propose a derivational approach to *wh*-in-situ phrase licensing in multiple *wh*-questions.

Before I argue *wh*-in-situ phrase licensing, I will present my assumptions to the syntactic mechanism of *wh*-questions in English. We assume *Clause-Typing Parameter* in (16) and *Clause-Typing Parameter Setting* in (17), as proposed in Nishimura (2013) along with Cheng (1997).

(16) *Clause-Typing Parameter*

(Nishimura (2013: 76))

In the case of a *wh*-question, a clause must be typed in either of two ways:

a. By *wh*-movement to Spec-CP

b. By the existence of a question particle on C

(17) *Clause-Typing Parameter Setting* (ibid.: 125))

a. English: (16a) in terms of only one *wh*-phrase in a sentence

b. Japanese: (16b)

In terms of (17a), the licensing condition for the C-head in English *wh*-questions can be given as in (18).

(18) *Licensing Condition for C in English Wh-Questions*

C must be licensed by a *wh*-phrase with [WH] and [uQ] moving to Spec-CP in order to be typed as a *wh*-question in English.

Plus, given similarities between *wh*-phrases in multiple *wh*-questions and NPIs, I propose the licensing condition for *wh*-phrases in multiple *wh*-questions as in (19), based on (5).

(19) *Licensing Condition for Wh-Phrases in Multiple Wh-Questions*

If there is more than one syntactic object carrying [WH] in a sentence, a c-command relation between them must be built for licensing as a multiple *wh*-question.

[$\mathbf{SO_1}_{[WH]}$ … $\mathbf{SO_2}_{[WH]}$ …] ($SO_1 > SO_2$)

Under these assumptions, I argue the licensing of multiple *wh*-questions. Firstly, let us look at the derivation of (20) for (14a).

(20) [$_{v*P}$ **who** [v*-saw [saw **what**]]]

($who_{[WH]} > what_{[WH]}$) ⇒ (19) ok

In (20), *who* c-commands *what* within v*P, so that (19) can be satisfied. Finally, *who* carrying [uQ] moves to Spec-CP, satisfying (18). As a result, (14a) can be interpreted appropriately at the Interface, and it becomes grammatical.

Next, the case of (15a) can be illustrated as in (21).

(21) a. [$_{v*P}$ I [v*-spoke [spoke about what]]]

b. [$_{v*P}$ I [v*-spoke [spoke about what]]]

[WH] ◄----------[WH]

c. [$_{CP}$ C-because [$_{TP}$ I [T [v*-spoke…]]]]

d. [$_{CP}$ C-because [$_{TP}$ I [T [v*-spoke …]]]]

[WH]◄---------[WH]

e. [$_{vP}$ **who** [got jealous] [$_{CP}$ **C-because** [$_{TP}$ …]]]

($who_{[WH]} >$ C-because$_{[WH]}$) ⇒ (19) ok

Each phase-head continues to take over [WH] of *what* from the stage of (21a) up to (21d), because it is unlicensed. At the stage of (21e), *who* can c-command the C-head of the embedded clause carrying [WH], and (19) can be satisfied. In addition, *who* which ends up moving to Spec-CP can satisfy (18) and this derivation can receive a proper interpretation as a multiple *wh*-question. Thus, we can capture its grammaticality.

Moreover, the derivation for (15c) can be illustrated as in (22).

(22) a. [$_{CP}$ C-that [$_{TP}$ who$_2$ is going to leave]]

b. [$_{CP}$ C-that [$_{TP}$ who$_2$ …]]

[WH]◄----[WH]

c. [$_{v*P}$ **who$_1$** [… [$_{CP}$ **C-that** [$_{TP}$ …]]]]

($who_{1[WH]} >$ C-that$_{[WH]}$) ⇒ (19) ok

At the stage of (22a), the C-head takes over [WH] of unlicensed *who*$_2$ at Transfer as in (22b). When *who*$_1$ occurs in the matrix clause as in (22c), it can c-command the C-head with [WH], satisfying (19).

Also, (18) can be satisfied by *who*$_1$ moving to Spec-CP. Thus, the grammaticality of (15c) could also be maintained under my phase-based analysis. Thus, I could show that my current approach could also handle long-distance licensing phenomena of multiple *wh*-questions.

4.3 JAPANESE *WH*-QUESTIONS

Finally, let me move on to *wh*-phrase licensing in Japanese *wh*-questions. In Japanese, a *wh*-phrase can stay in-situ and a question particle *-no* 'Q' occurs in the C-position, as in (23).

(23) John-wa nani-o tabeta no?
John-Nom what-Acc ate Q
'What did John eat?'

Given this, I can suppose under my approach that a *wh*-phrase in Japanese should also build a syntactic licensing relation with a question particle on the C-position for interpretation, as I have assumed for NPI licensing.

In Japanese, when a complementizer *-to* 'C' occurs in the C-position of the embedded clause including a *wh*-phrase, the example can be interpreted as a *wh*-question in (24a), as pointed out by Nishigauchi (1999). On the other hand, (24b), in which a question particle occurs in the embedded C-position, can be interpreted as a *yes-no* question.

(24) a. Suzuki san-wa [$_{CP}$ Tanaka san-ga
Mr. Suzuki-Top Mr. Tanaka-Nom
dare-ni atta **to**] iimashita ka?
who-Acc met C said Q
'Who did Mr. Suzuki say that Mr. Tanaka met?'

b. Suzuki san-wa [$_{CP}$ Tanaka san-ga
Mr.Suzuki-Top Mr. Tanaka-Nom
dare-ni atta **ka**] iimashita ka?
who-Acc met Q said Q
'Did Mr. Suzuki say who Mr. Tanaka met?' (Nishigauchi (1999: 32))

Furthermore, the example of (25), in which a *wh*-phrase occurs within a syntactic island, can receive an interpretation as a *wh*-question.

(25) Kimi-wa [**nani-o** katta hito]-ni atta no?
you-Top what-Acc bought person-Acc met Q
'What did you meet the person who bought?
(ibid.: 43)

In this section, then, I will present that *wh*-elements in Japanese can be licensed in-situ without movement under Phase Theory, as well as NPIs and *wh*-in-situ phrases in English.

Firstly, my licensing condition for C in Japanese *wh*-questions can be shown as in (26), along with (16) and (17).

(26) *Licensing Condition for C in Japanese Wh-Questions* (cf. (16), (17))
C must be licensed by a question particle such as *-ka* or *-no* in C in order to be typed as a *wh*-question in Japanese.

Next, given the facts in (23) and (24), the licensing condition for *wh*-phrases will be provided as in (27).

(27) *Licensing Condition for Wh-Phrases in Japanese Wh-Questions*
A syntactic object carrying [WH] in a sentence must be licensed by being c-commanded by a C with [Q] where a question particle occurs.
[**C** $_{[Q]}$… **SO**$_{[WH]}$ …] ($C_{[Q]} > SO_{[WH]}$)

Given these assumptions, we will look at the derivation of Japanese *wh*-questions. The derivation of (23) is shown as in (28).

(28) a. [$_{v*P}$ John-wa [nani-o tabeta] $\boxed{\text{tabeta-v*}}$]
b. [$_{v*P}$ John-wa [nani-o tabeta] $\boxed{\text{tabeta-v*}}$]
[WH] ----------→ [WH]
c. [$_{CP}$ [$_{TP}$ John-wa [∘∘∘] $\boxed{\textbf{tabeta-v*}}$] **no-C**]
(no-$C_{[Q]}$ > tabeta-v*$_{[WH]}$) ⇒ (27) ok

When VP is transferred at the stage of (28b), the v*-head takes over [WH] of unlicensed *nani-o* '*what*-Acc'. The question particle of *–no* 'Q'

c-commands the v*-head carrying [WH] at the stage of (28c), so that (27) can be satisfied. Thus, its grammaticality can be captured.

Moreover, the case of (24a) is shown in (29).

(29) a. [$_{v*P}$ Tanaka san-ga [dare-ni atta] atta-v*]

b. [$_{v*P}$ Tanaka san-ga [dare-ni atta] atta-v*]

[WH] ------►[WH]

c. [$_{CP}$ [$_{TP}$ Tanaka san-ga [...] atta-v*] to-C]

d. [$_{CP}$ [$_{TP}$ Tanaka san-ga [...] atta-v*] to-C]

[WH] --►[WH]

e. [$_{v*P}$ Suzuki san-wa [$_{CP}$...to-C] iimashita-v*]

[WH] ----►[WH]

f. [$_{CP}$[$_{TP}$… [$_{CP}$...to] **iimashita-v***] **ka-C**]

(ka-C$_{[Q]}$ > iimashita-v*$_{[WH]}$) ⇒ (27) ok

Since *dare-ni* '*who*-Acc' cannot be licensed at the stage of (29a), each phase head continues to take over its [WH] up to the v*-position in the matrix clause at the stage of (29e). Then, *-ka* 'Q' of a question particle in the matrix C-position can c-command the v*-head with [WH] and (27) can be satisfied. This derivation is legitimate, and it results in its grammaticality.

On the other hand, in the case of (24b), *-ka* 'Q' occurs in the embedded clause. Therefore, it can c-command the embedded v*-head taking over [WH], and consequently (27) can be satisfied within the embedded clause. Thus, I can explain that this case receives a *yes-no* question.

Furthermore, I will argue that my analysis can handle *wh*-phrase licensing in Japanese multiple *wh*-questions in (30), as well as in English under my approach. The derivation for (30) can be illustrated as in (31).

(30) **Dare-ga** **nani-o** tabeta no?
who-Nom what-Acc ate Q
'Who ate what?'

(31) a. [$_{v*P}$ **dare-ga** [$_{VP}$ **nani-o** tabeta] tabeta-v*]]

(dare-ga$_{[WH]}$ > nani-o$_{[WH]}$) ⇒ (19) ok

b. [$_{CP}$ [$_{TP}$ **dare-ga** [$_{VP}$...] tabeta-v*] **no-C**]

(no-C$_{[Q]}$ > dare-ga$_{[WH]}$) ⇒ (27) ok

In (31a), *dare-ga* '*who*-Nom' c-commands *nani-o* '*what*-Acc' within the v*P phase, satisfying (19). Plus, *dare-ga* '*who*-Nom' can be licensed by C with a question particle in terms of (27). Hence, (30) can be interpreted appropriately and the grammaticality can be explained.

As for the long-distance case in (32), I claim that a *wh*-phrase in the embedded clause can be successfully licensed by the higher *wh*-phrase via TAKE-OVER of (6), as illustrated in (33).

(32) John-ga **dare-ni** [Mary-ga **nani-o**
John-Nom who-Acc Mary-Nom what-Acc
tabeta to] itta no?
ate C said Q
'Who did John tell that Mary ate what?
(Takahashi (1993: 664))

(33) a. [$_{CP}$ [$_{TP}$...nani-o tabeta-v*] to-C]

[WH] --►[WH] ----►[WH]

b. [$_{v*P}$ **dare-ni** [$_{CP}$ ... **to-C**$_{[WH(nani-o)]}$] itta-v*]

(dare-ni$_{[WH]}$ > to-C$_{[WH(nani-o)]}$) ⇒ (19) ok

c. [$_{CP}$ [$_{TP}$ John-ga [$_{v*P}$ (John-ga) **dare-ni** [$_{CP}$ ...] itta-v*]] **no-C**]

(no-C$_{[Q]}$ > dare-ni$_{[WH]}$) ⇒ (27) ok

As in (33a), each phase head takes over [WH] of *nani-o* '*what*-Acc' up to the C-head in the embedded clause. Then, (19) can be satisfied at the stage of (33b). At the stage of (33c), *dare-ni* '*who*-Acc' can be c-commanded by the C-head in the matrix clause, and (27) can be satisfied. Consequently, my analysis can explain that (33) can receive an appropriate interpretation in terms of (27) and (19), and it is grammatical.

In sum, my current analysis can capture the grammaticality of Japanese *wh*-questions as well as English ones.

5. CONCLUSION

Up to this point, I have discussed how my phase-based approach can deal with licensing phenomena including NPIs, *wh*-in-situ phrase in

multiple *wh*-questions, and Japanese *wh*-questions comprehensively, by assuming licensing conditions in terms of c-command and TAKE-OVER of (6). Ultimately, I could show that the current Phase Theory could contribute to the explanation of long-distance licensing phenomena.

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NOTES

[1] See Nishioka (2010) and Simpson (2000) for more detailed explanations.

[2] As for c-command, I assume the derivational definition given by Epstein et al. (1998).

REFERENCES

Boeckx, Cedric (2000) "A Note on Contraction," *LI* 31, 357-366.

Cheng, Lisa Lai-shen (1997) *On the Typology of* Wh-*Questions*, Garland, New York.

Chomsky, Noam (2008) "On Phases," *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, Carlos P. Otero and Maria Luisa Zubizarreta, 133-166, MIT Press, Cambridge, MA.

Epstein, Samuel D., Erich M. Graut, Ruriko Kawashima and Hisatsugu Kitahara (1998) *A Derivational Approach to Syntactic Relations*, Oxford University Press, Oxford.

Nishigauchi, Taisuke (1999) *Ronri-Kozo to Bunpo-Riron:Nichi-Eigo no* WH *Gensho* (Logical Structure and Grammar Theory: *Wh*-phenomena in Japanese and English), Kuroshio, Tokyo.

Nishimura, Megumi (2013) *A Derivational Approach to Multiple* Wh-*Questions in English*, Doctoral dissertation, Kyushu University.

Nishioka, Nobuaki (2007) *Eigo-Hiteibun no Togoron Kenkyu: Sosei-Syogo to Kaizai-Koka* (A Syntactic Study of English Negative Sentences: Feature-Checking and Intervention Effects), Kuroshio, Tokyo.

Nishioka, Nobuaki (2010) "Bun-Hitei to Hitei-Sosei Ido (Sentential Negation and Negative Feature Movement)," *Hitei to Gengo-Riron* (Negation and Linguistic Theory), ed. by Yasuhiko Kato, Akiko Yoshimura and Ikumi Imani, 51-73, Kaitakusha, Tokyo.

Oba, Yukio (1999) "Phase toshiteno Meishi-ku Hyogen (Nominal Expressions as a Phase)," *Gengo-Kenkyu no Choryu* (Currents in Linguistic Research), ed. by Toshiaki Inada, Kozo Iwabe, Yukio Oba, Masanori Suiko, Masashi Takemoto and Hideo Nishimura, 21-36, Kaitakusha, Tokyo.

Simpson, Andrew (2000) Wh-*Movement and the Theory of Feature-Checking*, John Benjamins, Amsterdam.

Stroik, Thomas (1992) "English *Wh*-in-situ Constructions," *Linguistic Analysis* 22, 133-153.

Stroik, Thomas (1996) *Minimalism, Scope, and VP Structure*, Sage Publications, Thousand Oaks, CA.

Takahashi, Daiko (1993) "Movement of *Wh*-Phrases in Japanese," *NLLT* 11, 655-678.

Yoshimura, Akiko (1999) *Negative Polarity Phenomena* (Hitei-Kyokusei Gensho), Eihosha, Tokyo.

目的語の省略について: Eat と Devour を中心に*

(On Object Deletion: With Special Reference to *Eat* and *Devour*)

西脇　幸太（NISHIWAKI Kota）
岐阜県立岐阜北高等学校（Gifu Prefectural Gifu Kita Senior High School）

キーワード：目的語省略、文脈要因、語彙特性、定性、中核と周辺

1. はじめに

Rice (1988)は eat が目的語省略（統語的な目的語を伴わない統語形式）を許す一方で、eat と類似した意味を持つ(1b)の動詞は目的語省略を許さない、としている。

(1) a. Celia ate.
b. *Celia nibbled / bit / chewed / devoured / ingested / munched / gobbled. (Rice (1988: 204))

Rice の観察に対して、西脇（2010)は、(1b)の動詞は、devour を除き文脈が整えば、目的語省略を許すが、devour については、いかなる環境が整おうとも目的語省略を許さない、と修正している。即ち、目的語の省略可能性において、devour の語彙特性は文脈要因に勝る、という主張である。本研究では devour も、他の(1b)の動詞と同様に、語彙特性よりも文脈要因が勝ることを示す。更に、“省略”された目的語の定性を考慮した議論が必要であることを述べる。即ち、本来的な自動詞用法と他動詞用法で目的語が省略された場合を区別する必要があることを示す。

2. 先行研究

西脇（2010)は Rice (1988)を修正し、「食べる」という意味を表す動詞について、目的語省略を容易に許す(2a)と、環境が整えば許す(2b)、そして、いかなる環境が整おうとも目的語省略を許さない(2c)に細分化している。

(2) a. 「行為」: eat
b. 「行為」+「様態」: nibble / bite / chew / munch / gobble / ingest
c. 「行為」+「様態」+「完結」: devour

筆者が知る限り、(「食べる」という意味の) devour は目的語省略を許さない、という観察が主流である（cf. Radford (1990)、Huddleston and Pullum（以下 H&P) (2002)、Jackendoff (2002)）。しかし西脇(2010)の記述にも 2 点の修正が必要である。第一に、devour も環境が整えば目的語省略を許す。第二に、他動詞 eat は目的語省略を容易に許さない。本研究では、統語上、明示的に表れていないが、意味上、解釈される目的語が不定の場合、つまり特定のものを指示しない場合を自動詞用法とし、定解釈を必要とする他動詞の目的語省略とは区別して議論を進める。

3. 事実観察

本節では devour と他動詞 eat が目的語省略を許す事実を観察する。使用する資料は、筆者による作例、ウェブページからの実例（一部改変を含む）、映画のスクリプト、British National Corpus (BNC)からの実例である。いずれの例文に対しても母語話者によるインフォーマントチェックを受け

ている。

3.1. devour の目的語省略

本節では 11 名の母語話者の判断を基に、環境が整えば devour も目的語省略を許すことを示す。[1] 命令文は目的語省略を許す環境の一つであるが（cf. Rice（1988））、devour に関しては、単に命令文で使われただけでは、目的語を省略することは不可能である。(3)は 11 名すべての母語話者が不可である、と回答している。

(3)　*Devour!

(4)は否定形で用いられた命令文である。1 名は容認できる、と回答したが、残りの 10 名は不可としている。

(4)　*Don't devour like that.

行為に焦点が当たるような like that という句があっても、目的語省略を許さない、という devour の語彙特性が勝る。ここまでは西脇 (2010)の観察と一致する。一方で、レシピの文脈やラベル表示の文脈では、目的語省略に関しての容認度が極めて高くなる。(5)はペパーミントアイスクリームのレシピ中の一文である。11 名中 8 名が問題ないと回答している。

(5)　[Peppermint Ice Cream Recipe の一部]（母語話者にはより広い文脈を提示）
…. ?Just don't devour too quickly like my family and I did!
(http://www.serving-ice-cream.com/peppermint-ice-cream.html 2013/03/11 引用)

(6)はシナモンロールのレシピ中の一文であり、シナモンロールにふりかける糖衣についての注意を述べたものである。11 名中 10 名が問題ないと回答している。[2]

(6)　[Cinnamon Rolls Recipe の一部]
…. Just a word of caution about the frosting: Do NOT devour before pouring over the rol.ls. You can scrape the bowl, but the frosting is supposed to go ON the cinnamon rolls. Not straight into your mouth.
(http://www.mformommy.com/cinnamon-rolls/ 2013/03/11 一部を改変して引用)

ラベル表示の文脈で使用された(7)については、11 名中 10 名が可としている。(7)は筆者による作例だが、あるインフォーマントからは、おどけた表現として用いられる可能性がある、という回答があった。

(7)　[アイシング (frosting) のパッケージに印刷されて]
DO NOT DEVOUR!

(8)は映画のスクリプトの一部である。11 名中 10 名が問題ないとしている。

(8)　[watches James gulp down a strawberry]
James, this is high tea, all right? We nibble, we do not DEVOUR.
（*The Great Debaters*, 2007）

この例で極めて重要な点は、nibble と

devour が対比されている、ということである。(8)において、nibble との対比で、食べる対象となる目的語が背景化され、動詞が前景化する（cf. 菅山（2003））。実際の映画の場面では、音声上、devour に対照強勢が認められる。さらに、(8)の devour の意味上の目的語は、(5)-(7)のそれとは異なり、不定の可能性がある。つまり、具体的な指示対象((8)では a strawberry あるいは high tea）があるのではなく、一般的な食べ物、という解釈がされる、ということである。あるインフォーマントは意味上の目的語についても言及し、それは不定である、と回答している。

以上を基に、本研究ではレシピの文脈、ラベル表示の文脈、行為自体が対比される文脈では devour は目的語省略を許す、と主張する。即ち、文脈要因は、devour の目的語省略を許さない、という語彙特性に勝る、と言うことができる。[3]

3.2. 他動詞 eat の目的語省略

動詞 eat が統語上、目的語を伴わない場合は、意味上、解釈される目的語は、いかなる場合も不定である(Fillmore (1986))。(9B)では目的語を明示的に示さない限り会話が成立しない。（cf. Lehrer（1970）、Allerton (1975)、Quirk et al. (1985)、Levin (1993)、H&P（2002）、Culicover and Jackendoff (2005)）

(9) A: What happened to my sandwich?
B: *Fido ate.
(Fillmore (1986: 97))

即ち、他動詞 eat は目的語を省略できない。西脇（2011)は多様な文脈を検討し、他動詞 eat が安定して目的語省略を許さない文脈(10)、母語話者により揺れが生じる文脈(11)-(13)、安定して目的語省略を許す文脈(14)(15)を示している。西脇（2011)の 11 名によるインフォーマント調査では、(10)は 11 名全員が容認できない、と回答している。(9)と同様に、一見、my sandwich が(10B)の eat の目的語として解釈されそうだが、目的語が明示的に表現されない限り、単に、何かを食べた、または、食事をした、という解釈しかされず、会話が成立しない。

(10) A: What happened to my sandwich?
B: *The dog ate.
（西脇（2011: 114））

(11)は(10)に大幅に変更を加えた会話である。(11B)においては、目的語省略を許しやすい以下の 3 つの要因が組み込まれている。第一に、同一文中に your sandwich や it などの目的語が明示されており、最後の eat の目的語のみが省略された形になっている。第二に、find、sniff、eat という 3 つの動詞が等位接続されることにより、目的語になる対象物ではなく、行為そのものに焦点が当たるようになっている。第三に、eat と副詞 greedily を共起させることで、様態に焦点が当たり、行為が前景化するようになっている。

(11) A: What happened to my sandwich?
B: ??The dog found your sandwich, sniffed it and then ate greedily. （西脇（2011: 115））

これらの要因を加えることで、(11)は(10)よりも容認度が上がる。西脇（2011)の調査では 11 名中 5 名が容認できると回答している。しかしながら、依然として容認できないと回答しているインフォーマントがい

ることも事実である。(12)のように命令文で用いられると、容認度はさらに高くなる。(12)については、11 名中 7 名が容認できると回答している。(注意を要するのは、この容認度は、eat の形に出ていない目的語をサンドウィッチと解釈する、という条件での容認度である、という点である。不可とした 4 名は、統語的には問題なく、単に「食事をしてください」や「私を待たずに先に食べてください」の意味なら可能である、と回答している。以下の例文で示す容認度も、同様に、定の指示対象を伴った解釈が可能かどうか、というものである。)

(12) [目の前のサンドウィッチを指して]
? Eat! (西脇 (2011: 117))

但し、ここでも容認できないと回答しているインフォーマントが 4 名いる。そのうちの 1 名は(13)のように否定命令文にしても不自然であると回答している。[4]

(13) [サンドウィッチを食べている聞き手に対して]
Do not eat ?(it).
(西脇 (2011: 117))

一方で、レシピの文脈で用いられた場合は 11 名すべてのインフォーマントが容認できるとしている。(14)は、BNC からの実例で、メロンの食べ方について述べた文である。

(14) To ripen melons, keep them at room temperature for a few days, when ripe store in the fridge and eat as soon as possible. (BNC: A70)

ここでは eat の形に出ていない目的語は定の指示対象を持ち、melons と解釈される。(15)についても、同様に、11 名全員が容認できるとした。

(15) [乾燥剤の表面に印刷されて]
DO NOT EAT.
(西脇 (2011: 119))

注目すべきは、単なる命令文ではなく、命令文の中でも、特に、レシピやラベル表示の文脈という限られた環境においてのみ、他動詞 eat は目的語省略を許す、という点である。

以上より、他動詞 eat は、(14)のレシピや(15)のラベル表示の文脈など、ごく限られた文脈でしか目的語省略を許さない。従って、eat は容易に目的語省略を許す、という西脇 (2010)の記述は不正確である。eat の目的語省略を議論する際には、形の上で目的語を伴っていない現象が、本来的な自動詞用法であるのか、他動詞の目的語が省略された用法であるのかを区別する必要がある。

4. 考察

以上の事実観察より、他動詞 eat も devour も、本来的な語彙特性としては目的語省略を許さないが、レシピやラベル表示など、ごく限られた文脈であれば目的語省略を許す、と言える。これは目的語省略を可能にする文脈要因が、動詞の目的語省略を許さないという語彙特性に勝るということを示唆している。

4.1. 目的語省略とレジスター

同様のことが、通例、目的語省略を許さない状態変化他動詞の break などについても当てはまる。(16)は break の本来的な語彙特性が目的語省略を許さないことを示し

ている。

(16) Chris broke *(something).
(菅山 (2003: 53))

一方で、レシピの文脈が与えられると break は目的語省略を許す。

(17) Take 3 eggs. Break into a bowl.
(Massam and Roberge (1989: 135))

目的語省略という現象について議論する際には、レジスター、特に、レシピの文脈は極めて決定的な要因になり得る。

4.2. 目的語省略と中核・周辺

4.1 節の break と同様に、3 節では、他動詞 eat も devour もレジスターなどの文脈が整うと目的語省略を許す例を確認した。但し、他動詞 eat も devour も必要な文脈が整わない限り統語的な目的語が必要である。即ち、他動詞 eat も devour も目的語省略を許さない場合が中核的な用法であり、目的語省略を許す場合は周辺的な用法である。[5] 目的語省略を許すのは、あくまでも周辺的な用法であり、明示的な目的語を伴った場合と、伴っていない場合を同列に扱うことは妥当ではない。目的語省略という観点から、中核と周辺を認めなければならない。

5. まとめ

本研究では以下のことを明らかにした。

(18) devour はレシピ、ラベル表示の文脈、又は行為の対比がなされる文脈では目的語省略を許す。

(19) 動詞 eat の目的語省略の議論には意味上の目的語の定性を考慮する必要がある。他動詞 eat は極めて限られた文脈でしか目的語省略を許さない。

(20) 他動詞 eat も devour も、あくまでも中核的な用法は統語上の目的語を伴った場合であり、目的語省略を許す場合は周辺的な用法である。

以下の 2 点を今後の課題としたい。

(21) 語彙特性が文脈要因に勝る動詞があるかを調査する。そして、それはどのような特性により目的語省略を許さないのかを明らかにする。

(22) 他動詞 eat と devour が原則、目的語省略を許さないのはなぜかを明らかにする。

注

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1. 協力いただいた 11 名のインフォーマントの内訳は以下の通りである : アメリカ人 8 名、イギリス人 2 名、非公開 1 名。インフォーマントには例文を提示し、不自然な箇所があれば示すように依頼した。

2. (5)と(6)では、同じレシピの文脈でも容認度に差が出る点が興味深い。これは devour を用いた指示の必然性に起因するものと考える。
3. レシピやラベル表示の文脈における否定の指示も、ある種の「対比」と考えることができる。つまり、「食べる」と「食べない」の対比が認められ、その対比が目的語省略を許す大きな要因として働いている可能性がある。以上の視点は、柏野健次先生のご助言によるものである。要因間の関係をいかに記述するか、という点は今後の課題としたい。
4. 同じ命令文でも eat と devour で容認度に差が出る点が興味深い。また、目的語省略の容認度において、eat は極性による差は感じられないが、devour は、本調査では、否定命令文のときが主流である。これは、命令文の特性によるものであると考えられる。命令文は、本来的に、聞き手にとって好ましいと考えらえることを伝達するものである。従って、命令文には、聞き手にとって好ましいと考えられる、または、中立的な情報を伝達し得る語が選択される。この点から、eat は「食べる」という意味を表す最も中立的な語の一つであるため、肯定でも否定でも用いることができる。一方で、devour は「がつがつ食べる」という、ある種の否定的なイメージを持つ語である。従って、肯定の命令文では使用されにくく、否定命令文が主流となる。これは目的語を伴った場合でも同様のことが言える。以上の視点は、高橋英光先生のご助言によるものである。
5. 現段階では、このような立場をとっているが、目的語省略という現象において、何を中核とし、何を周辺とするか、については議論の余地がある。以上の視点は小野尚之先生のご助言によるものである。中核と周辺を認める必要があるか、そして何を中核・周辺と認めるかについては、今後の課題としたい。

参考文献

Allerton, D. J. (1975) "Deletion and Proform Reduction," *Journal of Linguistics* 11, 213-237.

Culicover, Peter W. and Ray Jackendoff (2005) *Simpler Syntax*, Oxford University Press, New York.

Fillmore, Charles J. (1986) "Pragmatically Controlled Zero Anaphora," *BLS* 12, 95-107.

Fraser, Bruce and John R. Ross (1970)"Idioms and Unspecified NP Deletion,"*Linguistic Inquiry* 1, 264-265.

Goldberg, Adele E. (2001) "Patient Arguments of Causative Verbs Can Be Omitted: The Role of Information Structure in Argument Distribution," *Language Sciences* 23, 503-524.

Groefsema, Marjolein (1995) "Understood Arguments: A Semantic/Pragmatic Approach," *Lingua* 96, 139-61.

Huddleston, Rodney and Geoffrey K. Pullum (2002) *The Cambridge Grammar of the English Language*, Cambridge University Press, Cambridge.

Jackendoff, Ray (2002) *Foundations of Language: Brain, Meaning, Grammar, Evolution*, Oxford University Press, Oxford.

小西友七（編）(2006)『現代英語語法辞典』三省堂，東京.

Lehrer, Adrienne (1970) "Verbs and Deletable Objects," *Lingua* 25,

227-253.

Levin, Beth (1993) *English Verb Classes and Alternations*, University of Chicago Press, Chicago.

Massam, Dianne and Yves Roberge (1989) "Recipe Context Null Objects in English," *Linguistic Inquiry* 18, 134-139.

西脇幸太 (2010)「Missing Object の認可に関わる優先性規則—Eat とその下位レベルの動詞の比較分析を通して—」,『英語語法文法研究』17, 132-147.

西脇幸太 (2011)「動詞 Eat の Missing Object—中核的な解釈と周辺的な解釈—」,『英語語法文法研究』18, 110-125.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language*, Longman, London.

Radford, Andrew (1990) *Syntactic Theory and the Acquisition of English Syntax*, Blackwell, Cambridge.

Rice, Sally (1988) "Unlikely Lexical Entries," *BLS* 14, 202-212.

菅山謙正 (1994)「英語の 'missing objects' について」,『英語語法文法研究』創刊号, 91-104.

菅山謙正 (2003)「状態変化他動詞の目的語は省略できないか？－event 構造と prominence からの考察」,『英語青年』4 月号, 53-55. 研究社, 東京.

On the Discourse Function and Phrasal Origin of *Just So You Know**

Takahito Nobe
University of Tsukuba

Keywords: *just so you know*, inference triggering, sentence final particle *yo*, performative clause, informational superiority

1. Introduction

This paper is concerned with the discourse function of the expression *just so you know* as exemplified in (1):

(1) Roy: I can't wait for your art show tonight.
Pam: Okay, <u>just so you know</u>, it's just the students from my class in a little studio.
Roy: I-I wouldn't miss it for the world.
Pam: Thanks.
(*The Office* S03E16[1])

According to some online-based dictionaries (e.g. *Eijiro on the Web*), *just so you know* is used to preface an utterance, making explicit the speaker's communicative intention.

What is of interest here is the optional nature of *just so you know*. By "optional" I mean that the expression does not affect the truth condition of the sentence to which it is attached, and thus its presence/absence does not dramatically affect the content of the proposition conveyed, much like so-called discourse markers:

(2) Okay, it's just the students from my class in a little studio.

The removal of *just so you know* as in (2) does not alter the propositional content *per se*.

In addition, as will be seen presently, *just so you know* is seemingly redundant not only in terms of propositional content but also from the viewpoint of the "strong communicativity" of English.

If *just so you know* is optional, what makes it usable in the first place? The main purpose of this paper is, thus, to clarify what discourse function *just so you know* serves and what mechanism is at work. I will argue that *just so you know* triggers the inference of implicatures, especially those concerning indirect speech acts.

2. Proposal

In this section, I will argue that *just so you know* has a function to trigger the inference of implicatures.

As a preliminary discussion, we consider *just so you know* from the perspective of one characteristic of the English language system: its strong communicativity.

According to Hirose (1995, 1997, 2013), English is a "public-self centered" language in which the unmarked mode of expression is public expression (expression for communication). Observe the following:

(3) a. Today is Saturday.
b. I SAY TO YOU Today is Saturday.
(Hirose (2013: 11))

(3a) is an ordinary English declarative sentence which is, by default, interpreted as in (3b) where the communicativity of the sentence is guaranteed by I SAY TO YOU, i.e. it is

presupposed in (3a). This point makes a sharp contrast with "private-self centered" languages such as Japanese. In such languages, the unmarked mode of expression is "private" expression (expression for thought), which does not presuppose communication and thus needs certain linguistic forms to ensure communicativity (e.g. sentence final elements like *yo*, *desu*, etc.). English, as seen above, does not need any such extra element to ensure the communicativity of a sentence. In this respect, therefore, English is said to be inherently communicatively strong.

Recall that *just so you know* prefaces an utterance and makes explicit the speaker's communicative intention. This characteristic is problematic in view of the strong communicativity of English. That is, if the unmarked mode of expression in English presupposes communication, then why is it that *just so you know*, which expresses the speaker's communicative intention, is used when an unmarked simple statement is self-sufficient for communication? In this way, *just so you know* is redundant both in terms of propositional content and the strong communicativity of English. Then, what is the motivation for the use of *just so you know*?

In this paper, as stated above, I propose that *just so you know* has a function to trigger inferences and is employed for this purpose. We will elaborate on this proposal in detail below.

It has generally been observed that utterances that are in violation of Grice's (1975) conversational maxims trigger the inference of implicatures (Grice (1975), Sperber and Wilson (1995), Levinson (1983, 2000)). For example, by saying something superfluous in violation of the second maxim of Quantity,[2] the speaker may imply more information than otherwise intended.

As we have seen, *just so you know* does not affect propositional content, and redundantly expresses the speaker's communicative intention which, even without it, is presupposed by the English declarative sentence; thus, *just so you know* violates the second maxim of Quantity.

It follows, then, that the use of *just so you know* should trigger some kind of inference. Indeed, a close examination of actual examples reveals that sentences marked by *just so you know* involve implicatures, especially those related to indirect speech acts (cf. Searle (1975)). More specifically, *just so you know* triggers an inference pattern illustrated in (4):

(4) *just so you know* P(ROPOSITION) (where P is interpreted as a reason for an action to be undertaken) +> The hearer should undertake the action.[3]

The proposition of the sentence marked by *just so you know* is interpreted as a reason for a certain action to be undertaken. This triggers the inference of an implicature that the hearer should undertake that action, i.e. indirect speech acts of directives (cf. Searle (1976)).

Now let us consider some examples to verify the claim that *just so you know* triggers the inference of implicatures.

(5) Roy: I can't wait for your art show tonight.
Pam: Okay, <u>just so you know</u>, *it's just the students from my class in a little studio.*
Roy: I-I wouldn't miss it for the world.
Pam: Thanks. (= (1))

This is a scene in which Roy is going to go to the art show where Pam is putting her drawings on exhibit. They are talking about the art show and Roy is a little too excited for a small-scaled, amateur art show. Pam realizes it and produces the utterance in question. Here, the proposition marked by *just so you know* (italicized) is interpreted as a reason for an action to be undertaken, namely, stop being too excited. Consequently, the utterance serves as an indirect request or order like "Don't be too excited," or "Stop being excited."

Let us move on to another example.

(6) Izzie: Meredith, if you can't make this right, if you can't fix this with George, <u>just so you know</u>, *if it comes to choosing sides, I'm on his*.

(*Grey's Anatomy*)

Meredith has had some trouble with George, both of whom are Izzie's (the speaker) good friends. Meredith has not been able to resolve the situation for quite a while, so Izzie, having grown impatient, says the utterance in question to Meredith. Again, the proposition marked by *just so you know* is interpreted as a reason for some action to be undertaken. Here, the hearer is urged to fix the situation with George. In this example, the utterance is taken to be an indirect warning or threat implying that if the hearer does not do so, she will suffer a negative consequence.

So far, we have proposed that *just so you know* has a function to trigger inferences, and examined two actual examples to see that the expression indeed has such a function in discourse.

At this point, however, one may wonder whether the implicatures observed in the examples above are really derived from the use of *just so you know*. Such a suspicion is justified since in the above examples the implicatures do seem to be derivable from the propositional content and the context alone.

However, while *just so you know* does not *produce* implicatures, it does *trigger* or *help induce* the inferences in a way that facilitates the uptake of the implicatures by limiting *interpretations* of the proposition to the pattern in (4). Observe the followings:

(7) a. I'm not interested.
b. He's coming.
c. You are not smart.

(7a-c) are unmarked declarative sentences and say nothing about implicatures when devoid of context. Interestingly, however, the addition of *just so you know* to these sentences brings about changes in interpretation:

(8) a. Just so you know, I'm not interested.
b. Just so you know, he's coming.
c. Just so you know, you're not smart.

In (8a), an imaginable situation is that a man is persistently talking to a woman at a bar. The woman is disgusted and says (8a) to indirectly ask the man to stop making an advance to her. In (8b), the person referred to as "he" may be a common acquaintance of the speaker and hearer. The speaker says (8b) to advise the hearer to, for example, prepare for "his" coming or be ready for the event. In (8c), the hearer may be behaving as if he were smart, and the speaker says (8c) to get the hearer to stop acting like that.

In all the utterances in (8a-c), *just so you know* coerces the proposition, as it were, into certain interpretations in conformity with the

pattern in (4). It is in this sense that we claim that *just so you know* has a function to trigger the inference of implicatures.

3. A Cross-linguistic Implication for the Implicature-triggering Function

In the previous section, we saw that *just so you know* has a function to trigger inferences. In this section, we turn our eyes to the Japanese sentence final particle *yo*, in order to shed some light on the inference-triggering function from a cross-linguistic perspective.

It is frequently pointed out that the sentence final particle *yo* in Japanese has a function to trigger inferences. Observe the following:[4]

(9) a. Mosimosi, kippu-o
Excuse me ticket-ACC
otos-are-masi-ta.
drop-HON-POL-PAST

b. Mosimosi, kippu-o
Excuse me ticket-ACC
otos-are-masi-ta yo.
drop-HON-POL-PAST I tell you
'Excuse me, but you dropped your ticket.'

(Inoue (1997: 62); slightly modified)

Assume that in this scene, the speaker is speaking to the hearer who has just dropped her ticket but has not noticed it.

In (9a), a case without *yo*, the speaker is only describing the immediate situation and is requesting the hearer to understand no further than the information conveyed; the utterance does not invoke an inference as to what the hearer should do, and thus is unnatural in this context, in which such an inference is expected.

On the other hand, in (9b), a case with *yo*, the speaker is not only describing the immediate situation but also is invoking an inference as to what the hearer should do with the ticket. In other words, the use of *yo* puts at issue the necessity of the hearer's picking up the ticket, in addition to the communication of the proposition "the hearer dropped the ticket."

The above observation shows that the inference-triggering function exists in Japanese as well as in English. It is interesting to note that while linguistic devices that trigger inferences are observed in both languages, their realizations are different according to the respective language systems: In Japanese, addressee-oriented expressions like sentence final particles *ne* and *yo* are well developed as grammatical forms (Hirose (1995, 1997), and such forms are employed for inference triggering. In English, by contrast, such addressee-oriented expressions are not so well developed since it is communicatively strong (cf. section 2), and thus need not ensure communicativity by such a means. As a consequence, English uses periphrastic forms like *just so you know* for such a discourse function.

In the next section, we will investigate the phrasal origin of *just so you know* and identify its basic meaning in order to see its further parallelism with *yo*. By doing so, I will propose one possible general mechanism for the inference-triggering function.

4. The Phrasal Origin of *Just So You Know* and a General Mechanism of Inference-Triggering

To state the conclusion first, *just so you know* originates from the *so that* clause that expresses 'purpose.'[5] This claim is based on the observation of instances where *just so you know* takes the complementizer *that*:

(10) Just so that you know, I did not steal the car. (*COCA*)

Below, I will elaborate upon this claim.

To begin with, there are at least two types of the *so that* clause, namely, propositional modification and speech-act modification:

(11) a. The school closes earlier so (that) the children can get home before dark. (Quirk et al. (1985: 1108))

b. [$_{\text{PROPOSITION}}$ [MATRIX CLAUSE [*SO THAT* CLAUSE]]]

(12) a. But just so you have all the information, my home was wrecked well before you came into the picture and I'm just now done trying to rebuild it. (*Grey's Anatomy* S03E02)

b. [I TELL YOU [*SO THAT* CLAUSE] [$_{\text{PROPOSITION}}$ […]]]

(11a) is an instance of propositional modification: The subordinate *so that* clause modifies the matrix clause, i.e. a propositional element, specifying the purpose of the state of affairs described by the matrix clause, as illustrated in (11b). (12a) is an instance of speech-act modification: The *so that* clause modifies not any propositional element but the statement speech act I TELL YOU, specifying the purpose of the speech act that is not syntactically realized, as illustrated in (12b).

As for *just so you know*, it shows the behavior of the speech-act modification type:

(13) a. Just so you know, I'm not going to the party with you.

b. [I TELL YOU [just so you know] [$_{\text{PROPOSITION}}$ […]]]

In (13a), *just so you know* modifies the speech act I TELL YOU, as shown in (13b).[6] That is, it is a meta-discoursal expression with the basic meaning like the following:

(14) (I tell you X) just for the purpose that you know X

Thus, *just so you know* expresses the purpose of the statement speech act, i.e. that of letting the hearer know something, which is, as we have seen, presupposed in English verbal communication.

Having identified the phrasal origin and the basic meaning of *just so you know*, let us turn to a further parallelism between *yo* and *just so you know*. That is, they both express the speaker's communicative intention and his "informational superiority" (Hirose (2013), Ikarashi (2013)) over the hearer. Below, I will explain the concept of informational superiority and how the two forms incorporate it.

Yo is generally said to indicate that the speaker knows about the proposition which is unknown to the hearer (Masuoka (1991)). That is, the speaker "has a fuller grasp of the situation in question than [the hearer]" (Ikarashi (2013: 116)). This is what is meant by informational superiority.

Just so you know can also be said to involve informational superiority. As we have seen, *just so you know* makes explicit his purpose of letting the hearer know X, thereby expressing his communicative intention. In English, however, in light of its strong communicativity, the speaker's communicative intention is by default presupposed and the use of *just so you know* is redundant. By redundantly stating what is already presupposed, the speaker emphasizes the purpose of letting the hearer know X. That is, the speaker implies that the hearer does not know, and thus should know X; this is why the speaker engages in the

statement speech act to give the information in question. In other words, by the use of *just so you know*, the speaker stresses his informational superiority over the hearer.

What the above discussion suggests is that not only are there linguistic devices for inference triggering in English and Japanese, but also they share the mechanism for such a function (i.e. informational superiority) despite their different syntactic realization.

It is yet to be explored, however, whether *yo*, *just so you know* and other possible forms are different in the degree and quality of the inference that they trigger; and why informational superiority has to be involved in inference triggering.[7] In this paper, I only point out the possibility of analyzing the phenomenon of inference-triggering from the perspective of informational superiority, or more generally, information manipulation through linguistic means.

6. Conclusion

This paper dealt with the function of *just so you know*, which is seemingly redundant both propositionally and in light of the strong communicativity of English. I proposed that *just so you know* has a function to trigger inferences of implicatures. Also, we explored the parallelism between the Japanese sentence final particle *yo* and *just so you know*, and suggested a cross-linguistic implication for one possible mechanism of inference triggering, namely, the indication of the speaker's informational superiority.

Notes

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[1] S and E stand for Season and Episode, respectively.

[2] "Do not make your contribution more informative than required." (Grice (1975: 45))

[3] The term *action* here is used in a broad sense. Aside from prototypical "action," it is intended to refer also to, for example, expressing emotions, refraining from certain actions, etc.

[4] The glosses used in this paper are as follows: ACC = accusative, HON = honorific, POL = polite, PAST = past tense.

[5] The *so that* clause has another interpretation, namely, that of 'result.' However, there is evidence that *just so you know* is related to the purpose sense rather than the result sense. Due to the space limitation, I will not discuss this point in detail, but three pieces of evidence are involved: (a) my informants report that *just so you know* intuitively involves the purpose sense rather than result; (b) *just* does not appear in the cases of the result interpretation; (c) cases of the result interpretation do not allow the proposing operation. Henceforth, I will refer only to the purpose *so that* clause by the term "*so that* clause".

[6] This accounts for the non-propositionality of *just so you know* that we saw in section 1.

[7] Yukio Hirose has pointed out to me that the speaker's informational relation with the hearer

is independent of their socio-psychological relationship; and the reason that informational superiority is involved in inference triggering may be that it enables the speaker to manipulate the hearer without affecting their socio-psychological relationship. I leave this possibility for further research.

References

Davis, Mark (2008) *The Corpus of Contemporary American English* [COCA], available online at http://corpus .byu.edu/coca/.

Grice, Paul (1975) "Logic and Conversation," *Syntax and Semantics, vol.3: Speech Acts*, ed. by Peter Cole and Jerry L. Morgan, 41-58, Academic Press, New York.

Hirose, Yukio (1995) "Direct and Indirect Speech as Quotations of Public and Private Expressions," *Lingua* 95, 223-238.

Hirose, Yukio (1997) "Hito o Arawasu Kotoba to Shoo-oo (Words of Reference to Persons and Anaphora)," *Siji to Shoo-oo to Hitei* (Reference, Anaphora, and Negation), ed. by Minoru Nakau, 1-89, Kenkyusha, Tokyo.

Hirose, Yukio (2013) "Deconstruction of the Speaker and the Three-Tier Model of Language Use," *Tsukuba English Studies* 32, 1-28.

Ikarashi, Keita (2013) "The Performative Clause *I Tell You*, Interpersonal Relationship, and Informational Superiority," *Tsukuba English Studies* 32, 111-126.

Inoue, Masaru (1997) ""Mosimosi, Kippu o Otosaremasita yo" –Syuujosi "yo" o Tukau Koto no Imi ("Excuse me, but you dropped your ticket" –The Point of Using the Sentence Final Particle *Yo*)," *Gengo* 26, 62-67.

Kinsui, Satoshi and Yukinori Takubo (1998) "Danwa Kanri Riron ni Motozuku "Yo" "Ne" "Yone" no Kenkyuu (A Study on *Yo*, *Ne*, and *Yone* Based on The Discourse Management Theory," *Onsei ni yoru Ningen to Kikai no Taiwa* (Man-Machine Dialog by Speech), ed. by Shuzi Doshita et al., 257-271, Ohmusha, Tokyo.

Levinson, Stephen C. (1983) *Pragmatics*, Cambridge University Press, Cambridge.

Levinson, Stephen C. (2000) *Presumptive Meanings: The Theory of Generalized Conversational Implicature*, MIT Press, Cambridge.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language*, Longman, London.

Masuoka, Takashi (1991) *Modarithi no Bunpoo* (Grammar of Modality), Kurosio, Tokyo.

Searle, John R. (1975) "Indirect Speech Acts," *Syntax and Semantics*, vol.3: *Speech Acts*, ed. by Peter Cole, and Jerry L. Morgan, 59-82. Academic Press, New York.

Searle, John Rogers (1976) "A Classification of Illocutionary Acts," *Language in Society* 5, 1-23, Cambridge University Press, Cambridge.

Sperber, Dan and Deirdre Wilson (1995) *Relevance: Communication and Cognition*, Blackwell Publishing, Oxford.

Takubo, Yukinori (1992) "Danwa Kanri no Hyoosiki ni Tuite (On Markers of Discourse Management)," *Bunka Gengogaku –Sono Teigen to Kensetu* (Cultural Linguistics –Its Proposal and Construction), Sanseido, Tokyo.

Irish [+Q] COMPs

Dónall P. Ó Baoill and Hideki Maki
Queen's University Belfast, Professor Emeritus and Gifu University

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1. INTRODUCTION

This paper closely investigates the wh-construction in Modern Irish (Irish, hereafter), and points out that in terms of the wh-construction, Irish is a typologically unique language in the sense that it has two different types of [+Q] COMPs: one type of [+Q] COMP has a [strong] feature that needs to be deleted in overt syntax, which necessarily involves overt wh-movement; and another type that does not have this feature, and binds a wh-phrase in situ, so that no wh-movement takes place with this COMP. If this is correct, Irish is different from (i) English, which has a [+Q] COMP with a [strong] feature, which is inserted only in overt syntax, (ii) French, which has a [+Q] COMP with a [strong] feature, which is inserted either in overt syntax or in LF, according to Bošković (2000), and (iii) Chinese, which seems to have a [+Q] COMP without a [strong] feature. The present research thus shows that a given language picks up a certain type of [+Q] COMP or certain types of [+Q] COMPs out of the list of possible [+Q] COMPs, and Irish has picked up two types of [+Q] COMPs (one found in English and another found in Chinese). The Irish data in point are shown in (1).

(1) a. Cad é a chreideann tú a cheannaigh
what aL believe you aL bought
Seán *t*?
John
'What do you believe that John bought?'

b. Creideann tú gur ceannaigh Seán
believe you that bought John
cad é?
what

(1a) is a non-echo wh-question which involves overt wh-movement. (See McCloskey (1979, 2002), among others.) (1b) is also well-formed as a non-echo wh-question, and the wh-phrase is in situ in the embedded clause. We will provide more examples of type (1b) in this paper, and based on the newly found data, we will argue (i) that Irish has two types of [+Q] COMPs, one with a [strong] feature, and another with a [weak] feature, (ii) that adjunct wh-phrases in Irish are categorized into two groups: the manner class and the reason class, and the manner class wh-phrases pattern together with argument wh-phrases, and (iii) that the differences in the A'-chain patterns suggest that there are actually three types of wh-phrases in Irish: argument, manner, and reason wh-phrases.

The organization of this paper is as follows. Section 2 reviews the properties of (i) the wh-construction in French and (ii) complementizers in Irish as the background to the subsequent sections. Section 3 provides the wh-interrogative data in Irish. Based on the newly found data, Section 4 discusses what they suggest for the theory of (Irish) syntax. Finally, Section 5 concludes this paper.

2. BACKGROUND

2.1. FRENCH

Bošković (2000) argues that French [+Q] COMP with a [strong] feature is inserted in overt syntax or in LF based on abundant data including (2)-(4). In French, both (2a) and (2b) are grammatical,

suggesting that a wh-phrase can be in CP SPEC or in situ.

(2) a. Qui as-tu vu?
who have-you seen
'Who did you see?'

b. Tu as vu qui?
you have seen who

However, the ungrammaticality of (3b) and (4b) indicates that a wh-phrase cannot always be in situ.

(3) a. Qui Jean et Pierre croient-ils que
who Jean and Pierre believe-they that
Marie a vu?
Marie has seen
'Who do Jean and Pierre believe that Marie saw?'

b.?* Jean et Pierre croient que Marie
Jean and Pierre believe that Marie
a vu qui?
has seen who

(4) a. Que ne mange-t-il pas?
what NEG eat-he NEG
'What doesn't Jean eat?'

b.?* Jean ne mange pas quoi?
Jean NEG eats NEG what

Bošković (2000) claims that the above data suggest (i) that a [+Q] COMP with a [strong] feature is derivationally inserted, so that it can be inserted in LF, and (ii) that LF wh-movement is restricted to head-movement, which cannot move across an A'-head, such as COMP in (3b) or NEG in (4b). To summarize, if Bošković (2000) is correct, French has one type of [+Q] COMP with a [strong] feature, which can be inserted either in overt syntax or in LF.

2.2. IRISH

Irish has three types of complementizers: the [-Q] marker, the direct relative marker, and the indirect relative marker. (5) is a declarative sentence, and the embedded clause is headed by the [-Q] COMP *gur* 'that.' When the sentence involves wh-interrogative clause formation, as in (6), the embedded COMP must change to the direct relative marker *aL*, and at the same time, another COMP *aL* must be inserted right after the wh-phrase.

(5) Creideann Seán gur cheannaigh Máire
believe John that bought Mary
an carr.
the car
'John believes that Mary bought the car.'

(6) Cad é a chreideann tú a
what aL believe you aL
cheannaigh Seán ***t***?
bought John
'What do you believe that John bought?'

There is another way to form a wh-interrogative clause in Irish. Observe the example in (7).

(7) Cad é a gcreideann tú gur
what aN believe you that
cheannaigh Seán **é**/***t***?
bought John it
'What do you believe that John bought?'

In (7), the topmost COMP of the wh-interrogative clause is an indirect relative marker *a*, the COMP of the embedded clause is a [-Q] COMP, and the embedded clause contains a resumptive pronoun (RP) *é* 'it' instead of a gap.

McCloskey (2002) assumes that the SPEC of *aL* contains a null operator/null pronoun (henceforth, null operator) as a result of movement, that in the SPEC of *aN*, there is a base-generated operator, and that in the SPEC of *go*/*gur*, there is no operator. In this paper, for expository purposes only, we represent the structure of a wh-interrogative clause by putting a wh-phrase, not its operator, in the SPEC of *aL*/*aN*, as shown in (8).

(8) $[WH_1\ aL/aN\ [_{IP}\ldots t_1/RP_1\ldots]]$

3. IRISH DATA

Having outlined the particular background, let us consider the Irish wh-construction. Firstly, (9) and

(1) show that wh-in-situ is possible in matrix clauses and embedded complement clauses, respectively.

(9) a. Cad é a cheannaigh Seán *t*?
what aL bought John
'What did John buy?'

b. Cheannaigh Seán cad é?
bought John what

Secondly, wh-in-situ is possible within a complex NP island, while wh-movement out of it is not, as shown in (10).

(10) a. * Cad é a chonaic siad [an fear a cheannaigh *t*]?
what aL saw they the man aL bought
'[Q [they saw [the man who bought what]]].'

b. Chonaic siad [an fear a cheannaigh cad é]?
saw they the man aL bought what

Thirdly, wh-in-situ is possible within an adjunct island, while wh-movement out of it is not. See the examples in (11).

(11) a. * Cad é a dúirt tú a bhí iontas ar Mháire [cionnas gur cheannaigh Seán *t*]?
what aL said you aL be.PAST surprise on Mary because that bought John
'[Q [you said that Mary was surprised [because John bought what]]].'

b. Dúirt tú go raibh iontas ar Mháire [cionnas gur cheannaigh Seán cad é]?
said you that.PAST be.PAST surprise on Mary because that bought John what

Fourthly, wh-in-situ is possible within a wh-island, while wh-movement out of it is not. See the examples in (12).

(12) a. * Cad é a bheidh a fhios agat [ar cheannaigh Seán *t*]?
what aL be.FUT the knowledge with.you Q bought John
'[Q [you will know [whether John bought what]]].'

b. Beidh a fhios agat [ar cheannaigh Seán cad é]?
be.FUT the knowledge with.you Q bought John what

Fifthly, and finally, wh-movement across a negation head is possible, and wh-in-situ is also possible within a negation island, as shown in (13).

(13) a. Cad é nár cheannaigh Seán *t*?
what aL.NEG bought John
'What didn't John buy?'

b. Níor cheannaigh Seán cad é?
NEG.PAST bought John what

4. DISCUSSION

Let us now consider what the above findings suggest for the theory of (Irish) syntax. Firstly, Irish has two types of [+Q] COMPs. The contrast between (1b) in Irish and (3b) in French suggests that unlike French, a wh-phrase in situ does not undergo LF head movement. Furthermore, the fact that the *b*-examples in (10)-(13) are grammatical in Irish suggests that a wh-phrase in situ does not undergo LF movement in general. Rather, these facts suggest that in the wh-construction with a wh-in-situ, Irish has a [+Q] COMP that is not found in French or English. The [+Q] COMP seems to pattern with the one found in Chinese. Consider the examples in (14)-(16). (15) and (16) are from Huang (1982: 530, 493).

(14) Ni renwei [Lisi piping-le shei]?
you think Lisi criticize-Asp who
'[Q [you think [Lisi criticized who]]].'
(p.c. with Ling-Yun Fan)

(15) Ni xiang-zhidao [shei xi-bu-xihuan ni]?

you wonder who like-not-like you
'[Q [you wonder [whether who likes you or not]]].'

(16) Ni xihuan [$_{NP}$ [$_{S}$ wo piping shei] de wenzhang]?
you like I criticize who DE article
'[Q [you like [the articles in which I criticize who]]].'

These examples suggest that Chinese [+Q] COMP binds an argument wh-phrase in situ, which does not move in LF.

Now, it has turned out that Irish [+Q] COMP for an argument wh-phrase is exactly like the one found in Chinese, as exemplified by the *b*-examples in (10)-(13). At the same time, all the *a*-examples show that Irish also has another [+Q] COMP, which is like the one found in English, as shown by the examples in (17)-(20).

(17) What do you believe that John bought?

(18) * What did they see [the man who bought *t*]?

(19) * What did you say that Mary was surprised [because John bought *t*]?

(20) * What do you know [whether John bought *t*]?

Thus, the present research made it explicit that a language can have two types of [+Q] COMPs, and its manifestation is Irish.

Secondly, the contrast between (21) and (22) shows that adjunct wh-phrases are categorized into two groups: the manner class and the reason class.

(21) a. Cad é an dóigh ar chóirigh Seán an carr?
what the way aN fixed John the car
'How did John fix the car?'

b. Chóirigh Seán an carr (ar) cad é an dóigh?
fixed John the car on what the way

(22) a. Cén fáth ar chóirigh Seán an carr?
what.the reason aN fixed John the car
'Why did John fix the car?'

b. * Chóirigh Seán an carr cén fáth?
fixed John the car what.the reason

(21b) shows that the manner adverbial wh-phrase *cad é an dóigh* 'what the way = how' can be in situ, while (22b) shows that the reason adverbial wh-phrase *cén fáth* 'what.the reason = why' cannot be in situ. This dichotomy is further confirmed by the corresponding examples in French, as shown in (23) and (24).

(23) a. Comment Jean a réparé la voiture?
how Jean has fixed the car
'How did Jean fix the car?'
(p.c. with Gilles Guerrin)

b. Jean a réparé la voiture comment?
Jean has fixed the car how
(Bošković (2000: 56))

(24) a. Pourquoi Jean a réparé la voiture?
why Jean has fixed the car
'Why did Jean fix the car?'

b. * Jean a réparé la voiture pourquoi?
Jean has fixed the car why

Note further that the manner adverbial wh-phrase *cad é an dóigh* 'how' can be in the embedded clause, as shown in (25b).

(25) a. Cad é an dóigh a síleann tú gur chóirigh Seán an carr?
what the way aN think you that fixed John the car
'How do you think [that John fix the car *t*]?'

b. Síleann tú gur chóirigh Seán an carr (ar) cad é an dóigh?
think you that fixed John the car on what the way

In this sense, the COMP that licenses *cad é an dóigh*

'how' in situ is similar to the one found in Chinese, as shown in (26) and (27).

(26) Lisi zenme xiuli-le nabu che?
Lisi how fix-Asp that car
'[Q [Lisi fixed the car how]].'

(27) Ni renwei Lisi zenme xiuli-le nabu che?
you think Lisi how fix-Asp that car
'[Q [you think [Lisi fixed the car how]]].'
(p.c. with Ling-Yun Fan)

Furthermore, the manner adverbial wh-phrase *cad é an dóigh* 'how' can be in a complex NP, as shown in (28b).

(28) a. Cad é an dóigh a bhfaca siad [an fear a chóirigh an carr *t*]?
what the way aN saw they the man aL fixed the car
'[Q [they saw [the man who fixed the car how]]].'

b. Chonaic siad [an fear a chóirigh an carr (ar) cad é an dóigh]?
saw they the man aL fixed the car on what the way

Both sentences in (28) are grammatical. In (28a), *cad é an dóigh* 'how' modifies the matrix clause, but it cannot modify the clause in the complex NP. In (28b), *cad é an dóigh* 'how' only modifies the clause in the complex NP.

Again, this is what takes place in Chinese, as shown in (29).

(29) Ni bu yuanyi yong [[ta zenmeyang zhuan-lai de] qian]?
you not willing use he how earn-come DE money
'[Q [you are reluctant to use [the money he earns how]]].'
(Lin (1992: 295))

Thus, the above data clearly show that adjunct wh-phrases are categorized into two groups: the manner class and the reason class. This then provides support for the essential claim by Bošković (2000) for French. See also Lin (1992) for the same claim based on Chinese data.

Note, however, that there is a major difference between Chinese *weishenme* 'why' and Irish *cén fáth* 'why.' The examples in (30) show that *cén fáth* 'why' in Irish must be base-generated in CP SPEC.

(30) a. Cén fáth ar chóirigh Seán an carr?
what.the reason aN fixed John the car
'Why did John fix the car?'

b. * Chóirigh Seán an carr cén fáth?
fixed John the car what.the reason

The Chinese counterpart of (30b) is perfect, as shown in (31).

(31) Lisi weishenme xiuli-le nabu che?
Lisi why fix-Asp that car
'[Q Lisi fixed the car why]]].'

At first sight, *weishenme* 'why' is base-generated within TP. However, Lin (1992) and Ko (2005) argue that it is actually base-generated in CP SPEC, just like Irish and English. Ko (2005) claims the External-Merge Hypothesis, which states that in the overt syntax, 'why' in Chinese/Japanese/Korean is externally-merged into the [Spec,CP] of the clause it modifies, and that the CP that 'why' merges with may be declarative or interrogative. Therefore, (32), which is grammatical, has *weishenme* 'why' in CP SPEC of the embedded clause, with the subject *Lisi* topicalized across it, as schematically shown in (33).

(32) Ni renwei Lisi weishenme cizhi?
you think Lisi why resign
'Why$_1$ do you think [Lisi resigned t_1]?'
(Soh (2001))

(33) a. you think [$_{CP}$ why [$_{IP}$ Lisi resigned]]

b. you think [$_{CP}$ Lisi [$_{CP}$ why [$_{IP}$ t_{Lisi} resigned]]]

The point is that in (32), the reason adjunct

wh-phrase is in the embedded clause at the surface level, although it takes matrix scope.

However, this is impossible in Irish, as shown in (34).

(34) * Dúirt Pól cén fáth a raibh
said Paul what.the reason aN be.PAST
Seán ann?
John there
'Why$_1$ did Paul say [that John was there t_1]?'

In (34), the reason adjunct wh-phrase *cén fáth* 'why' is in CP SPEC of the embedded clause. The COMP *aN* indicates that the wh-phrase is base-generated in that position. In order for (34) to be grammatical, *cén fáth* 'why' must be in CP SPEC where it takes scope at the surface level, as shown in (35), cited from McCloskey (2002, ex. 69).

(35) Cén fáth a dúirt Pól a
what.the reason aL said Paul aN
raibh Seán ann?
be.PAST John there
'Why$_1$ did Paul say [that John was there t_1]?'

In (35), the embedded COMP is *aN*, and the matrix COMP is *aL*. Therefore, *cén fáth* 'why' moved from the SPEC of the embedded CP to the SPEC of the matrix CP.

Therefore, the ungrammaticality of (34) in Irish indicates that the reason adjunct wh-phrase *cén fáth* 'why' in Irish does not pattern together with the corresponding wh-phrase *weishenme* 'why' in Chinese, and this contrast between Chinese and Irish suggests that the behaviors of reason adverbial wh-phrases need to be specified independently of the properties of the [+Q] COMPs in the languages.

Thirdly, there are actually three types of wh-phrases in Irish. In the above discussion, we saw that the manner adverbial wh-phrase *cad é an dóigh* 'how' patterns together with argument wh-phrases, such as *cad é* 'what.' The *b*-examples in (1), (10), (21), and (28) show that both *cad é an dóigh* 'how' and *cad é* 'what' can be in situ, and pattern together. Since *cad é an dóigh* 'how' does not pattern with *cén fáth* 'why,' it may be concluded that there are two types of wh-phrases in Irish.

However, the patterns in A'-chains for *cad é* 'what' are not parallel to those for *cad é an dóigh* 'how,' as shown in (36) and (37).

(36) a. Cad é a cheannaigh Seán *t*?
what aL bought John
'What did John buy?'

b. Cad é ar cheannaigh Seán é?
what aN bought John it

(37) a. Cad é an dóigh ar chóirigh Seán an carr?
what the way aN fixed John the car
'How did John fix the car?'

b. * Cad é an dóigh a chóirigh Seán an carr?
what the way aL fixed John the car

The examples in (36) indicates that there are two ways to make a wh-interrogative sentence with an argument wh-phrase in Irish, namely, by movement, as in (36a), and by resumption, as in (36b). However, as the contrast in grammaticality in (37) shows, there is one way to make a wh-interrogative sentence with the manner adverb wh-phrase *cad é an dóigh* 'how.' Therefore, although apparently the manner adverb wh-phrase *cad é an dóigh* 'how' patterns together with argument wh-phrases such as *cad é* 'what,' they are not categorized together. Thus, there are actually three types of wh-phrases in Irish, as *cad é an dóigh* 'how' does not pattern together with *cén fáth* 'why.'

5. CONCLUSION

This paper investigated the wh-construction in Irish that involves wh-movement and wh-in-situ. Based on the newly found data, we claimed (i) that Irish

has two types of [+Q] COMPs, one with a [strong] feature, and another with a [weak] feature, (ii) that adjunct wh-phrases in Irish are categorized into two groups: the manner class and the reason class, and the manner class wh-phrases pattern together with argument wh-phrases, and (iii) that the differences in the A'-chain patterns suggest that there are actually three types of wh-phrases in Irish: argument, manner, and reason wh-phrases.

It has turned out then that in terms of the wh-construction, Irish is a typologically unique language in the sense that it has two different types of [+Q] COMPs: one type of [+Q] COMP has a [strong] feature that needs to be deleted in overt syntax, which necessarily involves overt wh-movement; and another type that does not have this feature, and binds a wh-phrase in situ, so that no wh-movement takes place with this COMP.

The languages investigated in this paper are grouped together in terms of the types of COMPs and when they are put into the phrase structure, as shown in (38). Note that as it is not obvious when the COMP with a [weak] feature is inserted to the phrase structure, especially in a language without an overt COMP, the distinction in the timing of COMP insertion is not made explicit for the COMPs with a [weak] feature in (38).

(38) Languages Grouped in Terms of the Two Factors: the COMP Type and the Timing of COMP Insertion

Type of C	Insertion Before LF	Insertion in LF
$C_{[strong]}$	English, French, **Irish**	French
$C_{[weak]}$	Chinese, **Irish**	

What is special about (38) is the fact that Irish has two types of COMPs. The fact that such a language exists as a human language indicates that a given language can pick up more than one type of COMP out of the lexicon in principle.

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REFERENCES

Bošković, Željko (2000) "Sometimes in SpecCP, Sometimes In-Situ," *Step by Step: Essays on Minimalism in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 53-87, MIT Press, Cambridge, Mass.

Huang, C.-T. James (1982) *Logical Relations in Chinese and the Theory of Grammar*. Doctoral dissertation, MIT.

Ko, Heejeong (2005) "Syntax of *Why*-In-Situ: Merge into [Spec,CP] in the Overt Syntax," *Natural Language & Linguistic Theory* 23, 867-916.

Lin, Jo Wang (1992) "The Syntax of *Zenmeyang* 'How' and *Weishenme* 'Why' in Mandarin Chinese," *Journal of East Asian Linguistics* 1, 293-331.

McCloskey, James (1979) *Transformational Syntax and Model Theoretic Semantics: A Case Study in Modern Irish*, Reidel, Dordrecht.

McCloskey, James (2002) "Resumption, Successive Cyclicity, and the Locality of Operations," *Derivation and Explanation in the Minimalist Program*, ed. by Samuel Epstein and Daniel Seely, 184-226, Blackwell, Cambridge, MA.

Soh, Hooi Ling (2001) "On the Intervention Effect: Some Notes from Chinese," ms, University of Minnesota, Twin Cities.

Linking Elements as Expletives in Distributed Morphology*

Tatsuhiro Okubo
University of Tsukuba

Keywords: morpheme-based approach, lexeme-based approach, linking elements, distributed morphology, expletives

1. Introduction

There are two widely known approaches to morphology: the morpheme-based approach and the lexeme-based approach. The former approach considers morphemes as its basic elements of word-formation, while the latter considers lexemes, not morphemes, as its inputs of word-formation. Accordingly, the difference between the two approaches is whether the building-blocks of word-formation are morphemes. In this paper, a morpheme is defined as a minimal unit of form and meaning.

Given the definition of morphemes, the presence of meaningless elements poses a problem for the morpheme-based approach, as discussed by Anderson (1992: 53-54). On the other hand, meaningless elements are not problematic for the lexeme-based approach because in this approach, words can be formed without reference to morphemes. The next section shows that there are such semantically empty elements called Linking Elements (LEs) in various languages.

2. Linking Elements

LEs are regarded as semantically empty and recurring in compounds. A representative example is LEs in German, as shown in (1) below:[1]

(1) a. Liebe-s+lied lit. love-LE+song 'love song' (Bauer (2009: 346))

b. Das Auto mein-es Bruder-s lit. the car my-GEN brother-GEN 'the car of my brother'

c. die Auto-s lit. the (PL) car-PL 'the cars'

(Bauer (2009: 346))

Bauer (2009: 346) mentions that, generally, Germanic LEs stem from genitive and plural markers and that in German, the suffix *-s* has either of those meanings, as given in (1b-c). However, the suffix of the compound in (1a) is not qualified as a genitive or plural marker because the gender is wrong to allow for an *s*-genitive and the declension is wrong to allow for an *s*-plural. The correct genitive form of *Liebe* is *Liebe-ø* and its correct plural form is *Liebe-n*.

LEs are found in various languages, as illustrated in (2) and (3). In these examples, LEs are italicized:

(2) a. Modern Greek: domat-*o*-salata lit. tomato-LE-salad 'tomato salad' (Ralli (2009))

b. Russian: gaz-*o*-snabženie lit. gas-LE-supply 'gass supply'

(Benigni and Massini (2009: 174))

c. Kannada: de:var-*a*+mane lit. god-LE+house 'room set aside for prayer and worship in the house, a 'home-shrine"

(Sridhar (1990: 284))

d. Japanese: nak-*i*-sakeb-u lit. weep-LE-cry-PRS 'weep and cry'

(Shimada (2013: 90))

(3) a. English: children-'s+hour, oar-s+man, frontier-s+man

(Lieber (2009))

b. French: port-*e*+drapeu lit. bear-LE+standard.PL 'standard bearer,' etc.

(Fradin (2009))

c. Finnish: käde-*n*+sija lit. hand-LE+place 'handle,' vet-*tä*+pitävä lit. water-LE+holding 'waterproof,' etc.

(Niemi J. (2009: 244-245))

d. Maori: waiata-*ā*-ringa lit. song-of-hand 'action song'

(Bauer (1997: 309))

In (2a), the link -*o*- is an LE. According to Ralli (2009: 454), the LE originates from an ancient thematic vowel. However, synchronically, it is not related to any inflectional morphemes. In (2b), the link -*o*- corresponds to an LE in that language. In (2c), it appears that the suffix -*a* serves as an LE because it links between two members in the compound without contributing to its meaning. In (2d), the suffix -*i*- added to a verbal stem can be regarded as LE. Let us move on to the examples in (3). In (3a), the suffixes -*s* or -'*s* are considered to be an LE. It is obvious that the suffix -*s* comes from a plural marker and the suffix -'*s* from a genitive marker. However, according to Lieber (2009: 369), *oars* of *oarsman* need not be interpreted as more than one oar. Moreover, if *frontiers* of *frontiersman* is construed as a plural form or a genitive form, it does not make sense. In (3b), the element -*e* behaves as an LE. The LE stems from a cumulative realization of [3rd], [sg], and [pres]. In (3c), the suffixes -*n* and -*tä* appear to be LEs because they make no semantic contribution to the meaning of the compound, although the suffix -*n* comes from a genitive marker and the suffix - *tä* from a partitive marker. In (3d), unlike the languages observed so far, an LE stems from a preposition -*ā*-, probably because Maori has no inflectional morphology.

On the basis of the observations of LEs in (2) and (3), it appears that LEs are classified into two types: LEs of stem-based type and those of word-based type. In the former, LEs stick to stems, but in the latter, they stick to words. All LEs in (2) belong to the stem-based type because the non-heads minus LEs cannot occur independently, and are thus stems. On the other hand, all LEs in (3) belong to the word-based type because the non-heads minus LEs occur independently and are thus words. Henceforth, I refer to a non-head composed of a stem and an LE as a "small non-head," whereas I

refer to a non-head composed of a word and an LE as a "large non-head."

The non-morphemic status of LEs constitutes a problem for the morpheme-based approach. However, in the lexeme-based approach, it has no problematic natures. For example, Shimada, Nagano, and Okubo (2013) regard them as part of lexemes. In this paper, I attempt to find a possible solution for the problem of the morpheme-based approach, based on Distributed Morphology (DM) (Marantz (1997, 2001), Embick and Marantz (2008)) among the morpheme-based theories. The purpose of this paper is to propose that LEs are expletives.

The next section introduces three theoretical assumptions of this study: Mukai's (2008) DM-based analysis of LEs, the notion of expletives, and DM's devices such as a "single engine hypothesis" and "root or outer domains."

3. Theoretical Assumptions

The first assumption is Mukai's (2008) proposal that an LE checks an uninterpretable feature. Mukai argues that the Swedish left-branching recursive compound in (4a) has the structure in (4b):

(4) a. fot+boll-***s***+domare lit. foot+ball-LE+referee 'football referee'

b. $[_{\cancel{P(x)}}$ $[[_{\cancel{P(x)}}$ √FOT $[$√BOLL $\cancel{P(x)}]]$

LINK, -s] [√DOMARE P(x)]]

According to Collins (2002), a head has one or more uninterpretable features. On the basis of the definition of heads, Mukai proposes a P(x) head composed of a nominalizer and some uninterpretable features. As shown in (4b), the head is contained in the structure of the non-head *fot boll* and of the head *domare*. According to Collins (2002), if there is an uninterpretable feature in a derivation, it must be checked before another item with an uninterpretable feature is introduced to the derivation. Assuming that this proposal of Collins is correct, the structure of the non-head with P(x) cannot be merged with the structure of the head with P(x). One of the two P(x) heads must be checked before the two structures are combined. Mukai argues that an LE is responsible for this. In (4b), the LE represented as LINK is merged with the structure of the non-head and as a result, the P(x) of the non-head is checked.

The second assumption is the notion of expletives. An expletive is defined as a semantically empty element and as serving for checking uninterpretable features. For instance, the subject *it* in *it seems that John is a teacher* and the subject *there* in *there is a book on the desk* are expletives because they are semantically empty and check uninterpretable EPP features (cf. Chomsky (2000)). The types of expletives are not restricted to nominal expletives such as *it* and *there*. Shimada (2004) argues that there are verbal expletives: the dummy *do* of *do*-support in English and the copula *-da* in Japanese. Considering that there are nominal and verbal expletives, we can thus say that there are various types of expletives.

The third assumption consists of two devices of DM: a single engine hypothesis and root and outer domains. The single engine hypothesis states that words and phrases are formed in syntax (cf. Marantz (1997), Arad (2003)). On the basis of the hypothesis, Marantz (2001) and Arad (2003) suggest two places for word formation. In one place, words are created from category-neutral Roots, and in the other place, they are created from existing words. The former place is called a root domain and the latter place an outer domain, as shown in (5). In the schematic structures, the heads x and y stand for categorizers:

(5) a. root domain: [√ROOT *x*]

b. outer domain: [[√ROOT *x*] *y*]

(Marantz (2001) with slight modifications)

As shown in (5b), an outer domain is outside a root domain. The followings are sample derivations:

(6) a. vaporous: [√VAPOR *a*, -ous]

b. vaporousness: [[√VAPOR *a*, -ous] *n*, -ness]

(Embick and Marantz (2008: 11))

For example, *vaporous* is derived in the root domain by attaching the Root √VAPOR to the adjectivalizer *a*, as shown in (6a). However, *vaporousness* is formed in the outer domain by attaching the nominalizer *n* to the existing word *vaporous*, composed of the Root √VAPOR and the adjectivalizer *a*.

In the next section, I solve the problem for the morpheme-based approach on the basis of the similarity between LEs and expletives.

4. Proposal

In this paper, on the basis of the meaningless characteristics of LEs and Mukai's (2008) proposal that the function of LEs is to check an uninterpretable feature, I propose that LEs are expletives. As seen in the previous section, expletives are semantically empty and check uninterpretable features like EPP features. DM is based on the single engine hypothesis. As mentioned earlier, this hypothesis states that both words and phrases are built in syntax. Accordingly, in DM, among the morpheme-based theories, LEs can be identified with expletives. Thus, based on the framework of DM, LEs are regarded as dummy elements like expletives and are thus located in the grammar.

The next section discusses three consequences of the view that LEs are expletives.

5. Consequences

The first consequence is that the recycling property of LEs is explained. As seen in section 2, elements like inflectional suffixes and prepositions are recycled as LEs. If the view that LEs are expletives is correct, this recycling property is accounted for because expletives are recycled from elements such as nominals and adverbials.

The second consequence is that the presence of two types of LEs, LEs in small non-heads and in large non-heads, is explained by root and outer domains. In section 2, we observed that LEs attach to category-neutral stems in small non-heads, but they attach to words in large non-heads. The

distinction between small and large non-heads corresponds to the distinction between root and outer domains. In the root domain, words are formed from category-neutral Roots, while in the outer domain, words are formed from existing words. Considering the structural similarity between the two types of non-heads and the two domains, I propose the following structures:

(7) a. small non-heads: [√ROOT *f*]

b. large non-heads: [[√ROOT *x*] *f*]

The heads *f* in (7) represent some functional heads other than categorizers. LEs are realizations of the heads *f*. In (7a), *f* is directly attached to the Root and the resultant structure corresponds to small non-heads. On the other hand, in (7b), *f* attaches to the existing words formed by the Root and a categorizer *x*; the resultant structure correlates with large non-heads. Sample derivations are as follows:

(8) a. domat-o-salata: [√DOMAT *f*, -o-]

b. park-s+department: [[√PARK *n*] *f*, -s]

The Greek compound *domat-o-salata* in (8a) consists of the small non-head *domat-o* and the head *salata*. Accordingly, the non-head is created by the attachment of the Root √DOMAT to *f*. The English compound *parks department* in (8b) is composed of the large non-head *park-s* and the head *department*. Accordingly, the non-head is formed by combining the existing word *park* with *f*.

The third consequence is that Okubo's (2013) assumption that a functional head *f* occurs only in an outer domain is adjusted. On the basis of Kageyama's (2001) proposal that words are disintegrated into Word and Word$^+$, Okubo (2013) argues that non-heads of phrasal compounds can be classified into Word-type non-heads and Word$^+$-type non-heads. The italic elements in (9a) are Word-type non-heads and those in (9b) Word$^+$-type non-heads:

(9) a. Word-type non-heads: *over the fence* gossip, *after-the-party* mess, *run-of-the mill* work

b. Word$^+$-type non-heads: [*gray elephant*] hunter, [*small car*] driver, [*fresh fish*] shop

(Okubo (2013: 175), cf. Shimamura (2005, 2007))

Word-type non-heads differ from Word$^+$-type non-heads in that only the latter allows genitive and plural markers to occur, as shown in (10):

(10) a. between-meal(*s) snacks, the wash-hand(*s) stand

b. [new-books] shelf, [equal rights] amendment, [little girl's] bicycle

(Shimamura (2005, 2007))

In (10a), Word-type non-heads disallow plural markers, while in (10b), Word$^+$-type non-heads permit genitive and plural markers. According to Okubo, this difference is explained by the structural difference; Word-type non-heads are derived in a root domain, while Word$^+$-type non-heads are derived in an outer domain. The fact that a functional head *f* occurs in (11b), but not in (11a), is more important:

(11) a. over the fence gossip: [over the fence *a*]

b. small car driver: [[small car *a*] *f*]

Okubo argues that *f* licenses inflectional suffixes in Word^{+}-type non-heads. As Word-type non-heads lack the functional head as shown in (11a), they cannot license inflectional suffixes. If my analysis is correct, it follows that the Okubo's proposal that *f* occurs only in an outer domain is adjusted and, as a result, *f* occurs even in a root domain. Moreover, apparent inflectional suffixes in (10b) prove to be LEs.

6. Conclusion

In this paper, based on the framework of DM, I have proposed that LEs are expletives. The analysis of LEs as expletives locates the elements in the universal grammar and solves the problem for the morpheme-based approach.

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1. 3rd = 3rd person, 3SG = 3rd person singular, GEN = genitive, PART = partitive, PL = plural, PRS or pres = present, sg = singular, '-' = affix boundary, '+' = word boundary

References

Anderson, Stephen (1992) *A-Morphous Morphology*, Cambridge University Press, Cambridge.

Arad, Maya (2003) "Locality Constraints on the Interpretation of Roots: The Case of Hebrew Denominal Verbs," *Natural Language and Linguistic Theory* 21, 737–778.

Bauer, Laurie (2009) "Typology of Compounds, " *The Oxford Handbook of Compounding*, ed. by Rochelle Lieber and Pavol Štekauer, 343–356, Oxford University Press, Oxford.

Bauer, Winifred (1993) *Maori*, Routledge, London.

Bauer, Winifred (1997) *The Reed Reference Grammar of Māori*, Reed, Auckland.

Benigni, Valentina and Franceska Masini (2009) "Compounds in Russian," *Lingue e Linguaggio* VIII-II, 171–193.

Chomsky, Noam (2000) "Minimalist Inquiries: The Framework," *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin, David Michael and Juan Uriagereka, 89–155, MIT Press, Cambridge, MA.

Collins, Chris (2002) "Eliminating labels," *Derivation and Explanation in The Minimalist Program*, ed. by Samuel Epstein and Daniel Seely, 42–64, Blackwell, Oxford.

Embick, David and Alec Marantz (2008) "Architecture and Blocking," *Linguistic Inquiry* 39-1, 1–53.

Fradin, Bernard (2009) "IE, Germanic: Dutch," *The Oxford Handbook of Compounding*, ed. by Rochelle Lieber and Pavol Štekauer, 370–385, Oxford University Press, Oxford.

Haspelmath, Martin (1993) *A Grammar of Lezgian*, Mouton, The Hague.

Kageyama, Taro (2001) "Word Plus: The Intersection of Words and Phrases," *Issues in Japanese Phonology and Morphology*, ed. by Jeroen van de Weijer and Nishihara Tetsuo, 245–276, Mouton, Berlin.

Lieber, Rochelle (2009) "IE, Germanic: English," *The Handbook of Compounding*, ed. by Rochelle Lieber and Pavol Štekauer, 357–369, Oxford University Press, Oxford.

Marantz, Alec (1997) "No Escape from Syntax: Don't Try Morphological Analysis in the Privacy of Your Own Lexicon," *Proceedings of the 21st Penn Linguistics Colloquium*, ed. by Alexis Dimitriadis, Laura Siegel, Clarissa Surek-Clark and Alexander Williams, 201–225, University of Pennsylvania, Philadelphia.

Marantz, Alec (2001) "Words and Things," Handout, MIT.

Mukai, Makiko (2008) "Recursive Compounds," *Word Structure* 1, 178–198.

Niemi, Jussi (2009) "Compounds in Finnish," *Lingue e Linguaggio* VIII-II, 237–256.

Niemi, Sinikka (2009) "Compounds in Swedish," *Lingue e Linguaggio* VIII-II, 257–269.

Okubo, Tatsuhiro (2013) "The Phrasal Element within the Word and the Relationship between Morphology and Syntax," *JELS* 30, 173–179.

Ralli, Angela (2009) "IE, Hellenic: Modern Greek," *The Oxford Handbook of Compounding*, ed. by Rochelle Lieber and Pavol Štekauer, 453–463, Oxford University Press, Oxford.

Shimada, Masaharu (2004) *Dousiteki Kyozi ni Kansuru Syogensyou: Huhenbunpou no Kanten kara no Bunseki* (Phenomena concerning Verbal Expletives: The Analysis in terms of Universal Grammar), Doctoral dissertation, University of Tsukuba.

Shimada, Masaharu (2013) "Coordinated Compounds: Comparison between English and Japanese," *SKASE Journal of Theoretical Linguistics* 10-1, 77–96.

Shimada, Masaharu, Akiko Nagano, and Tatsuhiro Okubo (2013) "Lexeme, Stem, and Word-Form: Compounding as a Morphosyntactic Context," paper presented in "Interdisciplinary Workshop on Grammatical Word," University of California, Davis.

Shimamura, Reiko (2005) "Ku no Goika nitsuite: Eigo no Meishizenishushokuhyougen o Chushin ni (On the Lexicalization of Phrases: with Special Reference to Prenominal Modifiers in English)," *Gendai Keitairon no Chôryû* (The Current of Contemporary Morphology), ed. by Tsuyoshi Oishi, Tetsuo Nishihara, and Youji Toyoshima, 55–73, Kurosio, Tokyo.

Shimamura, Reiko (2007) "The Adjective-Noun Expression within the Word Revisited: The Boundary between Phrase and Word," *Language Beyond: A Festschrift for Hiroshi Yonekura on the Occasion of His 65th Birthday*, ed. by Mayumi Sawada, Larry Walker, and Shizuya Tara, 367–395, Eichosha, Tokyo.

Sridhar, Shikaripur (1990) *Kannada*, Routledge, London and New York.

On Floating Quantifiers in an Irish English and Weak-Phases*

Tomonori Otsuka
Graduate School of Kyushu University

Keywords: ECM Construction, Floating Quantifiers, Irish English, Weak-Phases

1. INTRODUCTION

This paper argues that examples of Floating Quantifiers (FQs) in an Irish English dialect[1] cannot be explained in Chomsky's (2008) framework and that these examples are readily captured if we assume w(eak)-phases exist.

1.1. Floating Quantifiers in an Irish English Dialect

Before moving on to the main topic, some notes are needed concerning the treatment of FQs in this paper. There have been two positions in analyzing FQs. One is a stranding analysis, where FQs are considered to be introduced with their modifying DPs but are stranded later on in the derivation. On the other hand, there is a position where FQs are treated as adjuncts, which, however, somehow hold relations with the relevant DPs through the derivation. Nevertheless, Shlonsky (1991) claims that in Hebrew, agreements appear on FQs, which makes it difficult to assume them to be adjuncts. Moreover, quite a few researchers have pointed out that distribution of FQs is distinct from that of adjuncts. Thus, this paper takes the position of a stranding analysis.

Let us move to actual examples. McCloskey (2000) claims that FQs in the Irish English dialect can be floated in A-bar trace positions.

(1) a. What all did he say (that) he wanted *t*?
b. What did he say (that) he wanted all *t*?
c. What did he say all (that) he wanted *t*?

(McCloskey (2000: 61))

In (1a), *all* is pied-piped with the wh-phrase *what,* whereas in (1b), *all* is stranded in the low trace position. However, interestingly, *all* in (1c) is stranded in the middle position. Since the position is to the left of the complementizer *that*, it is natural to assume *all* to be in the spec of the embedded CP.

Next, let us move to ECM examples in the Irish English dialect. In ECM constructions, *all* is stranded to the left of a T head *to*.

(2) a. Who did you want your mother all to meet *t* at the party?
b. Who did you expect your mother all to meet *t* at the party?

(McCloskey (2000: 70))

Interestingly, again *all* is stranded to the left of *to*, but to the right of the ECM subjects. Note that *all* in (2a, b) is not modifying *your mother*, but the wh-element *who*.

Now, let us take a closer look at examples (2a, b). If ECM complements

were TPs, as is standardly assumed, then the reason why *all* is stranded in the respective positions would not be clear, because A-bar movements usually do not occur via Spec-TPs. Since A-bar movements do occur via Spec-CP and *all* can be stranded in A-bar positions in this dialect, it is reasonable to assume that ECM complements are CPs (at least in this dialect). Of course, one can pursue a possibility to take ECM complements as TPs by assuming that in this case, the A-bar movement somehow occurs via Spec-TP. Nevertheless, if A-bar movements went on via Spec-TPs, the reason why the A-bar movements in (1) do not proceed via Spec-TP would be unclear. At least, such an approach is doomed to present an alternative analysis concerning wh-movements, where in some cases movements occur via Spec-TP but in others, only via Spec-CP. Since such an analysis is ad hoc, this paper takes the position of assuming ECM complements to be CPs in whose specs FQs are stranded, and claims that as has been argued in traditional analyses, wh-movements proceed via Spec-CPs.

(3) $[_{CP}$ wh$_i$…$[_{v*P}$ v* $[_{VP}$ your mother$_j$ $[_{V'}$ V $[_{CP}$ all$_i$ $[_{C'}$ C $[_{TP}$ t_j $[_{T'}$ to $[_{v*P}$ v* …]]]]]]]] …]

However, once we assume ECM complements to be CPs, another problem occurs. In Chomsky's (2008) framework, a CP is considered to form a phase. Thus, if the ECM subject moves beyond the CP as is expressed in (4a), the Phase Impenetrability Condition (PIC) is violated, whereas if it moves successive-cyclically as is shown in (4b), this movement is unacceptable as a case of Improper Movement.

(4) a. $[_{v*P\text{-}Ph}$…your mother…$[_{CP\text{-}Ph}$ C $[_{TP}$ …*t*…]]] PIC violation

b. $[_{v*P\text{-}Ph}$…your mother…$[_{CP\text{-}Ph}$ C $[_{TP}$ …*t*…]]] Improper Movement

On the other hand, if this CP did not form a phase, the movement in (4a) would be accepted without the PIC violation. Nevertheless, in this case, the reason why *all* is stranded to the left of *to* would be unclear. In other words, if the CP did not serve as a phase, the wh-movement would not need to proceed via the Spec-CP.

(5) $[_{v*P\text{-}Ph}$ wh$_i$ $[_{v*'}$ v* $[_{CP(non\text{-}Ph)}$ all$_i$ $[_{C'}$ C $[_{TP}$…t$_i$…]]] ?

To conclude, in Chomsky's (2008) framework, examples (2a, b) cannot be generated.

2. THEORETICAL BACKGROUND AND A PROBLEM

2.1. Chomsky's (2008) Feature-Inheritance

A notable notion suggested by Chomsky (2008) is the assumption of Feature-Inheritance (F-I) and following simultaneous probing and movements. In this framework, as is illustrated in (6a), phase heads own u(ninterpretable)-features, which trigger the syntactic operations. A phase's syntactic operations are triggered after the phase head's transmission of its features onto the head of the phase's complement. Specifically, a

phase head generally owns an Agree Feature (AF), which agrees with a DP and phonetically realized as an inflection, and an Edge Features (EF), which attracts discourse-related elements such as wh-elements and Topics to the left periphery. After the phase is formed, the phase head passes its AF to the head of its complement. This process is named F-I. After the F-I, the EF on the phase head and the AF on the complement's head probe their c-command domain and attract their goals at once. Thus, although A-movements and A-bar movements traditionally occur successive-cyclically, A-movements and A-bar movements in a phase occur simultaneously in Chomsky's (2008) framework.

(6) a. [C{EF, } [T{AF} [wh-DP [$_{v*P}$…]]]] F-I

b. [C{EF} [T{AF} [wh-DP [$_{v*P}$…]]]] Probe

c. [wh-DP C{EF} [wh-DP T{AF} [*t* [$_{v*P}$…]]]]Simultaneous Movement

2.2. A Problem concerning W-Phases

Although Chomsky's (2008) framework has recently been motivated both theoretically and empirically (see Richards (2007) and Obata and Epstein (2008) for the details), it contains a problem concerning w-phases. In what follows, this paper assumes that as Chomsky (2001) claims, passive and unaccusative vPs form w-phases. For explanatory purposes, a s(trong)-phase vP is expressed as *v*P*, whereas a w-phase vP is represented as *vP* without *. Now, a w-phase vP is considered to hold the following three characteristics.

(7) a. The PIC does not hold in w-phases.

b. EFs exist on w-phase heads.

c. AFs exist on w-phase heads.

Details of (7) are illustrated below.

Firstly, as (8) shows, the A-movement of *John* can occur beyond the w-phase (vP) boundary, which would be banned in s-phases because of the PIC violation. Thus, (7a) is deduced.

(8) John was [$_{vP}$ hit *t*]. (cf. (5a, b))

Secondly, examples (9) show that A-bar trace in Spec-w-phase should be available for reconstruction.

(9) a. [At which of the parties that he$_i$ invited Mary$_j$ to]$_k$ was every man$_i$ t_k' introduced to her$_j$ t_k ?

b.*[At which of the parties that he$_i$ invited Mary$_j$ to]$_k$ was she$_j$ t_k' introduced to every man$_i$ t_k ?

(Legate (2003: 2))

Legate (2003) argues that in order to be interpreted properly, in (9), *he* must be c-commanded by *every man* whereas *her* cannot be c-commanded by *Mary* due to Condition C. Therefore, although (9b) is ungrammatical because t_k' position does not ensure this relation, (9a) is grammatical since the wanted c-command relations are gained in t_k' position. Thus, an A-bar trace should exist in t_k' position and this implies that the A-bar movement proceeds via Spec-vP, which requires the EF on w-phase heads in Chomsky's (2008) framework as is summed up in (7b). Additionally, Legate (2003) shows other pieces of supporting evidence for the

existence of A-bar traces in Spec-w-phases by presenting examples of Antecedent Contained Deletions and Parasitic Gaps.

Finally, example (10) shows that inflections are observed in w-phases, which indicates that AFs exist on w-phase heads, in Chomsky's (2008) framework.

(10) Les chaises ont été
the chairs-F-Pl have-Pl been
repaintées.
repainted-F-Pl
'The chairs were repainted.'
(Boeckx (2008: 33))

Now, under Chomsky's (2008) framework, we face a problem concerning w-phases' characteristics in (7). An implication of (7a) is that their complements cannot be transferred because the PIC is expected based on the assumption that a phase's complement is already transferred and thus cannot be involved in syntactic operations in higher phases. On the other hand, (7b, c) indicate that w-phases' complements have to be transferred. This is because, based on Richards' (2007) theoretical consideration concerning the adequacy of F-I, feature checking and transfer must occur simultaneously, for if a u-feature is checked (namely assigned a value), it becomes indistinguishable from i(nterpretable)-features. Otherwise, checked u-features could not be removed at the transfer (see Richards (2007) for the detailed discussions). Since the derivation is doomed to crash if checked/valued u-features cannot be removed, the only way to prevent the crash is to assume feature-checking to occur simultaneously with transfer. Therefore, as (7b, c) indicate, if w-phases own u- features and moreover, the features are actually checked in w-phases, the logical expectation is that transfer must occur within w-phases.

Here, (7a) indicates transfer cannot occur in w-phases whereas (7b, c) force us to assume transfer must occur. These raise an obvious contradiction. Thus, it is concluded that under Chomsky's (2008) framework, w-phases' characteristics in (7) cannot be induced. Of course, one can claim that such a weak boundary does not exist at all and capture examples (9) and (10) from other perspectives. However, then we would have to abandon a phase based approach to A-bar movements and propose an alternative strategy concerning A-bar movements. In sum, to capture w-phases' characteristics (7), it is fair to say that we need to choose to modify Chomsky's (2008) framework or to forsake the phase-based approach.

3. PROPOSAL

3.1. Feature-Transcription

In this subsection, I pursue a possibility of taking a position of modifying Chomsky's (2008) framework for the sake of explaining w-phases' characteristics in (7). I claim that F-I occurs not only from a phase head to its complement's head, but also from an s-phase head to a w-phase head. In what follows, the latter inheritance from an s-phase head to a w-phase head is named Feature-Transcription (F-T). As (11) indicates, I argue that an s-phase head transmits its EF and AF to a w-phase head, which the s-phase c-commands (*Ph*

stands for *Phase*).

(11) Feature-Transcription

a. [$_{\text{S-Ph}}$ $\boxed{\text{Head}}$ [$_{\text{Comp}}$ [[$_{\text{W-Ph}}$ Head [$_{\text{Comp}}$
{EF, AF} { , }
XP]]]]]

b. [$_{\text{S-Ph}}$ $\boxed{\text{Head}}$ [$_{\text{Comp}}$ [[$_{\text{W-Ph}}$ Head [$_{\text{Comp}}$
{EF, AF} ⟶ {EF, AF}
XP]]]]]

As (11a) shows, under this assumption, a w-phase head does not possess u-features. However, when an s-phase is formed, the s-phase head transmits its u-features to the w-phase head as is seen in (11b). After this transmission, the syntactic operations of the relevant phases occur, namely, F-I and following feature-checking and transfer. This paper argues that based on this assumption, w-phases' characteristics in (7) are readily captured.

Let us take a closer look at derivations under the assumption of F-T, exemplifying the passive sentence *Who was hit?* in order to capture (7).

(12) a. [$_{\text{CP}}$ C [$_{\text{TP}}$ T [$_{\text{vP}}$ v [$_{\text{VP}}$ V who]]]]
{EF} { }
{AF} { }

b. [$_{\text{CP}}$ C [$_{\text{TP}}$ T [$_{\text{vP}}$ v [$_{\text{VP}}$ V who]]]]
{EF} ⟶ {EF}
{AF} {AF} F-T

c. [$_{\text{CP}}$ C [$_{\text{TP}}$ T [$_{\text{vP}}$ v [$_{\text{VP}}$ V who]]]]
{EF} {AF} {EF} {AF}
{ } ↗ { } ↗ F-I

d. [$_{\text{CP}}$ who [$_{\text{C'}}$ C [$_{\text{TP}}$ who [$_{\text{T'}}$ T [$_{\text{vP}}$ who
{EF} {AF}
[$_{\text{v'}}$ v [$_{\text{VP}}$ who [$_{\text{V'}}$ V *t*]]]]]]]]
{EF} {AF}

e. [$_{\text{CP}}$ who [$_{\text{C'}}$ C [$_{\text{TP}}$ *t* [$_{\text{T'}}$ T [$_{\text{vP}}$ *t* [$_{\text{v'}}$ v
[$_{\text{VP}}$ *t* [$_{\text{V'}}$ V *t*]]]]]]]] transfer

As (12a) shows, the w-phase vP originally does not possess u-features. After the s-phase CP is formed, F-T occurs from the C to the v as is seen in (12b). Having received the u-features, the w-phase head v as well as the s-phase head C starts its syntactic operations. As (12c) indicates, F-I occurs from the C to the T and from the v to the V, respectively. As is observed in (12d), the relevant u-features, namely, the AFs on the T and the V, and the EFs on the C and the v probe down to find the wh-DP *who*. These u-features attract *who* to their spec positions simultaneously. Thus, the A-movements to Spec-TP and Spec-VP, and the A-bar movements to Spec-CP and Spec-vP, namely the four movements in sum are triggered simultaneously. After the movements, the C transfers its complement TP including the w-phase, as is represented in (12e).

To sum up, since the v's domain is transferred within the C's transfer domain, the PIC does not prohibit *who*'s movement out of the w-phase vP and thus (7a) is explained. In addition, F-T ensures that the w-phase does possess u-features, which are transmitted from the s-phase head, and thus (7b, c) are accounted for. Therefore, under the assumption of F-T, w-phases' characteristics in (7) can be deduced without raising a paradox.

3.2. An Explanation

In this subsection, I argue that the F-T framework can capture the examples in (2) in section 1, which are repeated in (13) below, besides the characteristics of (7) above.

(13) a. Who did you want your mother all to meet *t* at the party? (=(2a))

b. Who did you expect your mother all to meet *t* at the party? (=(2b))

As we have already seen, this paper claims that examples (13a, b) cannot be accounted for under Chomsky's (2008) current framework. In detail, the stranding positions of *all* cannot be ensured with the ECM subjects *your mother* undergoing an A-movement out of the CPs in (13a, b). However, under the F-T framework, I claim that the examples in (13) can easily be explained with the assumptions that the CPs in (13) are w-phases, and of (14) below.

(14) Quantifers can optionally be stranded or pied-piped.

The theoretical motivation for (14) is omitted here for concerns of space (see McCloskey (2000) for the details). Let us move to the derivation of (13a, b), under the assumptions of F-T and (14)

(15) a. $[_{v^*P}$ v* $[_{VP}$ V $[_{CP}$ C $[_{TP}$ T $[_{v^*P}$ DP…
{EF} → {EF}
{AF} {AF} F-T
who…]]]]]

b. $[_{v^*P}$ v* $[_{VP}$ V $[_{CP}$ C $[_{TP}$ T $[_{v^*P}$ DP…
{EF} {AF} {EF} {AF}
{ } ↗ { } ↗ F-I
who…]]]]]

c. $[_{v^*P}$ who$_j$ $[_{v^{*\prime}}$ v* $[_{VP}$ DP$_i$ $[_{V'}$ V $[_{CP}$
{EF} {AF}
who$_j$ $[_{C'}$ C $[_{TP}$ DP$_i$ $[_{T'}$ T $[_{v^*P}$ t_i…t_j…
{EF} {AF}
]]]]]]]]]

d. $[_{v^*P}$ who$_j$ $[_{v^{*\prime}}$ v* $[_{VP}$ DP$_i$ $[_{V'}$ V $[_{CP}$ t_j $[_{C'}$ C $[_{TP}$ t_i $[_{T'}$ T $[_{v^*P}$ t_i…t_j…]]]]]]]]]

As is assumed in (11), the syntactic operations in the w-phase CP are not triggered until the s-phase v*P is completed. When the v*P is formed, F-T occurs from the s-phase head v* to the w-phase head C, as is shown in (15a). In a similar vein to the derivation in (12), after the F-T, the v* and the C triggers their syntactic operations. As (15b) shows, F-I occurs from the v* and the C to the V and the T, respectively. Following the F-I, the AF on the V and the T attracts the ECM subject DP. Simultaneously, the EF on the v* and the C attracts the wh-element *who* to their specs. Thus, as is indicated in (15c), the two A-movements of the DP and the two A-bar movements of *who* occur simultaneously. Finally, the v* transfers its complement VP including the w-phase CP.

To conclude, this derivation ensures that the movement of the ECM subject DP does not violate the PIC since this movement proceeds within the transfer domain (VP) and that the stranding position of *who* exits because the EF exists on the C as well, due to the F-T.

4. CONCLUSON

This paper has argued that the examples in (2a, b) (=(13a, b)), which cannot be generated within Chomsky's (2008) framework, are readily captured under the assumption that the relevant CPs are w-phases. In addition, after a theoretical consideration of the behavior of w-phases, I have shown that w-phases' characteristics in (7) cannot be explained in Chomsky's (2008) framework as well, and that F-T, namely an extended version

of F-I can induce the wanted results, contributing a theoretical development to Chomsky's (2008) framework.

NOTES

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[1] According to McCloskey (2000), this is a dialect "spoken in an area west and east of the river Foyle in the northwest of Ireland."

[2] In this paper, I assume *want* to select ECM complements based on the examples in (i).

(i) a. Who did you arrange all for your mother to meet *t* at the party?
b.* Who did you arrange for your mother all to meet *t* at the party?
c.* Who did you want all your mother to meet *t* at the party?
d.* Who did you expect all your mother to meet *t* at the party?
(McCloskey (2000: 70))

In usual analyses, *want* is considered to select null *for*-CP complements rather than ECM complements. However, in (i), the distribution of FQs in the *want* examples is different from that in the *arrange* examples, which are generally assumed to select overt *for*-CP complements. In this light, the *want* examples behave similarly to the *expect* examples (at least, in this dialect).

REFERENCES

Boeckx, Cedric (2008) *Understanding Minimalist Syntax: Lessons from Locality in Long-Distance Dependencies*, Blackwell Publishing, Malden, MA.

Chomsky, Noam (2001) "Derivation by Phase," *Ken Hale: A life in Language*, ed. by Michael Kenstowicz, 1-52, MIT Press, Cambridge, MA.

Chomsky, Noam (2008) "On Phases," *Foundational Issues in Linguistic Theory*, ed. by Robert Freidin, Carlos P. Otero and Maria L. Zubizarreta, 133-166, MIT Press, Cambridge, MA.

Legate, Julie A. (2003) "Some Interface Properties of the Phase," *Linguistic Inquiry* 34, 506-516.

McCloskey, James (2000) "Quantifier Float and Wh-Movement in an Irish English," *Linguistic Inquiry* 31, 57-84.

Obata, Miki and Samuel D. Epstein (2008) "Deducing Improper Movement from Phase Based C-to-T Phi Transfer: Feature-Splitting Internal Merge," Proceedings of the WCCFL 27, 353-360, Somerville, MA.

Richards, Marc D. (2007) "On Feature Inheritance: An Argument from the Phase Impenetrability Condition," *Linguistic Inquiry* 38, 563-572.

Shlonsky, Ur (1991) "Quantifiers as Functional Heads: A Study of Quantifer Float in Hebrew," *Lingua* 84, 159-180.

Cyclic Linearization and the *Wh*-Island Constraint*

Hideshi Sato
University of Niigata Prefecture

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1. Introduction

Within the framework of the Minimalist Program, the *Wh*-Island Constraint (henceforth *Wh*IC), exemplified in (1), has commonly been assumed to be subsumed under the Defective Intervention Constraint (henceforth DIC), a derivational constraint defined in (2).

(1) ?* [$_{CP2}$ Which problem$_i$ do you wonder [$_{CP1}$ how$_j$ [$_{TP}$ John could solve t_i t_j]]]?

(2) *α>β>γ, where (a)“>” indicates c-command, and (b) β and γ match the probe α, but β is inactive so that the effects of matching are blocked. (Chomsky (2000: 123))

The main purpose of this paper is to explore a possible extension of Bošković’s (2007) hypotheses in order to argue for a representational instead of the DIC-based derivational approach to the *Wh*IC. In particular, I will argue that the ill-formedness of (1) results from a violation of the Cyclic Linearization (henceforth CL), a PF-representational constraint defined in (3)[1].

(3) Information regarding word order of Y is shipped to the phonology only once. (Bošković (2007))

This paper is organized as follows. Section 2 discusses a problem with the derivational approach in terms of island-repair by Sluicing. Section 3 reviews Bošković’s (2007) hypotheses, adopted in my proposal in section 4. Section 4 demonstrates how the CL (3) accounts for the *Wh*IC. Section 5 investigates some theoretical consequences of my analyses. Section 6 concludes this paper.

2. A Problem with the Derivational Approach

Merchant (2001) observes that a certain class of locality violations, including the Complex NP Constraint, for instance, are rescued by Sluicing. As discussed in Boeckx (2008), this generalization holds for the *Wh*IC as well, as illustrated in (4).

(4) Every journalist went out today to find out who was selling a certain book, but I don’t know which. (Boeckx (2008: 140))

The structure of (4) is illustrated in (5), where the embedded TP is elided at PF according to the PF-deletion strategy advocated by Merchant (2001, 2008)[2].

(5) …, but I don’t know [$_{CP}$ which (book)$_1$ C [$_{TP}$ every journalist went out today to find out [$_{CP}$ who was selling t_1]]].

In (5), deletion of the embedded TP, containing the intervener *who*, nullifies a potential violation of the *Wh*IC. If the *Wh*IC is a derivational constraint, some special devices to void the violation in syntax would be necessary at PF[3]. Bošković (2011), in fact, proposes such a device, shown in (6).

(6) A * is assigned to an island when a movement operation crosses it. The presence of the * leads to a violation in the PF representation. (Bošković (2011: 2))

Following this strategy, (4) is fine as a result of the well-formedness of its PF-structure (7).

(7) …, but I don't know [$_{CP}$ which (book)$_1$ C [$_{TP}$ every journalist went out today to find out [$_{CP}$ **who*** was selling t_1]]].

In (7), Sluicing applies to the embedded TP and deletes the intervener *who* with the uninterpretable feature *. This nullifies the interpretive violation at PF. Unfortunately, however, this method is inconsistent with the Inclusiveness Condition in (8) and the No-Tampering Condition in (9) since it introduces a new feature * to the structure already built in the derivation.

(8) No new features are introduced by C_{HL}.
(Chomsky (2000: 113))

(9) Merge of X and Y leaves the two SOs unchanged. (Chomsky (2008: 138))

In the following sections, I will propose a representational account, completely consistent with the Inclusiveness Condition and the No-Tampering Condition.

3. Bošković's (2007) Hypotheses

Let us first revisit Bošković's (2007) hypotheses, crucial for discussions in later sections. He hypothesizes a departure from a familiar assumption of the Minimalist framework for eliminating the Phase-Impenetrability Condition (henceforth PIC), defined in (10).

(10) In a phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge are accessible to such operations.
(Chomsky (2000: 108))

Instead, he proposes the following:

(11) a. Agree is not subject to the PIC.
b. Sending a unit X to Spell-Out in itself does not freeze X for further computation.

The PIC in (10) prohibits an Agree-relation depicted in (12).

(12) [$_{ZP}$ Z ... [$_{XP}$ X [$_{YP}$ ...WP...]]]

Suppose that X and Z are phase heads. The higher phase head Z cannot penetrate into the Spell-Out domain YP of the lower phase head X and access WP[4]. The proposals in (11), in contrast, make it possible for Z to penetrate into YP and access WP, as illustrated in (13).

(13) [$_{ZP}$ Z ... [$_{XP}$ X [$_{YP}$ ...WP...]]]

The example of (14), a simple sentence from Chukchee, for instance, demonstrates a piece of evidence to support his proposals. In (14), the matrix V agrees with an object in the embedded finite clause.

(14) ənan qəlɤilu ləŋərkə-nin-et [iŋqun
he-inst regrets-3-pl that
Ø-rətcəmŋəv-nen-at qora-t].
3sg-lost-3-pl reindeer-pl(NOM)
'He regrets that he lost the reindeers.'
(Bošković (2007:57))

He also hypothesizes that successive cyclicity of *wh*-movement, exemplified in (15), is guaranteed without recourse to the PIC.

(15) [$_{CP2}$ What$_1$ do you think [$_{CP1}$ t_1' that Mary likes t_1]]?

In the Minimalist literature, the successive cyclicity of *wh*-movement has commonly been assumed to be derived from the PIC. In short, *wh*-elements must move up to the final landing site via edge positions of phase heads in order to satisfy the PIC. He argues, instead, that the CL, whose definition is repeated in (16), feeds this requirement.

(16) Information regarding word order of Y is shipped to the phonology only once.

This constraint regulates that copies of moved elements should be sent to PF phase-by-phase and that multiple realizations of identical copies must be prohibited. We assume that this constraint cooperates with the following condition on pronunciation of chains.

(17) Pronunciation is fixed only for heads of trivial chains. (Bošković (2007:76))

Now, let us examine how the successive cyclicity in (15) is derived from (16). We assume, following Chomsky (2000, 2001), that P-feature bearing on C is optional. The derivation of (15) can then be shown in either (18) or (19), the former demonstrates a case where P-feature is present and the latter demonstrating a case where P-feature is absent[5]. Let us begin with the former case.

(18) a. $[_{CP1}\ WH^2\ C_1\ [_{TP1}\ \ldots\ WH^1]]$

b. $[_{CP2}\ C_2\ [_{TP2}\ldots\ [_{CP1}\ WH^2\ C_1\ [_{TP1}\ldots WH^1\ldots]]]]$

c. $[_{CP2}\ WH^3\ C_2\ [_{TP2}\ldots\ [_{CP1}\ WH^2\ C_1\ [_{TP1}\ldots\ WH^1\ldots]]]]$

d. $[_{CP2}\ WH^3\ C_2\ [_{TP2}\ldots\ [_{CP1}\ WH^2\ C_1\ [_{TP1}\ldots\ WH^1\ldots]]]]$

In the first place, P-feature on C_1 attracts WH^1 to the Spec of C_1, yielding (18a). At this point, Spell-Out applies to TP_1, the complement of the phase head C_1. Although WH^1 is contained in this Spell-Out domain, it is not sent to PF since it is not the head of the chain (WH^2, WH^1), according to the assumption (17). In the next place, in (18b), Agree holds between C_2 and WH^2 and raises WH^2 to the Spec of the matrix C_2, yielding (18c). At this point, Spell-Out applies to TP_2, the complement of the phase head C_2. Since WH^2 is not the head of the chain (WH^3, WH^2), it is not sent to PF. Finally, Spell-out applies to the root-phase, as in (18d), and the head of the chain (WH^3, WH^2), namely WH^3, is sent to PF. Since WH^3 is the sole copy of the moved *wh*-phrase pronounced in PF, the CL (16) is satisfied. Consequently, the derivation in (18) is legitimate.

Let us turn to the derivation (19), where P-feature is absent.

(19) a. $[_{CP1}\ C_1\ [_{TP1}\ \ldots\ WH^1\ldots]]$

b. $[_{CP2}\ C_2\ [_{TP2}\ldots\ [_{CP1}\ C_1\ [_{TP1}\ \ldots\ WH^1\ldots]]]]$

c. $[_{CP2}\ WH^2\ C_2\ [_{TP2}\ldots\ [_{CP1}\ C_1\ [_{TP1}\ldots\ WH^1\ldots]]]]$

d. $[_{CP2}\ WH^2\ C_2\ [_{TP2}\ldots\ [_{CP1}\ C_1\ [_{TP1}\ldots\ WH^1\ldots]]]]$

In (19a), by assumption, P-feature on C_1 is absent. WH^1, therefore, is not raised to the Spec of C_1 and, as in (19a), Spell-Out applies to TP_1. At this point, since WH^1 is the head of the trivial chain, it is sent to PF according to (17). In the next step, as in (19b), Agree holds between C_2 and WH^1. The assumptions in (11), depicted in (13), allow Agree to operate into Spell-Out domains. Additionally, since C_1 bears no uninterpretable features, it is inactive and hence does not disturb the relevant Agree-relation, according to the Activation Condition, defined in (20).

(20) Goal as well as probe must be active for Agree to apply. (Chomsky (2001: 6))

The Agree attracts WH^1 to the Spec of C_2 in one fell swoop, yielding (19c). Finally, Spell-Out applies to the root phase CP_2. Since WH^2, the head of the chain (WH^2, WH^1), is contained in this Spell-Out domain, it is sent to PF. Thus, both WH^1 and WH^2 are sent to PF, violating the CL (16). Consequently, the derivation in (19) is eliminated in PF.

To sum up this section, Bošković's hypotheses, in eliminating the PIC and proposing the CL, naturally explains why *wh*-movement must go successive cyclically via phase-edges. In other words, a PF-representational constraint on linearization can only tolerate movements designed in this way.

4. Explaining the Wh-Island Constraint

Now, let us try to account for the *Wh*IC. The basic example of (1) is repeated in (21) with its derivation, illustrated in (22)[6].

(21) ?* [$_{CP2}$ Which problem$_i$ do [$_{TP2}$ you wonder [$_{CP1}$ how$_j$ [$_{TP1}$ John could solve t_i t_j]]]?

(22) a. [$_{CP1}$ how$_j$ C_1 [$_{TP1}$ ... t_j ... WH^1...]]

b. [$_{CP2}$ C_2 [$_{TP2}$...[$_{CP1}$ how$_j$ C_1[$_{TP1}$ ... t_j ... WH^1]]]]

c. [$_{CP2}$ WH^2 C_2 [$_{TP2}$... [$_{CP1}$ how$_j$ C_1 [$_{TP1}$ ... t_j ... WH^1]]]]

d. [$_{CP2}$ WH^2 C_2 [$_{TP2}$... [$_{CP1}$ how$_j$ C_1 [$_{TP1}$ ... t_j ... WH^1]]]]

In (22a), Agree holds between C_1 and *how* and it values uninterpretable features of both of them, with raising the latter to the Spec of the former. According to the Activation Condition in (20), C_1 is no longer a probe matching WH^1. In addition to this, the fact in (23) leads us to an assumption that English is a language where multiple specifiers of C are not allowed.

(23) *I wonder which problem$_i$ how$_j$ John could solve t_i t_j.

Thus, the Last Resort prohibits the raising of WH^1 to the Spec of C_1. As a result, as in (22a), TP_1 is sent to Spell-Out, and WH^1, the head of the trivial chain, is sent to PF. In the next step, in (22b), Agree holds between C_2 and WH^1. Notice that nothing intervenes in this Agree-relation. The assumptions in (11) allows C_2 to penetrate into the Spell-Out domain TP_1 and access WH^1 as a matching goal. C_1 and *how*, their uninterpretable features being valued, are not a probe nor a goal, respectively, as a result of the Activation Condition (20). This results in moving WH^1 to the Spec of C_2 in one fell swoop over CP_1, as in (22c). Finally, in (22d), Spell-Out applies to the root phase CP_2, and WH^2, the head of the chain (WH^1, WH^2), is sent to PF. As a consequence, both of the *wh*-copies, WH^1 and WH^2, are pronounced in PF. Since this is in violation of the CL (16), the derivation in (22) is ruled out, hence the ill-formedness of the example (21). The *Wh*IC is, thus, accounted for.

This explanation is supported by a fact that the absence of the *Wh*IC in Bulgarian, shown in (24), can be accounted for .

(24) Vidjah edna kniga, *kojato*$_1$ se čudja *koj* saw-1s a book which wonder-1s who znae *koj* prodava t_1 knows who sells
'I saw a book *which* I wonder *who* knows *who* sells (it).' (Rudin (1988: 457))

The derivation of (24) is shown in (25).

(25) a. [$_{CP1}$ koj$_j$ C_1 [$_{TP1}$ ... t_j ... WH^1...]]

b. [$_{CP1}$ WH^2 koj$_j$ C_1 [$_{TP1}$ ... t_j ... WH^1...]]

c. [$_{CP2}$ WH^3 C_2 [$_{TP2}$ ...[$_{CP1}$ WH^2 koj$_j$ C_1 [$_{TP1}$ ... t_j ...WH^1...]]]]

d. [$_{CP2}$ WH^3 C_2 [$_{TP2}$...[$_{CP1}$ WH^2 koj$_j$ C_1 [$_{TP1}$ ... t_j ... WH^1...]]]]

Following the analysis in Rudin (1988), we assume that this language allows complementizers to have multiple specifiers. This assumption makes it possible for WH^1 to raise to the Spec of C_1, as shown in (25b). This gives birth to the chain (WH^2, WH^1), and the lower copy WH^1, not being the head of the chain, is not sent to PF even if it is contained in the Spell-Out domain TP_1, which is a crucial difference between Bulgarian and English. In (25c), WH^2 is not sent to PF, either, since it is not the head of the chain (WH^3, WH^2). The Spell-Out applies to the root-phrase, as in (25d), and sends WH^3 to PF. Since WH^3 is the sole copy of the moved *wh*-element pronounced in PF, the CL (16) is satisfied and the well-formedness of (24) is fully accounted for.

5. Theoretical Consequences

My proposal so far has some theoretical consequences. First, it accounts for island-repair effects by Sluicing. Let us revisit (5) and relevant parts of its structure, shown in (26).

(26) $[_{CP2}$ which (book) $_1$ C_2 $[_{TP2}$ …$[_{CP1}$ who$_i$ C_1 $[_{TP1}$ ... t_i ... which (book)$_1$...]]]]

The structure in (26) is potentially in a configuration of the *Wh*-Island violation. However, the elision of TP_2 deletes the lower copy of *which (book)*$_1$ it contains at the same time. As a result of this, the upper copy of *which (book)*$_1$ is the sole copy of the *wh*-chain pronounced in PF. Consequently, the CL is satisfied and the well-formedness of (4) is fully accounted for.

Secondly, a peculiar difference between the *Wh*IC and the Superiority Condition is accounted for. As discussed in Boeckx and Lasnik (2006), Superiority violations, in contrast to *Wh*-Island violations, cannot be rescued by Sluicing, as illustrated by Serbo-Croatian examples in (27)-(28).

(27) a. Every journalist went out today to find out who was selling a certain book, ...
b. ali ne znam koju (knjigu).
but NEG know which book
'but I do not know which (book).'
(Boeckx and Lasnik (2006: 152))

(28) a. Someone bought something, but...
b. i. Ivan i Marko ne znaju ko šta.
Ivan and Marko NEG know who what
ii. *Ivan i Marko ne znaju šta ko.
Ivan and Marko NEG know what who
'Ivan and Marko do not know who what.'
(*ibid.*)

We assume that, in this language, complementizers are not permitted to have multiple specifiers in the same way as in English. This assumption explains the *Wh*-Island sensitivity of this language, shown in (29).

(29) **Sta*$_1$ si me pitao *ko* može da uradi t_1?
what have-2s me asked who can to do
'What did you ask me who can do?'
(Rudin (1988: 459))

According to this assumption, the well-formedness of (27) is accounted for on a par with English cases, represented in (26). What is of interesting here is why Superiority violations cannot be rescued. Let us look at the following configurations:

(30) $[_{CP2}$ C_2 … $[_{CP1}$ WH_j [~~uF~~] C_1[~~uF~~] $[_{TP}$... WH_i [uF]...]]
OK Agree

(31) $[_{CP2}$ C_2 … $[_{TP}$ ... WH_j [uF] ... WH_i [uF]...]]
*Agree

(30) and (31) represents a *Wh*IC-configuration and a Superiority-configuration, respectively. In (30), Agree successfully holds from C_2 to WH_i as discussed in section 4. Agree can penetrate into the Spell-Out domain TP and uninterpretable features of WH_j and C_1 are valued and inactive. In other words, no violation occurs in syntax. Contrastively, in (31), Agree fails to hold between C_2 and WH_i since WH_j, in this case, intervenes between them, its uninterpretable feature still being unvalued and active. In other words, (31) falls into a violation in narrow syntax if we assume, following Chomsky (2000, 2001), that the Superiority Condition is reduced to Agree Closest[7]. This naturally accounts for why Superiority violations cannot be rescued by Sluicing. The derivation in violation of a syntactic constraint, Agree Closest, crashes before reaching PF, a fatal situation unsalvageable by Sluicing at PF[8]. In other words, the *Wh*-Island/Superiority contrast mirrors a representational/derivational distinction of these constraints.

Thirdly, the account of *Wh*IC based on the CL

can be extended to Super-raising as well. A representative example in (32) will be derived as shown in (33).

(32) *John$_1$ seems that it is likely t_1 to win.

(33) a. [$_{CP}$ that [$_{TP2}$ it$_{[\cancel{NOM}, \varphi]}$ T$_{2[\varphi]}$ [is likely John$_{[NOM, \varphi]}$ to win]]]

b. [$_{TP1}$ T$_{1[\varphi]}$ seems [$_{CP}$ that [$_{TP2}$ it$_{[\cancel{NOM}, \varphi]}$ T$_{2[\varphi]}$ [is likely John$_{[NOM, \varphi]}$ to win]]]]

c. [$_{TP1}$ John$_{[\cancel{NOM}, \varphi]}$ T$_{1[\varphi]}$ seems [$_{CP}$ that [$_{TP2}$ it$_{[\cancel{NOM}, \varphi]}$ T$_{2[\varphi]}$ [is likely John$_{[\cancel{NOM}, \varphi]}$ to win]]]]

d. [$_{TP1}$ John$_{[\cancel{NOM}, \varphi]}$ T$_{1[\varphi]}$ seems [$_{CP}$ that [$_{TP2}$ it$_{[\cancel{NOM}, \varphi]}$ T$_{2[\varphi]}$ [is likely John$_{[\cancel{NOM}, \varphi]}$ to win]]]]

Suppose that the derivation has reached (33a). In (33a), the expletive *it* is inserted in the Spec of T$_2$, hence blocking the raising of DP *John* to this position. Therefore, TP$_2$ is sent to Spell-Out at this point. Since *John*, contained in TP$_2$, is the head of the trivial chain, it is sent to PF. In the next step, in (33b), Agree holds between the matrix T$_1$ and *John*. Nothing prevents this Agree-relation since the uninterpretable feature [NOM] on the expletive *it* and the uninterpretable feature [φ] on T$_2$ are all valued and inactive. This yields the structure in (33c), where *John* is raised to the Spec of matrix T$_1$ in one fell swoop. (Notice that raising of *John* via edges of the intermediate C is excluded by a ban against improper movement.) In the final structure (33d), Spell-Out applies to the root phase and the copy of *John* in the Spec of T$_1$, the head of the chain (*John*, *John*) is sent to PF. As a consequence, both of the copies of *John*, namely the one in the original site and the other in the raised position, are sent to PF, hence a violation of CL. The derivation in (33) is, thus, excluded in PF and Super-raising is accounted for. This turns out to suggest that the DIC can be eliminated at least as a principle over the *Wh*IC and Super-raising.

6. Conclusion

This paper has argued for a representational approach to the *Wh*IC on the basis of Bošković's (2007) hypotheses. We have also seen that the proposal in this paper has some theoretical consequences with respect to explaining 1) island-repair by Sluicing, 2) a *Wh*-Island/ Superiority contrast in Sluicing contexts, and 3) a parallelism between the *Wh*-Island Constraint and Super-raising. This paper has also suggested a possibility that two derivational constraints, the DIC and the PIC, are reducible to the CL. This turns out to imply that language-specific syntactic constraints, unexplained in terms of Chomsky (2008), are reduced to a PF-interface condition, namely Linearization, an indispensible aspect of the faculty of language. This embodies the computational efficiency pursued in the Minimalist Program and is consistent with the Strong Minimalist Thesis.

Notes

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[1] See Fox and Pesetsky (2005) and Ko (2005, 2007) for other versions of the definition of Cyclic Linearization.

[2] Irrelevant parts of the structure are omitted here. In this paper, deleted parts of structures are indicated by dotted lines.

[3] Lasnik (2001) assumes √-loss as an alternative. This also satisfies neither (8) nor (9).

[4] In what follows, materials already sent to Spell-Out are indicated by shading.

[5] Identical copies of the moved *wh*-phrase are indicated by such superscripts as WH^1, WH^2 and WH^3 only for ease of explanation. This way of indication is used throughout the paper.

[6] The lower copy of *how* is indicated by trace for convenience.

[7] Agree Closest is defined as follows:

(i) Matching holds of a probe P and a goal G if

a. D(P) is the c-command domain of a probe P, and

b. matching feature of a goal G, is closest to P if there is no G' in D(P) matching P such that G is in D(G') (Chomsky (2000: 122))

[7] Aoun and Li (2003) proposes to deduce Superiority effects from the Minimal Match Condition, defined as follows:

(i) An operator must form a chain with the closest XP it c-commands that contains the same relevant features. (Aoun and Li (2003: 29))

Adopting this system does not affect the story mentioned here.

References

Aoun, Joseph, and Yen-hui Audrey Li (2003) *Essays on the Representational and Derivational Nature of Grammar: The Diversity of Wh-Constructions*, MIT Press, Cambridge, MA.

Boeckx, Cedric (2008) *Understanding Minimalist Syntax: Lessons from Locality in Long-Distance Dependencies*, Blackwell, Oxford.

Boeckx, Cedric, and Howard Lasnik (2006) "Intervention and Repair," *Linguistic Inquiry* 37, 150–155.

Bošković, Željko (2007) "Agree, Phases, and Intervention Effects," *Linguistic Analysis* 33, 54-96.

Bošković, Željko (2011) "Rescue by PF Deletion, Traces as (Non)interveners, and the *That*-Trace Effect," *Linguistic Inquiry* 42, 1-44.

Chomsky, Noam (1995) *The Minimalist Program*, MIT Press, Cambridge, MA.

Chomsky, Noam (2000) "Minimalist Inquiries," *Step by Step: Essays on Minimalism in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89-155, MIT Press, Cambridge, MA.

Chomsky, Noam (2001) "Derivation by Phase," *Ken Hale: A Life in Language*, ed. by Michael Kenstowicz, 1–52, MIT Press, Cambridge, MA.

Chomsky, Noam (2008) "On Phases," *Foundational issues in linguistic theory*, ed. by Robert Freidin, Carlos Otero, and Maria Luisa Zubizarreta, 133–166, MIT Press, Cambridge, MA.

Fox, Danny, and David Pesetsky (2005) "Cyclic Linearization of Syntactic Structure," *Theoretical Linguistics* 31: 1-45.

Ko, Heejeong (2005) *Syntactic Edges and Linearization*. Doctoral dissertation, MIT, Cambridge, MA.

Ko, Heejeong (2007) "Asymmetries in Scrambling and Cyclic Linearization," *Linguistic Inquiry* 38, 49-83.

Lasnik, Howard (2001) "When Can You Save a Structure by Destroying It?" *NELS* 31, 301–320.

Merchant, Jason (2001) *The syntax of silence*, Oxford University Press, Oxford.

Merchant, Jason (2008) "Variable Island Repair under Ellipsis," *Topics in Ellipsis*, ed. by Kyle Johnson, 132–153, Cambridge University Press, Cambridge.

Rudin, Catherin (1988) "On Multiple Questions and Multiple W*h*-Fronting," *Natural Language and Linguistic Theory* 6, 445-501.

英語進行形構文の機能的連続性：主観性と間主観性からみた機能分化*
(Functional Continuum of the English Progressive Construction)

清水　啓子（Keiko Shimizu）
熊本県立大学（Prefectural U. of Kumamoto）

キーワード: 英語進行形構文、行為解説、未来、（間）主観性、行為意図

1.　はじめに

近代英語、特に 18 世紀以降、進行形構文の使用頻度が顕著に増加し、20 世紀でも増加傾向を示している。増加の要因については、Leech et al(2009)、Kranich(2010)などに言及がある。共時的観点からみると当該構文は、以下の例文(1-8)に例示されるように、進行中の行為というアスペクト概念を表すプロトタイプの用法(1)だけでなく、様々な用法・機能を獲得し文法的機能が多様になっており、この機能的多様性が使用頻度増加の背景にあると考えられる。

(1) She is mowing the lawn.　（進行中の行為）
(2) I'm leaving tomorrow.　（未来）
(3) I'm leaving, because here comes my bus.
（意図、決心）
(4) You're not leaving.（発話行為：指示、禁止）
(5) I'm just being polite.（形容詞の進行形構文）
(6) When I said 'the boss', I was referring to you.
（行為解説）(Huddleston & Pullum 2002: 165)
(7) You are digging your own grave.（評価、警告）
(8) You are stealing life and health from your own child [implied: if you don't breast-feed her].
（行為解説）(Nesselhauf 2007: 205)

本稿では、英語進行形構文の中でも周辺的でアスペクト的意味を持たない（non-aspectual）とされる用法のうち代表的な２つ、「行為解説の進行形(interpretive progressive)」と「未来を表す進行形(futurate progressive)」に焦点をしぼり、プロトタイプ的な用法と対比し、進行形構文カテゴリー内での家族的類似関係を確認して、二つの周辺的用法がプロトタイプ用法の時間的概念構造を基盤としていることを示す。また言語使用（発話）場面に生じる主観性・間主観性に注目し、上記２つの非プロトタイプ的用法への意味拡張をミクロな観点から考察する。本稿で用いる「主観性(subjectivity)」とは、"a speaker's consciousness of self is imprinted in his or her linguistic expression of his or her relation to the world, its events, and its objects" (Wright 1995: 151)という意味で用い、「間主観性(intersubjectivity)」とはTraugott(2003)がいう i) the development of meanings that encode speaker/writer's attention to the cognitive stances and social identities of addressees (p. 124), ii) SP/W's attention to AD/R as a participant in the speech event, not in the described situation (p. 128)という意味で援用する。

2.　進行形構文の概念構造

前節の(1)に例示されるようなプトロタイプ的な進行形は事態の時間領域を特定化し、以下(9)のような特徴を持つ。最後２つの特徴は含意にとどまりキャンセル可能である。

(9) ongoing, imperfective, durative, dynamic, mid-interval, limited duration
(Huddleston & Pullum 2002: 163)

以下３、４節では、典型的用法(1)からどの様な要因の影響を受けて、行為解説用法や未来用法へと意味・機能が変化するのかを、それぞれの非典型化の方向性（①V 内部の後方焦点化、②V 内部の前方焦点化）という観点から考察する。

3.　行為解説の進行形

3.1 概観―その特殊性

行為解説の進行形(interpretive/explanatory use)は、進行形に特有の時間概念を失っているとされ、その特異性が指摘されている。次の例文(10)の主節は進行形の典型的な用法であり、when 節の事態[she-say that]よりも主節[she-smile]の方が時間的に長く、進行形構文の主節は when 節に対して時間領域における「フレーミング効果」を持つ。

(10) When she said that, she was smiling.
(11) When I said 'the boss', I was referring to you.
(=(6))

一方、行為解説用法の(11)では、when 節の事態[I-say ‘the boss’]と主節の事態[I-refer to you]は２つの別個の事態を指すのではなく同一の事態に対する言及であり、それならば時間領域においても同時(coextensive)なはずとされる。従って(11)の主節の進行形は時間的フレーム効果を持たないと指摘されている。(11)のような行為解説の進行形は、時間的アスペクト概念の代わりに、when 節の事態に対して、その解釈やより深い重要性を提示する(underlying interpretation (Leech 2004: 22), a deeper significance (Leech et al 2009:135), clarifying its nature (H & P 2002: 165)。このように時間的アスペクト概念を失っていることから、行為解説用法の進行形には様々な名称(non-aspectual usage, special usage, experiential progressive, not-solely-aspectual progressive)が与えられている。

Leech et al (2009)は、進行形の使用頻度の増加傾向の一要因として行為解説用法があげられるかもしれないと指摘している(p. 142)。イギリス英語において 1961 年から 1991 年の間にほぼ倍増（52 例から 97 例に増加）していると指摘する一方で、行為解説と明確に分類できない事例が多すぎる（200～300 事例）という問題点も挙げている(p. 136)。Smitterberg(2005)も 19 世紀の進行形に関する研究において行為解説用法の増加を指摘している。Leech et al、Smitterberg、さらに Kranich(2010)も、行為解説用法の進行形がアスペクト概念を持たず非プロトタイプ的であることを指摘しているのであるが、この用法がプロトタイプ的なアスペクト用法とどの様に関連しているのか（していないのか）という概念的な説明を明確には提案していない。以下 3.2 節では、進行形のプロトタイプ的概念構造がどの様にして行為解説という機能に発展するのかを考察する。

3.2 提案

3.2.1 進行形構文におけるズーム・アウト認知

認知文法(Langacker 1991, 2008 など)においては、進行形形式(be V-ing)とは完了的(perfective)事態に対してその内部の一部分に焦点をあて未完了(imperfective)にする未完了化作用(inperfectivization)であり、視点をズーム・イン(zoom-in)するような認知が作用していると言われる。しかしながら、この zoom-in 認知は、単純形動詞(V)と進行形(be V-ing)という２つの言語形式の間に成立する概念作用の派生関係である。一方、言語使用者と言語使用場面（言語化される環境世界を含む）との関係に焦点をあてて見ると、進行形構文を使って言語化する際には、ズーム・アウト(zoom-out)認知が作用していると考えられる。話者は、自分が目前に直接知覚する断片的な観察情報に対して、それを含むさらに大きな上位の全体的行為（事態）フレーム(V)をあてはめて、観察内容がその全体フレームの一部であることを認識するという認知作用があって初めてその観察内容を進行形構文によって言語化するのである。つまり、進行形構文の使用とは、時間領域におけるメトニミー認知（部分から全体）を背景にして動機づけられている。部分的にしか過ぎない観察情報を全体的事態フレームに落とし込むというメトニミー認知である(清水 2013)。

3.2.2 意図理解 (intention reading)

前節で指摘した全体的事態フレームへの観察情報の落とし込みという認知作用には、実は、子供の発達段階において重要な「意図理解(intention reading)」も含まれる。Tomasello(1999)によれば、赤ちゃんが他者を「意図を持つ主体(intentional agent)」として理解できるようになるためには、達成目標(goal)を、それを実現させるための手段的行為(behavioral means)から区別できるようにならなければならない。行為とは「行為意図＋手段的行為」という内部構造をもっているということであり、手段的行為は直接知覚できるが行為意図は非明示的である。これは言語行為にも当てはまる。Tomasello は「道具や記号の慣習的な使用を社会的に学習するためには、子供は他者がなぜ、外界のどのような目標にむけて、道具なり記号なりを使っているかを理解するようにならなければならない。つまり子供は、道具使用や記号行動の意図された意味(intentional significance)、それは何の「ため(for)」なのか、道具や記号の使用者である「私たち(we)」はそれを使って何をするのか、を理解するようにならなければならない」と言う(p. 6)。またスペルベル(1997: 276)は、行動は身体的動きとして概念化することもできるが、自発的な行動を

「意図」を認識することによって概念化する方が、より経済的であり説明力に富むと言う。つまり、上記の Tomasello とスペルベルの見解に基づけば、観察されたある断片的行為を一体どのような行為かと特定する場合に、その「行為意図」にアクセスしメトニミー的に把握することは、本来ヒトに固有に備わっている認知能力といえる。次節では、この「意図理解」という観点から行為解説の進行形を分析する。

3.2.3 プロトタイプ的な行為解説の進行形

典型的な行為解説の進行形構文とは、すでに先行談話（場面）の中に存在する（発話）行為(A)を、上位行為フレーム(B)の中に位置づけ、(B)を達成するための手段的行為として(A)を概念化することを表わしている。上位行為フレーム(B)は以下のような意図的行為フレーム構造を持つ。

・意図的行為フレーム:

全体的行為 B=

{ 行為意図 B'+手段的行為 A+達成結果 B" **}**

さらに行為解説の進行形では以下の２つのメトニミー認知が働いている。

i)手段的行為 A(部分)を全体的行為 B(全体)の一部として認識する（部分→全体）。

ii)全体的行為 B(全体)を行為意図 B'(=B")を参照することで把握してラベル付ける（全体→部分）。

たとえば、次の例文(12)において、

(12) When I said "I'm sorry", I was apologizing.

when 節の[I-say "I'm sorry"]という発話行為は、主節の[I-apologize]（謝罪する）という全体的行為 B を達成するための手段的行為 A である。また全体的行為 B は、行為意図 B'という観点からメトニミー的にラベル付与されている。行為解説の進行形においては、進行形形式を使うことによって、全体的行為フレーム B の中の一部分である「行為意図 B'」を焦点化する効果を持つ（意図と進行形の関連性については４節も参照）。事態構造における時間領域での一部分（アスペクト特性）が、意図的行為フレーム内の一部分（行為意図）へと概念的にプロファイル・シフトしているのである。

なぜ主節において進行形アスペクトが使われるかという問題をさらに考えてみると、典型的な進行形構文の持つ「未完了 imperfective」「進行中 ongoing」という時間領域の概念特徴がまったく漂白されている訳ではなく、行為解説という機能に利用され継承されていると考えられる。発話行為理論(Marimaridou 2000 等)によれば、発話行為とは、話者と聞き手による相互作用行為であり、聞き手がその発話意図を理解して初めて成立するもので、間主観的な性質を持つ。話者による発話内容（手段的行為 A）を、話者の意図する発話行為（行為意図 B）として聞き手側が認識していなければ、その発話行為 B は成立していない。つまり話者の意図した発話行為 B は未完了ということになり、結果として進行形アスペクト形式が採用される。次の(13)で、

(13) A1: I'm sorry.
B1: a. … (無言) ….
b. *I (cannot) accept your apology.
A2: I'm apologizing.

A1 の発話に対して、B1 が「謝罪 apology」と認識したことを表す b に続けて、A2 で I'm apologizing という行為解説の進行形を使って発話意図をさらに説明することはできない。

行為解説の進行形が使われるのは直接的な発話行為場面が多い。発話行為は話者と聞き手の間主観的相互作用であり、行為解説の進行形では、話者が発話参与者である聞き手の認知状況を参照することで進行形アスペクトが選択されている。本来は(13)のような談話形式で発せられた行為解説的な進行形が、その談話構造が例えば以下(14)のような複文構造にまとめられることにより、時間的アスペクト概念が背景化して、行為解説あるいは「意味交渉(negotiation of meaning)」ともいえる談話的機能が前景化した用法が際立ってきたのではないだろうか。

(14) When S V1(ed), S is (was) V2-ing.

解説対象 A(V1)が明示されずに、行為解説的な機能を果たしている進行形も多くみられ(15)、また形容詞（類）を述部に含む進行形も、文脈上理解される何らかの先行行為に対する解説である(16)(Ljung 1980)。

(15) The strategy I believe is helpful is the one used in this book—every indefinite or generic referent is feminine. I and several other linguists use this practice all the time. When questioned by people who find it odd, we reply that <u>we are practicing positive discrimination through</u>

positive language (Saul 2003: 188).

(16) I was just being polite.

行為解説用法の進行形はプロトタイプ的な用法と時間的アスペクト概念を共有した連続体をなし、行為解説用法を明らかな線引きで区別することは難しい。Leech et al(2009)による曖昧な事例が多いという指摘も当然ということになる。

3.3 行為解説用法における主観性の段階性 : 行為者の意図から話者(非行為者)の主観的判断へ

(17) a. I {am/*may be} drawing an elephant.

b. Sally {is /may be} drawing an elephant.

一人称主語の(17a)は行為者自身の行為意図に言及しているので推量はあり得ないが、(17b)は話者以外の他者の行為意図に言及しているので推量の可能性もあり、法助動詞 may と共起できる。行為解説の進行形においては、手段的行為 A（観察可能で overt）を行為者の行為意図 B（心理状態で covert）に結びつけるという認知作用が存在する。A から B への関連づけには何らかの心的・認知的プロセスが必要であり、このプロセスに主観性が関与する。つまり、(17a)のような行為者自身の内的な直接的主観か、(17b)のような他者の内的心理状態を話者が「推論」するという主観性である。(17a)では話者が on-stage にもいるが、(17b)では話者は off-stage にいる。行為解説の進行形では、解説対象である事態への話者の関与に段階性が観察される。

(18) I'm just kidding you. (cf. I'm hungry)

(19) You're/must be kidding me.

(cf. You ??are/ must be hungry.)

(18)は行為者（=話者）自身の意図的行為についての直接的主観である。一方(19)は行為者 you による先行（発話）行為に対して、その場面に参与している話者 me が自分の経験に基づき解釈し解説しているのであって、[you-kid me]が本当に行為者 you の行為意図であるかどうかの確証はなく推量にすぎず、話者の主観的判断が大きく作用している（(18)と(19)の cf.の各文を参照。他者の身体の生理的状態について断定することは難しい）。(19)のような進行形の機能を Wright(1995: 156)は experiential progressive と呼び、その機能を "expressive of a speaker's consciousness rather than of a narrated subject's consciousness"（主語の意識ではなく話者の意識を表す）として、次のような例をあげている。

(20) You're telling me you don't love me anymore.

(20)は、行為者 you の本当の行為意図を特定しているというよりもむしろ、その場面に直接参与している話者が自分にむけられた先行発話を自分がどう解釈し捉えるか、自分にとってはどういう意味になるか(speaker-meaning)という話者の主観的判断を述べている。(20)は行為者の意図よりも話者の経験的な主観的把握を優先させている点で、全節で考察した行為意図にアクセスして行為解説をする用法とは性質が異なる。次の(21)のようなごく一般的な事例も同様である。

(21) He was talking rubbish.

話者の主観的判断を最前景化しているという点で、(19-21)の行為解説進行形は、次節で考察する「意図しない結果」にアクセスして行為解説をする用法へと連続していると考えられる。

3.4 「意図しない結果」からみた行為解説

行為解説用法の進行形には、行為者の行為意図にアクセスするのではなく、ある行為に対して、それがもたらすと推測される結果にアクセスしてフレーム化するタイプがある。

(22) Harriet: She'll have to have a bottle, because I shan't feed her.

Shelly: You are stealing life and health from your own child [implied: if you don't breast-feed her]. (=(8))

上の Shelly の発話は Harriet の行為(bottle feeding)を Harriet の行為意図からではなく、Shelly が推測する結果から解釈しフレーム化している。行為者の意図を無視し、意図とは別の結果を予測する。以下(23-24)も同様の用法と考えられる。

(23) As soon as you start asking what education is for, what the use of it is, you are abandoning the basic assumptions of any true culture, that education is worth while for its own sake.

(König 1980: 275)

(24) a. You're digging your own grave.

b. You're asking for trouble.

c. You're making a mistake.

(22-24)の行為解説用法には、行為者の意図とは異なる事態展開、望ましくない結果を行為者に知らせる、忠告や警告といったニュアンスがあ

る。話者の主観的判断である点で前節の experiential progressive と共通するが、話者が当該の事態に直接参与している訳ではないので経験的(experiential)ではない。一人称主語で自分の行為（計画）を再検討するような事例もある(25)。

(25) I might straighten out my stride and get a little more shock absorption if I landed on my fleshy midfoot instead of my bony heel, [but]…I might just be swapping one set of problems for another. (*Born to Run*. p.13)

以上から、行為解説用法の進行形には次の２つのフレーム化パターンが関わると言える。

① intention-oriented framing:
{ 行為意図+手段的行為+意図達成 **}**

② result-oriented framing:
【{ 行為意図+手段的行為 (+達成意図) **}**→ 意図しない結果**】**

どちらのフレーム化でも観察されるのは手段的行為であるが、前者①ではその手段的行為を行為意図にアクセスして解釈するのに対し、後者②ではもたらされると推測される結果の観点から解釈している。以下(26)は②のフレーム化である。法助動詞が意図性をブロックしている。

(26) If I should go to one of the tea-parties in a dressing-gown and slippers, I should be insulting society. (長谷川 2005: 111)

3.5 客観的な行為解説

行為解説用法の進行形は主観的であるという見解もある(Kranich 2009)が、以下(27-28)のように行為Ａから上位行為Ｂへの関連付けが客観的であり、法律や常識、言語慣習などに言及している事例がある。

(27) …when one says there's a purple finch in that tree, one is normally asserting that the bird is in the space outlined by the branches of the tree,… (Croft 2012: 93)

(28) Any child riding these in a public place including roads, pathways and alleyways is breaking the law.
(*Oxford Dictionary of English*, 2nd ed.)

単純形と進行形の意味的対立は一般的に、以下の(29a, b)に例示される。進行形(29a)は現象的(phenomenal)で具体的事象を表すのに対し、単純形(29b)は一般特性などの構造的(structural)描写をする(Goldsmith & Woisetschlaeger 1982: 81)。

(29) a. The engine isn't smoking anymore.
b. The engine doesn't smoke anymore.

しかし(27-28)の行為解説進行形は、具体的事象ではなく総称的記述であり、結果としてアスペクト的概念が極めて希薄である。言語慣習や法律への言及なので客観性も高い。行為解説用法がすべて主観的なわけではなく、解説対象の事態に話者がどう関わるか(on-stage vs. off-stage)や、解説対象に対するフレーム化の根拠（社会的慣習や法律）などの要因により、主観的から客観的への段階性が生じると考えられる。

4. 未来を表す進行形 (futurate progressive)

Nesselhauf(2007)は未来用法も進行形構文の使用頻度拡大の一要因であると結論づけている。本節ではこの未来用法について共時的な機能範囲を確認し、他の用法との連続性を考察する。

4.1 準備段階と意図 (arrangement & intention)、およびその行為解説用法との連続性

「未完了」や「進行中」という本来のアスペクト概念が希薄化したもう一つの用法に「未来」を表す進行形がある。動詞 V の内部として焦点化される部分が前方化し、準備段階(arrangement)や前段階(runnup process)を V の内部として捉えるために、実際に事態が完了するのはかなり先になるので、未来という概念が前景化される。Leech(2004: 61)は "It is not a present intention or cause, but rather a present arrangement（現在の意図や原因ではなく、現時点での準備段階を表す）"と言う。一方 Nesselhauf(2007)は、進行形の未来用法には 1) 準備段階、2)準備段階と意図で曖昧、3)意図、の３つがあり、最近では、準備段階がない意図だけ表す事例や、とっさの決断(spontaneous decision)を表す事例が増加傾向にあると分析している(p. 204)。進行形構文が「意図」をその意味として前景化するならば、前節で述べた「行為意図」を表す行為解説用法①との交差を示唆する。以下の発話(30)は、曖昧である。

(30) I'm leaving tomorrow.

先行する談話場面がなくいきなり(30)が告げられれば、話者の意図や決心を知らせる発話であるが、もしも話者 I が夜に荷物をまとめている様子を訝しげに見ている聞き手に向かって(30)

を言えば、それは行為解説の機能を持つ。この機能の違いは、日本語訳で明確に区別される。

(30') a. あした帰ります。（意図、決心の告知）

b. あした帰るんです。（行為解説）

また前段階を指す未来用法は、行為解説用法②と交差する。前掲(22)の Shelley の発話において、Harriet の行為[bottle-feeding]が結果として[steal life and health from her own child]につながるとしてフレーム化している。

4.2 行為連鎖中のコントロールの在りか：話者のコミットメント(commitment)

意図的行為の場合にその行為意図が発生するのはプロトタイプ的には行為者（=主語）である。行為者が行為意図を持った時点が行為の開始時点と言える。しかし人は自分ひとりだけでは行動を決められない場合もあり、行為連鎖をコントロールする能力や権力を持つ人物が、行為者以外に存在する場合がある(external agent/control)。その多くの場合が話者で、一連の行為連鎖に社会的に関与している(force dynamics)。以下の進行形は、話者による意図・決定を表す。

(31) By the way, you're coming with us in the VW and Christie can go in the Fiat with Mary.
(Hirtle & Curat 1986:74)

(32) "I am [leaving], though"… "She's not leaving."
(*The Great Gatsby*, p.141)

(31)は話者による行為指示であり、(32)では夫が妻の行為を誘導している。話者のコミットメントに主語行為者が従うという社会的背景がある。次の(33)は共同行為(joint action)の場合である。

(33) (Son) We're seeing Spiderman tomorrow.
(Mother) We're not seeing Spiderman tomorrow. (Copley 2009: 27)

共同行為の場合、複数の行為者が関与するが、行為者全員が平等に同じ行為意図を持つ訳ではなく、決定権を持つ人物に他の参与者が従うというコントロールの非対称性が在る。(33)では息子は自分に決定権がないと納得する。(33)の母親の発話は息子にとって指示的な意味を持つ。同じく以下(34-35)も話者のコミットメントが未来の出来事を決めている進行形構文の例である。

(34) "Jason and Paumell"—here she raised her voice to a shout—"if you don't stop making so much commotion you're getting out until we're done here."

(35) "Warshawski, if I catch you in one more fight you're going into segregation…"
(Dancygier & Sweetser 2005: 90)

D & S(2005)によれば、(34)と(35)の主節の現在進行形は、話者の発話時のコミットメント(the speaker's current commitment, p. 90)を表し、良からぬ結果を警告している(warning about negative eventualities, p. 91)。主節の事態は話者が予測する未来ではなく、話者が自ら引き起こすと宣言しているのである。話者の社会的な力によって未来の事態の成立に影響を与えるという点で、(34)(35)の進行形は、法助動詞(must, may)の義務的用法と並行性がある。これは以下(22)(再掲)と対比的である。

(22) Shelly: You are stealing life and health from your own child [implied: if you don't breast-feed her]. (=(8))

(34)も(22)も "If you don't V1, you're V2-ing"という構文形式なのだが、(22)は行為者の意図しない結果から行為解説をする行為解説用法（パターン②）である。(22)では、[not V1]から[V2]への関連づけが、話者の主観的な判断（認識）である点で、法助動詞の認識用法と類似性を持つ。一方(34)では、[not V1]から[V2]への関連づけは、話者の現実世界におけるコミットメントであるため社会的効力を持ち、法助動詞の義務的用法との類似性が認められる。

未来を表す現在進行形構文では、現在時の状況（準備、行為者の意図・決断、話者のコミットメント）が、完了事態 V の内部の前方（初期段階）として概念化されるが、助動詞 will や be going to のような認識的な予測までは意味拡張していない。未来における事態の実現を保証するような、具体的（意図的）な行為連鎖の一部が発話時の現実として存在しなければならない。したがって、以下(36-37)は容認性が下がる。

(36)#The Red Sox are playing theYankees tomorrow but they might not. (Copley 2007: 28)

(37)#Mary is arriving at the station, but I don't know HOW she is going to get there with all the roads closed. (Rothstein 2004: 55)

5. まとめ

本稿では、英語進行形構文の用法において周

辺的で非アスペクト的であるとされる「行為解説」と「未来」を表す進行形を取り上げ、プロトタイプとの連続性を論じた。両用法ともプロトタイプが持つ未完了という時間領域のアスペクト的概念構造、全体(V)と部分(be V-ing)のメトニミー関係、に基づいた意味拡張である事を示した。さらに意図理解、(間) 主観性、意図指向・結果指向のフレーム化、意図、コントロールといった特徴に注目することで当該構文の機能的多様性の詳細を分析した。

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参考文献

Copley, Bridget (2009) *The Semantics of the Future*, Routledge, New York.

Dancygier, Barbara and Eve Sweetser (2005) *Mental Spaces in Grammar: Conditional Constructions*, Cambridge University Press, Cambridge.

Goldsmith, John and Erich Woisetschlaeger (1982) "The Logic of the English Progressive," *Linguistic Inquiry* 13(1), 79-89.

Hirtle, W. H. and V. N. Curat (1986) "The Simple and the Progressive: 'Future' Use," *Transactions of the Philological Society*, 42-84.

長谷川在古 (2005)「いわゆる「行為解説の進行形」の概念構造について」成田義光・長谷川在古(編)『英語のテンス・アスペクト・モダリティ』(阪大英文学叢書 2), 109-124,　英宝社, 東京.

Huddleston, Rodney and Geoffrey K. Pullum (2002) *The Cambridge Grammar of the English Language*, Cambridge University Press, Cambridge.

König, Ekkehard (1980) "On the Context-dependence of the Progressive in English," *Time, Tense, and Quantifiers: Proceedings of the Stuttgart Conference on the Logic of Tense and Quantification*, ed. by Christian Rohrer, *269-291*, Niemeyer, Tübingen.

Kranich, Svenja (2009) "Interpretive Progressives in Late Modern English," *Current Issues in Late Modern English*, ed. by I. Tieken-Boon van Ostade and W. Van der Wurff, 331-357, Lang, Bern.

Kranich, Svenja (2010) *The Progressive in Modern English: A Corpus-Based Study of Grammaticalization and Related Changes*, Rodopi, Amsterdam.

Langacker, Ronald W. (1991) *Foundations of Cognitive Grammar*. Vol.2: Descriptive Application, Stanford University Press, Stanford.

Langacker, Ronald W. (2008) *Cognitive Grammer: A Basic Introduction*. Oxford University Press, Oxford.

Leech, Geoffrey (2004) *Meaning and the English Verb*, 3rd ed. Pearson Longman, Harlow.

Leech, Geoffrey, Mariannce Hundt, Christian Mair and Nicholas Smith (2009) *Change in Contemporary Englsih: A Grammatical Study*, Cambridge University Press, Cambridge.

Ljung, Magnus (1980) *Reflections on the English Progressive*. Acta Universitatis Gothoburgensis, Göteborg.

Marimaridou, Sophia (2000) *Pragmatic Meaning and Cognition*, John Benjamins, Amsterdam.

Nesselhauf, Nadja (2007) "The Spread of the Progressive and its 'Future' Use," *English Language and Linguistics* 11(1), 191-207.

Rothstein, Susan (2004) *Structuring Events: A Study in the Semantics of Lexical Aspect*, Blackwell, Oxford.

清水啓子 (2013)「間主観性、および行為と意図のメトニミー関係からみた行為解説の進行形」日本認知言語学会第 14 回大会口頭発表.

Smitterberg, Erik (2005) *The Progressive in 19th-century English: A Process of Integration*. Rodopi, Amsterdam.

スペルベル、ダン (1997)「ことばの理解を理解する」 J・カルファ(編) 『知のしくみ』 263-294, 新曜社, 東京.

Tomasello, Michael (1999) *The Cultural Origins of Human Cognition*, Harvard U. Press, Cambridge.

Traugott, Elizabeth Closs (2003) "From Subjectification to Intersubjectification," *Motives for Language Change*, ed. by Raymond Hickey, 124-139, Cambridge University Press, Cambridge.

Wright, Susan (1995) "Subjectivity and Experiential Syntax," *Subjectivity and Subjectivisation*, ed. by D. Stein and S. Wright, 151-172, Cambridge University Press, Cambridge.

Linguistic Phenomena as Seen from the Viewpoint of Joint Attention: *If*-Cleft and Locative Inversion*

Takashi Shizawa
Mejiro University

Keywords: *if*-cleft, locative inversion, rhetorical effect, discourse function, joint attention

1. Introduction

This paper investigates the motivation of rhetorical effects and discourse functions of the *if*-cleft sentence (ICS) and the locative inversion construction (LIC), exemplified in (1) and (2), respectively:

(1) If anyone can help us, it's John. (ICS)

(2) Back to the village came Kate. (LIC)

As will be seen below, these constructions are similar to each other in terms of rhetorical effect and discourse function. The problem is where their similarity comes from. This paper addresses this issue from the perspective of a psychological phenomenon called *joint attention*. The main claim is as follows:

(3) The use of the ICS and LIC is significantly associated with joint attention engagement.

The organization of this paper is as follows. Section 2 reviews the characteristics of the ICS and the LIC on the basis of the findings of previous studies. Section 3 summarizes the observations in the previous section and poses a question to be answered. Section 4 introduces a psychological phenomenon called joint attention as an explanatory device, and surveys the relationship between joint attention and linguistic expressions. Section 5 argues that joint attention motivates the rhetorical effects and functions of the ICS and LIC. Section 6 gives concluding remarks.

2. Observation

2.1. *If*-Cleft Sentence: Its Markedness, Discourse Function, and Rhetorical Effect

According to Shizawa (2010, 2011), the ICS is semantically and syntactically marked as a conditional construction in the following points:

(4) a. Semantic markedness:
1) The *if*-clause introduces a variable, while the main clause assigns its value.
2) Formed from a single proposition.
b. Formal markedness:
Fixed clause order: the *if*-clause must precede the main clause (*if* p, q vs. *q, *if* p).

(Shizawa (2011: 179-180))

For a better understanding of (4), let us first review the semantic markedness of the ICS. Compare the following pair:

(5) a. If Mary goes, John will go.
b. If anyone can help us, it's John.

It is generally acknowledged that the *if*-clause and main clause of an ordinary conditional sentence show interdependencies such as causality, temporal sequentiality and logical inclusion. In sentence (5a), for example, the propositions *Mary goes* and *John will go* show causality: The speaker predicts that the event of Mary's going will cause John's going.

On the other hand, no such relationship is found in the ICS in (5b), because the number of relevant propositions is one. The main clause is not an independent proposition; it only specifies a value for the variable introduced in the *if*-clause. That is, the relevant proposition in (5b) is *John can help us* alone.

Let us turn our attention to the formal markedness. It is widely known that although the unmarked order of the *if*-clause (p) and main clause (q) in the ordinary conditional sentence is "*if* p, q," the clause order can be reversed as long as the discourse allows it:

(6) John will go, if Mary goes. (cf. (5a))

In the case of the ICS, on the other hand, the *if*-clause

never follows the main clause, as pointed out by Declerck and Seki (1990).

(7) * It's John, if anyone can help us.

On the basis of the above observations, Shizawa argues that the relationship between the *if*-clause and main clause in the ICS is very close to that between a *wh*-question and its answer, proposing a semantic representation as follows:

(8) If X, it is Y = If X *and if you ask me WH, I'll answer* it is Y

Then, sentence (1) can be paraphrased as follows:

(9) If anyone can help us *and if you ask me who, I'll answer* it's John.

Based on this semantic relation, the ICS fulfills the following discourse function:[1]

(10) The discourse function of the *if*-cleft sentence is evoking a question in hearer's mind and attracting much attention to the focalized element in the main clause so that the element can serve as the topic for the following discourse. (Shizawa (2011: 204))

The ICS can be regarded as a presentational sentence in the sense that it introduces a new entity into the discourse. In addition, the point is that by using the ICS, the speaker makes the hearer follow his inference, successfully guiding hearer's attention to the newly introduced entity (for more details, see Shizawa (2011)).

2.2. Locative Inversion Construction: Its Markedness, Discourse Function, and Rhetorical Effect

This subsection surveys the characteristics of the LIC. Let us begin with the formal or grammatical markedness. It is generally acknowledged that the LIC has some grammatical characteristics that the corresponding non-inversion sentence does not have.

First to be noted is that the LIC cannot be turned into the interrogative sentence:

(11) * Was in the corner a lamp?

Second, the LIC cannot be negated:

(12) * On the wall never hung a picture of U. S. Grant. (Bresnan (1994: 88))

Third, verbs that are found in the LIC must be informationally light in the sense that they do not contribute much to the information conveyed by the sentences in which they are used (cf. Levin and Rappaport Hovav (1995)):[2]

(13) Inside swam fish from an iridescent spectrum of colors…

Fourth, epistemic modal verbs like *may* cannot occur in the LIC (cf. Coopmans (1989)):

(14) * Down the hill may roll the baby carriage.

These grammatical characteristics are not found in non-inversion sentences. In this sense the LIC is formally and grammatically marked.

Next let us turn our attention to the discourse function of the LIC. Although there have been different points of view, most commonly it has been said to be used for presentational focus; that is, the LIC is used to introduce the referent of the postverbal NP on the scene (Bolinger (1977), Bresnan (1994), among others):

(15) A: I'm looking for my friend Rose.
B:# Among the guests of honor was sitting Rose.
C: Rose was sitting among the guests of honor.
(Bresnan (1994: 85))

B seems odd because it reintroduces an entity that has just been introduced in the previous context, which is not compatible with the discourse function of presentational focus.

Lastly, the rhetorical effect of the LIC should be mentioned. Many researchers (e.g. Fukuchi (1985), Kuno and Takami (2007), among others) point out that the LIC has rhetorical effects like the following:

(16) a. The LIC describes the scene more vividly than the non-inversion sentence.
b. The LIC makes the hearer feel as if he saw the described scene on the spot.

In other words, the LIC evokes *the sense of presence*. Observe the following example:

(17) Jack opened the box. Inside was an antique man's watch.

The LIC in (17) describes a situation from the viewer's point of view. The hearer identifies with the viewer, i.e. Jack, and aligns his perspective with Jack, conceptually putting himself in the same situation where Jack puts himself. In so doing, the hearer feels as if he was observing the same thing as Jack.

The LIC is more suitable than the non-inversion sentence to give the sense of presence, which is compatible with the fact that the LIC tends to be used in discourse contexts such as retrospective eye witness reports, route directions, and scenic narrative situations (cf. Weblhuth (2011)).

3. Parallelism between the ICS and LIC

The above observations can be diagrammatically summarized as follows:

(18) Characteristics of the ICS and LIC

	ICS	LIC
Grammar	Marked	Marked
Function	Presentation	Presentation
Effect	Making the hearer follow speaker's inference	The sense of presence

As shown in the diagram, the ICS and LIC, which appear to have no relationship with each other, are, in fact, slimier to each other with regard to their discourse functions and rhetorical effects in particular. Then the following question can be posed:

(19) What underlies the similarity between the ICS and LIC with regard to their discourse functions and rhetorical effects?

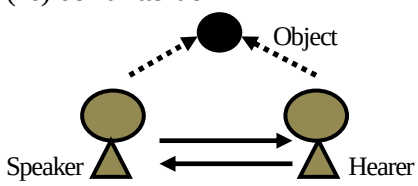
In what follows, I investigate the mechanism underlying the similarity.

4. Joint Attention: A Mechanism for Getting the Hearer Involved

4.1. Joint Attention

Here note that the rhetorical effects of the two constructions mean getting the hearer involved in the speaker's own inference (the ICS) or observation (the LIC). To put it in another way, the speaker and hearer share and coordinate attention with each other in relation to the object of inference/observation in the context. This means that what developmental psychologists refer to as *joint attention* is established between the speaker and hearer in that situation, as illustrated in the following figure:[3]

(20) Joint Attention



Technically speaking, joint attention means the simultaneous engagement of two or more individuals in mental focus on one and the same external thing. The figure shows that the speaker and hearer are paying attention to the same object. To be exact, the accidental sharing of attention cannot be called joint attention: It is necessary for each participant to know that they are attending to something in common (cf. Tomasello (1995: 106)).

There are two types of joint attention: the *following joint attention* and *directive joint attention* (cf. Oyabu (2004)). The former is established when one pays attention to what others are paying attention to (e.g. gaze following). The latter is established when one draws or directs others' attention to what he is focusing on (e.g. pointing at something). In either case, joint attention is highly social because its goal is to share thoughts, ideas, memories, observations, and experiences with others. In other words, joint attention helps the participants to share the meaning and construal of things they are paying attention to, which leads to the sharing of intention and emotion, i.e. *empathy* (cf. Honda (2011)).[4]

4.2. Joint Attention and Linguistic Expressions

This subsection reviews two cases concerning the relationship between joint attention and linguistic expressions, following Honda (2011).

First, to illustrate the empathy created by joint attention, I refer to Honda's (2011) analysis of "empathetic" *that*:

(21) a. How is **that** throat?

b. How is **your** throat?

The examples in (21) are semantically similar to each other. But there is a difference in empathy: When a nurse asks a patient with a sore throat how her throat is, sentence (21a) sounds more empathetic than sentence (21b). Honda argues that this difference can be explained in terms of joint attention. As in (21b), when the speaker uses *your throat* to refer to the hearer's throat, the same throat is *my throat* to the hearer. There arises a conflict between *your* and *my*, which implies that the speaker and hearer see the same throat differently. The use of *that*, on the other hand, means that the speaker and hearer see the same throat in the same way. The word *that* refers to an object which is equidistant from both the speaker and hearer. That is, *that throat* is *that throat* to both the speaker and hearer. This can be regarded as a linguistic realization of joint attention effect: seeing the same thing in the same way produces empathy between the speaker and hearer.

Second, let us review Honda's (2011) analysis of the topicalization construction and left-dislocation construction. As is well known, both constructions are classified as the topic-comment construction. However, they are different from each other:

(22) What can you tell me about John?

a. John Mary kissed.

b. * John, Mary kissed him.

(23) What can you tell me about John?

a. Nothing. * But Bill Mary kissed.

b. Nothing. But Bill, Mary kissed him.

In (22), the dislocated element (*John*) is already introduced in the previous discourse; that is, the dislocated NP is discourse-old information. In this case, topicalization is felicitous, while left-dislocation is not. In (23), on the other hand, the dislocated element does not appear in the previous discourse; that is, the dislocated NP (*Bill*) is discourse-new information. In this case, left-dislocation is felicitous, whereas topicalization is not.

According to Honda (2011), the difference between topicalization and left-dislocation pertains to the two types of joint attention. Topicalazation is related to the following joint attention: preposing discourse-old information, i.e. an element to which the hearer is already paying attention, indicates that the speaker follows the hearer's attention. Left-dislocation is, on the other hand, relevant to the directive joint attention: dislocating discourse-new information indicates that the speaker directs the hearer's attention to something to which the hearer is not paying attention. In this way, joint attention is highly relevant to the structure of topic-comment constructions.

5. Discussion

5.1. From the Perspective of Sentence Structure

The relevance of joint attention to the ICS and LIC is corroborated in terms of sentence structure. Observe the following examples:

(24) Donna didn't love anyone. If she had loved someone, it would have been Bill.

(Shizawa (2011: 188))

(25) What lives in Xanadu? – In Xanadu live all manner of crawly creatures.

(Bolinger (1977: 111))

These examples show that both *if*-clause and locative phrase convey information related to the previous context. In other words, the *if*-clause and locative phrase are, in principle, the topics of the sentences in which they occur (cf. Bolinger (1977), Haiman (1978)).[5] That is, the ICS and LIC can be regarded as topic-comment constructions. Thus they are in parallel with the topicalization construction, related to the following joint attention.

If this line of argument is on the right track, it is quite reasonable to assume that a kind of empathy is created between the speaker and hearer on the basis of joint attention, like the case of *that* in (21). This is the source of rhetorical effects of the ICS and LIC.

5.2. From the Perspective of Meaning and Function

In the previous subsection, I argued that the ICS

and LIC can be regarded as topic-comment constructions and thus are related to the following joint attention. However, while the following joint attention can explain the function of the *if*-clause and inverted locative phrase as topic, i.e. linking up with the preceding discourse, it cannot sufficiently explain the discourse function of presentational focus.

It should be noted that the discourse function of presentational focus is fulfilled by directing the hearer's attention to the focus element. This means that the joint attention established by the use of the *if*-clause or inverted locative phrase is, in turn, directed to the focus element, i.e. an entity to which the hearer does not pay attention in the previous context. In other words, a shift in focus occurs. Observe examples (24) and (17), repeated here as (26a) and (26b), respectively:

(26) a. Donna didn't love anyone. If she had loved someone, it would have been Bill.
b. Jack opened the box. Inside was an antique man's watch.

In (26a), the first sentence introduces a presupposition for the use of the ICS, directing the hearer's attention to a topic concerning a person called *Donna*. The speaker uses the *if*-clause, indicating that he follows up the hearer's attention, establishing the following joint attention. Then, the speaker introduces discourse-new information (i.e. *Bill*), to which he directs the hearer's attention. At this point, the directive joint attention is established. Likewise, in (26b), the first sentence directs the hearer's attention to the box. The speaker uses the locative phrase *inside* in the sentence initial position, indicating that he follows up the hearer's attention. Then, the speaker introduces discourse-new information (i.e. *an antique man's watch*), to which he directs the hearer's attention. In this way, the shift in focus from one object (discourse-old information) to another (discourse-new information) is closely related to the presentational function of both constructions.[6]

The mechanism of the shift in focus follows from the semantics of both constructions. Let us first focus on the ICS. Recall that the semantic relation of *wh*-question and answer underlies the meaning of the ICS:

(27) If anyone can help us, it's John.
>>> Who can help us? - It's John.

From a functionalist point of view, the purpose of using *wh*-questions is to ask for the specification of values for the variables represented by *wh*-phrases. In this sense, *wh*-questions are a good device for directing hearer's attention to the value. The ICS, the meaning of which the semantic relation of *wh*-question and answer underlies, can be said to be a good device for directing hearer's attention to the value, i.e. the focus element.

How about the LIC, wherein no explicit variable is contained? Here I propose the following semantic representation for the LIC, assuming that a variable is implicitly contained in it:

(28) *x* that +V+ Loc + BE + Subject

Then the LIC in (29a), for example, can be represented as (29b):

(29) a. Into the room came John.
b. *x* that came into the room was John.
>>> Who came into the room?- It's John.

If this assumption is on the right track, then the LIC can be analyzed in parallel with the ICS in the sense that the existence of a variable contributes to the successful direction of the hearer's attention to the value (i.e. the focus element).

To summarize, the assumption that the LIC as well as the ICS has a variable enables us to deal with them in a unified manner: Joint attention motivates not only the rhetorical effect but the presentational function of the two constructions.

5.3. Supporting Arguments

The assumption that the LIC contains a variable is supported from the perspective of *identificational focus* in the sense of Kiss (1998), which expresses exhaustive interpretation. The following is a test of exhaustive identification devised by Szabolcsi

(1981): In (30), if the second sentence is not among the logical consequences of the first one, the focus expresses exhaustive identification:

(30) a. It was a hat and a coat that Mary picked for herself.
b. It was a hat that Mary picked for herself.
(cf. Kiss (1998: 250))

According to Kiss (1998), sentence (30b) is not a logical consequence of (30a); on the contrary, it contradicts (30a). This indicates that the cleft constituent expresses exhaustive identification.

According to Mikami (2010), the postverbal NP in the LIC is also associated with identificational focus, and thus expresses exhaustive identification. To confirm this, I devise a similar test:

(31) a. Into the room came John and Mary.
b. Into the room came John.

If the postverbal NP in the LIC is associated with identificational focus, sentence (31b) cannot be a logical consequence of (31a). This prediction is borne out by the following example:

(32) # Into the room came John and Mary; therefore into the room came John.

Example (32) sounds odd because sentence (31b) contradicts sentence (31a). This indicates that the postverbal NP in the LIC expresses exhaustive identification.

The point is that an identificational focus, by definition, represents the value of a variable (cf. Kiss (1998: 245)). Therefore, if the postverbal NP in the LIC expresses an identificational focus, it is not unreasonable to assume that the LIC has a variable as a semantic ingredient.

In addition, if the representation in (28) is valid, then the interpretation of the LIC should be similar to that of the specificational sentence in that the focus NP specifies the value for the implicit variable. More specifically, it can be expected that the LIC is close to the pseudo-cleft sentence in terms of meaning and function. This view is supported by the following data (see also Takami (1995: 188)):

(33) A: Who came back to the village?
B_1: Back to the village came Kate.
B_2: The one who came back to the village was Kate.
B_3: It was Kate (that came back to the village).
B_4: #Kate came back to the village.

Example (33) indicates that the LIC is in parallel with or closely related with cleft constructions to the extent that they can be replaced with one another.

Taking into account the above observations (i.e. (32) and (33)) and Kiss's (1998) argument that the cleft constituent is the realization of identificational focus in English, we can say that the postverbal NP in the LIC also pertains to identificational focus, which in turn means that the LIC contains a variable in some form or other.

6. Conclusion

In this paper, I have demonstrated that the *if*-cleft sentence (ICS) and locative inversion construction (LIC) are in parallel with each other with regard to discourse function and rhetorical effect, and that the parallelism can be explained in terms of a psychological phenomenon called joint attention.

I made the following points. First, the ICS and LIC are closely associated with joint attention engagement, and thus the rhetorical effects of both constructions are the realization of empathy created by joint attention. Second, their sentence structures (i.e. the topic-comment structure) and semantic structures (i.e. the variable-value or question-answer relationship) correspond to attention-following and attention-directing respectively, which underpin the discourse function of presentation.

Notes

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of Mejiro University for kindly acting as an informant. All remaining errors and inadequacies are my own.

[1] In what follows, the terms *speaker* and *hearer* are used as cover terms to refer to *writer*/*narrator* and *reader*, respectively.

[2] The verb *swim* in (13) is informationally light in the sense that swimming is a kind of motion that is characteristic of fish.

[3] In figure (20), the broken arrows stand for the mental access to the object; on the other hand, the bold arrows represent the interaction between the speaker and hearer.

[4] Although I will not go into further detail here, joint attention is said to be a precursor of theory of mind.

[5] This is not to say that these constructions can never be used as discourse openers.

[6] For a related discussion about the shift in focus, see Langacker (1993).

References

Bolinger, D. (1977) *Meaning and Form*, Longman, London.

Bresnan, J. (1994) "Locative Inversion and the Architecture of Universal Grammar," *Language* 70, 72-131.

Coopmans, P. (1989) "Where Stylistic and Syntactic Process Meet: Locative Inversion in English," *Language* 65, 728-751.

Declerck, R. and S. Seki (1990) "Premodified Reduced *It*-Clefts," *Lingua* 82, 15-51.

Fukuchi, H. (1985) *Danwa-no Koozoo* (*The Structure of Discourse*), Taishukan, Tokyo.

Haiman, J. (1978) "Conditionals Are Topics," *Language* 54, 564-589.

Honda, A. (2011) "Kyoodoo Tyuui to Kansyukansee (Joint Attention and Intersubjectivity)," *Syukansee to Syutaisee* (Subjectivity), ed. by H. Sawada, 127-148, Hituzi, Tokyo.

Kiss, K. É. (1998) "Identificational Focus versus Information Focus," *Language* 74, 245-273.

Kuno, S. and K. Takami (2007) *Eego no Koobun to Sono Imi* (English Constructions and Their Meanings), Kaitakusha, Tokyo.

Langacker, R. W. (1993) "Reference-Point Constructions," *Cognitive Linguistics* 4, 1-38.

Levin, B. and M. Rappaport Hovav (1995) *Unaccusativity*, MIT Press, Cambridge, MA.

Mikami, S. (2010) "The Locative Inversion Construction in English: Topicalization and the Pronunciation of the Lower Copy," *English Linguistics* 27, 297-328.

Oyabu, Y. (2004) "Kyoodoo Tyuui no Syurui to Hattatu (Kinds and Development of Joint Attention)," *Kyoodoo Tyuui no Hattatu to Rinsyoo: Ningenka no Genten no Kaimee* (The Development of Joint Attention and Clinical Practice: A Clarification of the Origin of Humanization), ed. by Y. Oyabu, M. Tanaka, and H. Ito, 1-31, Kawashima Syobo, Tokyo.

Szabolcsi, A. (1981) "The Semantics of Topic-Focus Articulation," *Formal Methods in the Study of Language*, ed. by J. Groenendijk, T. Janssen, and M. Stokhof, 513-541, Matematisch, Amsterdam.

Shizawa, T. (2010) "If Bunretubun no Danwa Kinoo (The Discourse Function of *If*-Clefts)," *Eego Gohoo Bunpoo Kenkyuu* (English Grammar and Usage) 17, 99-114.

Shizawa, T. (2011) *Form, Meaning, and Discourse: The Semantics and Pragmatics of Conditional Constructions in English and Japanese*, Doctoral dissertation, University of Tsukuba.

Takami, K. (1995) *Kinooteki Koobunron ni yoru Niti Eego Hikaku–Ukemibun, Kootibun no Bunseki* (A Contrastive Study of Japanese and English based on a Functional-Constructional Approach: An Analysis of Passive and Postposing Sentences in Japanese and English), Kurosio, Tokyo.

Tomasello, M. (1995) "Joint Attention as Social Cognition," *Joint Attention: Its Origins and Role in Development*, ed. by C. Moore and P. Dunhan, 103-130, Psychology Press, New York.

Webelhuth, G. (2011) "Motivating Non-Canonicality in Construction Grammar: The case of Locative Inversion," *Cognitive Linguistics* 22, 81-105.

A Syntactic Approach to the Induced Action Alternation*

Kenji Sugimoto
Hokkaido University of Education

Keywords: induced action alternation, agentivity, light verb, head movement, contemporaneity

1. Introduction

This paper investigates agentive verbs of manner of motion, such as: *jump*, *run*, and *walk* among other verbs. They have several remarkable syntactic and semantic properties (Levin (1993)). Of such properties, this paper focuses on the induced action alternation, as shown in (1).

(1) a. The horse jumped over the fence.
b. Sylvia jumped the horse over the fence.
(Levin (1993: 31))

(1a) shows that the verb has an intransitive use. In addition, (1b) shows that it has a causative use. However, the causative alternant is not freely available to the verb; certain syntactic and semantic restrictions are imposed on its arguments. Of such restrictions, previous literature puts a great emphasis on the agentivity/intentionality requirement imposed on the subject argument. That is to say, the argument must be an agent – a person that volitionally causes the event denoted by the verb. For example, since *Sylvia* in (1b) is an entity that can volitionally cause the horse's jumping event, it is eligible as the subject. In contrast, *lightning* in the next example (2) is a causer without volition, so that it is ineligible as the subject.

(2) *The lightning jumped the horse over the fence.
(Levin and Rappaport Hovav (1995: 112))

Previous research has attributed this restriction to the lexical semantics of the verb (Folli and Harley (2006) (henceforth F&H (2006)), Levin and Rappaport Hovav (1995), Reinhart (2002)). However, in this paper we will propose that the relevant semantic restriction is to be read off from the syntactic structure.

The paper is organized as follows: section 2 will present a previous approach to the induced action alternation and point out its problems; in section 3, we will provide an alternative analysis to solve them and further evidence for the proposed analysis; section 4 will present concluding remarks.

2. Folli and Harley's (2006) Analysis and Its Problems

Although linguists sharply differ in their detailed accounts of the induced action alternation, they share a basic idea about the way to capture the agentivity requirement on the subject of the causative variant: they account for it in terms of lexical semantics. In this section, we review F&H's (2006) analysis as a representative of previous research on the induced action alternation.

First, F&H (2005, 2006) assume that there are two different flavors of *v*: v_{do} and v_{cause}. These light verbs place different restrictions on their subjects and complements. The light verb v_{do} needs an animate agent subject, whereas the light verb v_{cause} only requires that the subject be a possible causer. The light verb v_{do} can take an incremental theme as its complement, while the light verb v_{cause} must take a state as its complement, creating a resultative structure.

Next, agentive verbs of manner of motion cannot take an object, as shown in (3).

(3) John walked (*Matilda).

(F&H (2006: 124))

However it may be repaired by adding a directional PP, as shown in (4).

(4) a. John walked Matilda to his new flat in 20/#for 20 minutes.

b. John walked Mary along the river all afternoon.

(ibid.: 125)

Therefore, F&H (2006) conclude that the addition of a directional PP is necessary for the formation of the causative variant. Specifically, they assume with Hoekstra (1984) that the PP forms a predicative small clause with the theme argument. Then, they propose that this small clause is embedded under the causative light verb, thus deriving the causative variant, as depicted in (5).[1]

(5) a. John walked Mary to his flat.

b. [$_{vP}$ John [$_{v'}$ v_{cause} [$_{SC}$ Mary [$_{PP}$ to his flat]]]]

The proposed structure captures the correlation between the licensing of the causative variant and the addition of the PP. However, recall that the light verb v_{cause} only requires that the subject be a possible causer and does not need an animate agent. Therefore, F&H's (2006) proposal, as it stands, would predict that the following sentence is grammatical, contrary to fact.

(6) *The lightning jumped the horse over the fence. (=(2))

In order to solve this problem, they propose that the relevant verb intrinsically have a [+Agent] feature and that this property require its subject to be an agent. Thus, the agentivity requirement on the subject follows from the [+Agent] property of the verb root.

So far, we have seen F&H's (2006) analysis. However, their analysis is not without problems. There are three empirical problems. First, the lexical analysis predicts that the subject of causative variants is necessarily interpreted as an agent, because the relevant verbs possess [+Agent] properties. However, this prediction is falsified by the following example.

(7) These magic shoes can jump you over rivers and houses. [EWGV]

Although the subject position in (7) is occupied by the inanimate causer, the sentence is acceptable.

The second problem lies in the observation that directional PPs are obligatory in the licensing of causative alternants. Certainly, it has been noticed that causative alternants must be accompanied by directional PPs (Folli and Harley (2006), Levin (1993), Levin and Rappaport (1995)). However, this is not always the case, as shown in (8).

(8) a. She ran/galloped/walked them.

(Reinhart (2002: 242))

b. The trainer ran the athletes (around the field).

(Tanaka and Minami (2008: 112))

c. The trainer didn't run the best greyhounds in the race.

(Randall (2010: 262))

On the basis of the above data, in this paper, we assume that directional phrases are not defining properties of the licensing of causatives.

The final problem is concerned with the difference between verbs of the same semantic type. The verb *stroll* belongs to agentive verbs of manner of motion (Levin (1993)). Thus, F&H's (2006) analysis, as it stands, predicts that it should be fine in a causative use like *walk* and *run*. However, our informant reported that unlike *run* and *walk*, *stroll* sounds odd in a

causative variant, as shown in (9).

(9) a. *The therapist strolled the patient (to the park).

b. The therapist walked the patient (to the park).

We will reconsider this issue in section 3.2.

3. A Syntactic Approach to Agentivity Requirement

In previous section, we have seen F&H's approach to the agentivity requirement and pointed out its problems. In this section, we argue that this requirement can be uniformly accounted for in terms of a syntactic approach.

3.1. A Complex Head Account

First, we assume with F&H (2005, 2006) that there are two different flavors of *v*: v_{do} and v_{cause}. Then, we propose that the intransitive variant (10a) have the structure seen in (10b) and the causative variant (11a) the structure seen in (11b).

(10) a. The patient walked.

b. [$_{vP}$ the patient [$_{v'}$ v_{do} √walk]]

(11) a. The therapist walked the patient.

b. [$_{vP}$ [$_{v'}$ v_{cause} [$_{vP}$ the patient [$_{v'}$ v_{do} √walk]]]]

As illustrated in (10b), the light verb v_{do} selects the root √*walk* as its complement and *the patient* as its specifier (Harley (2005)). The root √*walk* incorporates into the light verb v_{do}, forming the complex head v_{do}-√*walk*. This complex head determines the thematic interpretation of its specifier: the subject *the patient* is thematically interpreted as an agent of a walking event. The causative structure in (11b) embeds (10b) under the light verb v_{cause}. As indicated by the arrowed lines, the root √*walk* undergoes the head movement to the light verb v_{cause} via the light verb v_{do}, forming the complex head v_{cause}-v_{do}-√*walk*. Intuitively, this complex head imposes more specific semantic restriction on its specifier than the simple light verb v_{cause}. More specifically, we propose that the raised light verb v_{do} reassign the agent role to its specifier position. Setting aside precise formalization, we assume that the complex head v_{cause}-v_{do}-√*walk* as a whole restricts its specifier to an entity that does some action which causes a person's walking event.

With this in mind, let us reconsider the problematic data shown in the previous section, (repeated below).

(12) a. *The lightning jumped the horse over the fence. (=(6))

b. These magic shoes can jump you over rivers and houses. (=(7))

On the basis of our analysis, the above contrast is accounted for as follows. The complex head in (12) requires its specifier to be a cause of a jumping event and an agent. However, *the lightning* is insufficient; although it may be such a cause, it is not an agent. As a result, (12a) is regarded as an interpretive anomaly. Then, let us consider (12b). Like *the lightning*, *these magic shoes* may be a cause of jumping event, but not an agent. However, there is a slight difference between *the lightning* and *these magic shoes*: the former is just a cause, but the latter is traditionally considered to be an instrument, a subset of cause roles. This role implies an agent which uses it. Probably, this implication will license the requirement of agentivity. Furthermore, our analysis will capture the following acceptability contrast.

(13) a. Max galloped the horse to the stable.

b. ?The whip galloped the horse to the stable.

c. *The rain galloped the horse to the

stable.

(Reinhart (2002: 243))

The subject *Max* completely satisfies the requirement just discussed above, while *the whip* is licensed in the indirect manner because of being an instrument. However, *the rain* is just a natural force and thus cannot be licensed.

3.2. Lexical and Syntactic Causatives

This section shows further predictions of our complex head analysis. First, our account crucially depends on head movement. So, if head movement is prevented by some additional factor, the light verb v_{cause} remains single and thus only requires that its specifier be a possible causer of an event. This prediction is confirmed by using syntactic causatives, as shown in (14).

(14) a. Max caused the horse to gallop to the stable.

b. The whip caused the horse to gallop to the stable.

c. The rain caused the horse to gallop to the stable.

(14a-c) are syntactic equivalents for the lexical causatives (13a-c), respectively. In contrast to (13), the light verb v_{cause} in (14) is severed from the root √*gallop* and phonologically realized as *caused*. In this environment, our informant judges all the subjects to be acceptable.

We have seen that the inability to form the complex head results in less specific semantic restriction on the subject. Then, let us consider the opposite situation where a certain complex head leads to more specific semantic restriction than the complex head as shown in 3.1. Such a situation occurs in the case of the verb *stroll*. According to the Collins Cobuild English Dictionary, the meaning of the verb is to walk in a slow, relaxed way. If so, we may assume that the root √*stroll* involves both the basic manner of motion (i.e., *walk*) and the additional manners (in this case, *in a slow, relaxed way*). For the purpose of convenience, we notate this as follows.

(15) √stroll = √walk + α

Such a verb unlike *walk* cannot undergo causativization, as shown in (16a).

(16) a. *The therapist strolled the patient (to the park).

b. The therapist walked the patient (to the park).

This contrast may be accounted for as follows. We assume that the intransitive *stroll* has the following syntactic structure.

(17) a. The patient strolled.

b. $[_{vP}$ the patient $[_{v'}\ v_{do}$ √walk$]]$

α

In (17b), the additional manner component α is inserted to the light verb v_{do} by some operation, say, Manner Incorporation proposed by Harley (2005) and this complex head is phonologically realized as *stroll*. However, our analysis as it stands would incorrectly generate the causative *stroll* by embedding (17b) under the light verb v_{cause}, as illustrated in (18b).

(18) a. *The therapist strolled the patient.

b. $[_{v'}\ v_{cause}\ [_{vP}$ the patient $[_{v'}\ v_{do}$ √walk$]]]$

α

To avoid this undesirable output, we assume that the head with some additional manner cannot be attracted by the light verb v_{cause} because it is semantically heavier than the head without additional manner.[2,3,4] This assumption is supported by other verbs with the same type of additional manner such as *amble* and *slouch*.

(19) *The therapist ambled the patient (to the park).

The additional evidence comes from verbs with the following types of additional manner.

(20) a. walk + with heavy steps: plod, stump…
b. walk + with quick steps: pad, tiptoe…
c. walk + in an unsteady way: totter…
d. walk + in a proud way: strut, swagger…
e. walk + other manners: sidle, slink…

Verbs with these types also are not permitted to be causativized, as shown in (21).[5]

(21) a. *The therapist stumped the patient (to the park).
b. *The therapist tiptoed the patient (to the park).
c. *The therapist tottered the patient (to the park).
d. *The therapist swaggered the patient (to the park).
e. *The therapist sidled the patient (to the park).

Then, if this account is on the right track, we will make a further prediction: if the additional manner part α is not incorporated into the light verb v_{do}, and introduced as the adjunct, such a sentence should become grammatical, because the semantic lightness of v_{do} allows its head movement to the light verb v_{cause}. This prediction is borne out by the following data.

(22) The therapist walked the patient (to the park) in a slow, relaxed way.

Although (22) expresses the conceptually same meaning as (18a), our informant reports that it is acceptable unlike (18a).

3.3. The Cotemporaneity Effect of Sub-events

We have addressed the agentivity requirement in causative manner-of-motion constructions. However, this requirement is not a sufficient condition for the formation of these constructions. There is another requirement on the causing sub-event and the caused sub-event: both sub-events must occur contemporaneously. For example, the causative manner-of-motion construction in (23) requires that Sylvia manipulating the horse totally overlap with the horse jumping over the fence.

(23) Sylvia jumped the horse over the fence. (=(2b))

This temporal identity also follows if we assume that the complex head formed by head movement (i.e., v_{cause}-v_{do}) is interpreted as a single event (cf. Levin and Rappaport Hovav (1999)).

Our analysis derives agentivity requirement and contemporaneity requirement from one and the same mechanism, namely head movement, whereas F&H (2006) derive each requirement from different implements. Having already seen in the previous section that in the F&H (2006) the former requirement is attributed to [+Agent] property of the root, we turn to a brief review of their account for the latter requirement and point out their problems.

F&H (2006) place the responsibility for contemporaneity restriction on the modification function of the verb root. They assume that the verb root inserted in the light verb head v^0 functions as a manner modifier of the event. In causative manner-of-motion constructions, there are two events which the manner elements can modify: the caused event denoted by the small clause (i.e., the motion event) and the causing event. When the verb root is inserted as a motion modifier, the manner-motion contemporaneity effect emerges. In other words, the manner activity which modifies the motion event continues throughout that motion event. On the other hand, when the verb is inserted as a modifier of the causative sub-event,

the manner-cause contemporaneity effect appears. That is to say, the manner activity denoted by the verb root need only last as long as the causative sub-event lasts. Then, F&H (2006) assume that there is a case where the manner component modifies both the motion sub-event and the causative sub-event, as shown in (24).

(24) John waltzed Matilda around the room.

Both the manner in which Matilda moves and the manner of the causing action which John is executing are waltzing. In this case, the manner activity extends over the whole duration of the motion sub-event and it also extends over the entire causation sub-event. Consequently, the motion sub-event is coextensive with the duration of the causation event.

However, this idea is confronted with a problem in the case where the motion action differs from the causing action in the manner component. For instance, let us consider the following example.

(25) The boy jumped the action figure across the table. (F&H (2006: 146))

In (25), since only the action figure is jumping, the manner modification applies only to the motion event. The manner activity extends for the entirety of the motion event but not for the entirety of the causative event. This implies that these two events do not have to be cotemporaneous. However, in fact, sentence (25) forces a temporal identity on them: even if the causative action is not itself an instance of the manner activity, it must accompany the manner activity for the duration of the motion event.

4. Conclusion

In this paper, we have explored two semantic restrictions found with the causative constructions in agentive verbs of manner of motion: the agentivity requirement on the subject and the contemporaneity requirement on the sub-events. We have proposed that these requirements are derived from syntactic head movement of the verb root to two types of light verb. We have shown that this proposal is supported by the contrast between lexical and syntactic causatives.

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Notes

1. In (5), the verb *walk* is inserted into the light verb by the operation Manner Incorporation proposed by Harley (2005).

2. Professor Etsuro Shima (personal communication) suggests to us that this idea come from the idea about V-to-T movement of English auxiliary verbs and lexical verbs. It is generally said that English auxiliary verbs move to T head, whereas English lexical verbs do not. Haegeman and Guéron (1999) argue that this is attributed to their semantic lightness. The former are semantically

lighter than the latter in that they do not assign thematic roles. As a result, lighter auxiliaries can be attracted by T head. However, heavier lexical verbs cannot be attracted by T head.

3. Professor Mikinari Matsuoka (personal communication) points out that *eat* and *devour* are in the same semantic relation as *walk* and *stroll*. That is, *devour* consists of √eat and the additional manner (i.e. in a gluttonous manner). Then, he asks us whether our assumption can also be applied to *eat* and *devour*. We leave this issue for future research.

4. Professor Masumi Matsumoto (personal communication) suggests to us that the observation that some restriction is imposed on verbs with additional manners be found not only in the induced action alternation but also in the cognate object construction.

5. The crucial problem with the relevant analysis is that some verbs such as *gallop* and *march* can be causativized.

(i) a. The general marched the soldiers to the tents.
b. Max galloped the horse to the stable.

These verbs may be regarded as complex verbs composed of basic manner of motion parts and some additional manners. For instance, the verb *march* may consist of √*walk* and a rhythmic manner. Thus, our analysis predicts that the verb could not have causative use, contrary to fact. We leave this issue for future research.

References

Folli, Raffaella and Heidi Harley (2005) "Flavors of *v*: Consuming Results in Italian and English," *Aspectual Inquiries*, ed. by Paula Kempchinsky and Roumyana Slabakova, 95-120, Springer, Dordrecht.

Folli, Raffaella and Heidi Harley (2006) "On the Licensing of Causatives of Directed Motion: Waltzing Matilda All Over," *Studia Linguistica* 60, 121-155.

Haegeman, Liliane and Jacqueline Guéron (1999) *English Grammar: A Generative perspective*, Blackwell Publishers, Oxford.

Harley, Heidi (2005) "How do Verbs Get Their Names? Denominal Verbs, Manner Incorporation, and the Ontology of Verb Roots in English," *The Syntax of Aspect: Deriving Thematic and Aspectual Interpretation*, ed. by Nomi Erteschik-Shir and Tova Rapoport, 42-64, Oxford University Press, Oxford.

Hoekstra, Teun (1984) *Transitivity: Grammatical Relations in Government and Binding Theory*, Foris, Dordrecht.

Levin, Beth (1993) *English Verb Class and Alternations: A Preliminary Investigation*, University of Chicago Press, Chicago.

Levin, Beth and Malka Rappaport Hovav (1995) *Unaccusativity: At the Syntax-Lexical Semantics Interface*, MIT Press, Cambridge, MA.

Levin, Beth and Malka Rappaport Hovav (1999) "Two Structures for Compositionally Derived Events," *SALT* 9, 199-223, Cornell Linguistics Circle Publications, Ithaca, NY.

Randall, Janet (2010) *Linking: The Geometry of Argument Structure*, Springer, Dordrecht.

Reinhart, Tanya (2002) "The Theta System: An Overview," *Theoretical Linguistics* 28, 229-290.

Tanaka, Eri and Yusuke Minami (2008) "A Note on PPs in Unergative-Based Transitives in English," *Osaka University Papers in English Linguistics* 13, 103-118.

Dictionary

A Dictionary of English Word Grammar on Verbs (1980), Kenkyuya. [EWGV]

Why Not? in Child English and its Theoretical Implications

Koji Sugisaki
Mie University

Keywords: neg-initial sentences, VP-internal subject hypothesis, *why not?*, child English

1. INTRODUCTION

Within the Principles & Parameters approach (as well as within the current Minimalist framework), it is widely assumed that the subject noun phrase is base-generated within the maximal projection of the verb (e.g. Fukui & Speas 1986, Kitagawa 1994, Koopman & Sportiche 1991, Kuroda 1988, among many others). In languages like English, the subject undergoes movement from this VP-internal position to the specifier position of the IP in the overt syntax, as illustrated in (1).[1]

(1) $[_{CP}\ [_{IP}$ ____ T $[_{VP}$ *Subject* V …]]]

An influential study on early child languages by Déprez & Pierce (1993) argues that children's negative sentences as in (2) provide evidence for this *VP-internal Subject Hypothesis*.

(2) a. Child English:
No Leila have a turn (Nina, 2;01)
b. Child German:
Nein Batsch Hunger
no uncle hunger
'The uncle is not hungry.'
(Kathrin, 25-26 months)

Analyzing such negation-initial (*neg-initial*) sentences in the acquisition of English, German, and other languages, Déprez & Pierce (1993) claim that the pre-sentential negative element is an instance of sentential negation (a variant of *not*), not an instance of anaphoric negation, in which the negative element negates a prior utterance. Under their analysis, children's neg-initial sentences indicate that children go through an early stage of acquisition during which subjects may optionally stay in their original position located within VP.

The goal of this small study is to re-evaluate the evidence provided by Déprez & Pierce (1993) for the existence of VP-internal subject stage in the acquisition of English. More specifically, building on the syntactic analysis of the collocation *why not?* by Merchant (2006), I will present evidence from child English against their fundamental assumption that children's sentence-initial *no* is a marker for sentential negation.

2. NEG-INITIAL SENTENCES IN CHILD ENGLISH

It has been observed at least since Bellugi (1967) that young English-learning children produce negative sentences in which the negative element occurs to the left of the subject noun phrases.[2] Some relevant examples are given in (3):

(3) Nina: Some Nonanaphoric Negatives
(Déprez & Pierce 1993:34)
a. No Mommy doing. David turn. (2;00)
b. No lamb have it. No lamb have it. (2;00)
c. No lamb have a chair either. (2;00)
d. No dog stay in the room. Don't dog stay in the room. (2;01)
e. Not man up here on him head. (2;02)

According to Déprez & Pierce (1993), an examination of the conversational context in which these utterances occur suggests that each is an instance of nonanaphoric negation: That (3c) is not intended to mean "No, the lamb does have it" is illustrated by the mother-child dialogue in (4):

(4) Context of Utterances (3b-c):

Mother:	Can you put it on the floor?
Nina:	No have it, Mommy.
Mother:	You don't want me to have it?
Nina:	No. No. <u>No lamb have it. No lamb have it.</u>
Mother:	You don't want the lamb to have it either.
Nina:	<u>No lamb have a chair either.</u>

Under the assumption that children's *no* in (3) is a form of sentential negation, Déprez & Pierce (1993) proposed that children's neg-initial sentences have the structure as in (5), in which the subject noun phrase remains in the base-generated position within the VP.

(5) Structure of the Child's Utterance in (3b):

$[_{CP}\ [_{IP}\ ___\ \ [_{NegP}$ no $[_{VP}$ lamb have it $]]]]$

In order to account for why the subject is not forced to raise in child English, Déprez & Pierce adopt the proposal by Koopman & Sportiche (1991) that the configuration for nominative Case assignment has parametric options: Nominative Case is assigned either (i) via the specifier-head relation with Infl, or (ii) under government by Infl. The latter option makes it possible for the subject to obtain nominative Case directly within VP, which leads to the phenomenon of free inversion in languages like Spanish. Déprez & Pierce maintain that nominative Case assignment under government by Infl is an initial option in the child's grammar, and hence subjects are licensed to remain in-situ even in child English.

Déprez & Pierce's (1993) analysis of children's neg-initial sentences, if correct, would constitute a very strong piece of evidence for the VP-internal Subject Hypothesis, since these utterances directly manifest the base position of the subject noun phrases. Yet, in light of its huge theoretical significance, each of the assumptions in their analysis needs to be well-motivated empirically. Thus, in this study, we re-evaluate their fundamental assumption that children's sentence-initial *no* is a marker for sentential negation. Our re-evaluation relies on the syntactic analysis of the collocation *why not?* by Merchant (2006), which is summarized in the next section.

3. *WHY NOT?*: MERCHANT (2006)

In English, when presented with a negative assertion, one can ask for the relevant reason with the elliptical question *why not?*, as shown in (6).

(6) a. Speaker A: Anna is not leaving.
b. Speaker B: *Why not?*
(= Why isn't Anna leaving?)

According to Merchant (2006), a number of languages have the collocation that corresponds to *why not?*, but this expression is subject to an intriguing cross-linguistic variation: While a group of languages use the word for *not*, the other group of languages employ the word for *no*. Merchant's cross-linguistic survey is given in (7) and (8).

Merchant (2006) argues that this cross-linguistic variation follows from the phrase-structural status of negative markers: If the sentential negative marker in a given language is phrasal (an XP, generally adverbial), it will occur

in the collocation *why not?*; if it is a head (an X^0, generally clitic-like), it will not. In the latter type of languages, the word for *no* is used, which is (presumably) a phrasal negative adverb.

(7) a. English:
why not ? * why no ?
b. German:
warum nicht ? * warum nein ?
c. Dutch:
waarom niet ? * waarom nee ?
d. Danish:
hvorfor ikke ? * hvorfor nej ?
e. Icelandic:
hverfor ekki ? * hvarfor nej ?
f. French:
pourquoi pas ? * pourquoi non?
g. Tsez:
shida anu ? * shida ey ?

(8) a. Greek:
*giati dhen ? giati oxi ?
b. Italian:
*perché non ? perché no ?
c. Bezhta:
* su-d -esh su-d gä'ä
d. Russian:
* pochemu ne ? pochemu njet ?

According to Merchant (2006), this distribution of negative markers is expected under the standard assumption that *why* is a phrasal adverb (an XP), and if only XPs can adjoin to XPs. Negative heads like Greek *dhen*, on the other hand, cannot adjoin to such XPs. Merchant further assumes that the use of the negative marker for sentential negation is the default option across languages; only if phrase-structural incompatibility rules out the use of this marker can the negative adverb *no* be used instead.

4. *WHY NOT?* IN CHILD ENGLISH: TRANSCRIPT ANALYSIS

We have seen in the previous section that in English, *why* can and must be followed by *not* given that (i) *not* is the marker for sentential negation, and (ii) it is phrasal (as well as *no*). Let us now recall the proposal by Déprez & Pierce (1993) for the sentence-initial *no* in child English: Children do not distinguish between *not* and *no*, and use *no* (as well as *not*) for sentential negation. If children's *no* is really an instance of sentential negation as envisioned by Déprez & Pierce, it makes a certain prediction for children's *why not* questions: There is a stage in which English-learning children should produce *why no?*, as well as *why not?*

In order to determine whether this is actually the case, I analyzed the spontaneous speech data for seven English-learning children available in the CHILDES database (MacWhinney 2000). This analysis included only those files before children reach three and a half years old, since children's neg-initial sentences with *no* typically disappear by around that age. The corpora examined in this study are summarized in Table 1.

Child	*Age Span*	*# of Files Analyzed*	*# of Child Utterances*	*Collected by*
Abe	2;04:24 - 3;07:28	120	14,944	Kuczaj (1976)
Adam	2;03:04 - 3;05:01	40	32,479	Brown (1973)
Eve	1;06 - 2;03	20	10,626	Brown (1973)
Naomi	1;02:29 - 3;04:18	85	13,233	Sachs (1973)
Nina	1;11:16 - 3;03:21	52	30,408	Suppes (1973)
Peter	1;09:08 - 3;01:20	20	22,580	Bloom (1970)
Sarah	2;3:05 - 3;07:23	70	14,279	Brown (1973)

Table 1: English Corpora Analyzed

The CLAN program KWAL was used to identify all the children's questions with *why*. I then counted by hand the number of utterances in which *why* was followed by either *no* or *not*.

The results of my transcript analysis are summarized in Table 2.

Child	*Why not?*	*Why no?*
Abe	1	0
Adam	124	0
Naomi	2	0
Sarah	1	0
TOTAL	*128*	*0*

Table 2: Results of the Transcript Analysis

Among the seven children analyzed, four of them produced the relevant expressions. All of these utterances took the form *why not?*, and the erroneous expression of *why no?* was never observed. The examples of children's *why not?* questions are presented in (9) – (12).

(9) Abe (abe113.cha, 3;06:26)
*FAT: hey don't touch the caterpillar .
*CHI: *why not ?*

(10) Adam (adam14.ch, 2;09:18):
*MOT: no (.) he doesn't have any teeth yet .
*CHI: *why not ?*
*MOT: he's too small .

(11) Naomi (n82.cha, 3:03;26)
*CHI: why ?
*MOT: because (.) that's one of those questions I can't answer honey .
*MOT: I can answer why when you ask me some things but +...
*CHI: *why not ?*
*MOT: other things are just very hard to answer that question .

(12) Sarah (sarah049.cha, 3;02:16)
*GLO: we're not going to use this microphone today .
*GLO: because the machine is broken .
*CHI: *why not ?*
*GLO: and it's being fixed .

During the same period of development, these children also produced a number of *why*-questions independently of *why not?*, which would undermine the possibility that they regard *why not* as a purely 'lexical' item.

(13) a. Abe (abe019.cha, 2;07):
why you doing work at home ?
b. Adam (adam12.cha, 2;08:16):
why you (s)miling ?
c. Naomi (n69.cha, 2;08:14):
why we reading Connecticut ?
d. Sarah (sarah026.cha, 2;08:25):
why need them more ?

To summarize, the results of my transcript analysis revealed that young English-leaning children only produced the adult-like expression of *why not?*, and never produced the incorrect form of *why no?*. This finding cast doubt on the possibility that children's *no* in neg-initial sentences is a maker for sentential negation.[3,4] Thus, the finding of this study poses a problem to the proposal by Déprez & Pierce (1993) that there is a developmental stage in which English-learning children do not distinguish between *no* and *not*, using *no* (as well as *not*) for sentential negation.[5]

5. CONCLUSION

In this study, we re-evaluated the status of sentence-initial *no* in child English. Evidence from children's *why not?* questions suggests that

the sentence-initial *no* is not a marker for sentential negation: The absence of *why no?* in early child English runs counter to the view by Déprez & Pierce (1993) that there is a stage in child English in which children do not distinguish between *no* and *not*, using *no* (as well as *not*) for sentential negation. Thus, the finding of this study seriously undermines the empirical basis for the proposal that English-learning children go through a developmental stage in which the subject noun phrase remains in their base-generated position within VP.

Then, a question arises as to whether there is any (other) evidence that the subject noun phrase originates and comes from inside the verb phrase even in child English. One recent attempt to answer this question can be found in Sugisaki (2012), which adopts Chomsky's (2012) minimalist analysis of subject-auxiliary inversion and analyzes children's *yes/no* questions in their spontaneous speech. According to this study, the absence of ungrammatical *yes/no* questions as in (14b), in which the nominal element in the subject noun phrase (rather than the auxiliary) has undergone raising, indicates that the subject originally occupies a structural position that is lower than the auxiliary even in child English. See Sugisaki (2012) for details.

(14) a. Can young children ____ write stories?
b.*Children young ___ can write stories?

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NOTES

1. The base position of the subject noun phrase might be located not within VP but within *v*P, as widely assumed in the recent syntactic literature. Since this distinction does not affect the main proposal of this study, I will simply ignore that difference in the following discussion.

2. This study focuses on the children's error in which children place *no* in the sentence-initial position. Another mismatch between children's and adults' negative utterances is the observation that children initially use *not* or *no*, whereas adults use negative auxiliary verbs (*don't*, *can't*, etc.). See Thornton & Tesan (2013) for a detailed discussion and analysis of this type of error in child English.

3. This finding is in line with the one made by Stromswold & Zimmermann (1999/2000) for child German. Their study analyzed the negative utterances produced by five German-speaking children, and found that these children systematically distinguish between *nicht* 'not' and *nein* 'no': The results of their transcript analysis indicated that children used *nicht* exclusively in sentence-medial position for sentential negation and *nein* exclusively in sentence-initial position for anaphoric negation.

4. If children's *no* in neg-initial sentences is not a marker for sentential negation, a question remains as to the exact nature of this negative element. Various attempts have already been made to answer this question. For example, Drozd (1995) analyzed the neg-initial sentences produced by 10 English-speaking children, and found that most of their negative sentences can be

paraphrased as exclamatory negation, like *No way Leila have a turn*. Based on this observation, Drozd (1995) argues that children's pre-sentential negations are not sentential negatives but an early form of *metalinguistic exclamative negation,* which is the use of idiomatic phrases like *no way* to express objection to a previous utterance.

5. A potential problem remains, though. Children's neg-initial sentences tend to appear (slightly) earlier than *why not?* questions, and hence it might be the case that the children analyzed in this study have already stopped using the sentence-initial *no* when they started to use *why not?* questions. Investigations of a larger number of children's corpora may find a child who uses neg-initial sentences and *why not?* questions during the same period of development, a task which I have to leave for future research.

REFERENCES

Bellugi, Ursula (1967) *The Acquisition of Negation*. Doctoral dissertation, Harvard University.

Bloom, Lois (1970) *Language Development: Form and Function in Emerging Grammars*. Cambridge, Massachusetts: MIT Press.

Brown, Roger (1973) *A First Language: The Early Stages*. Cambridge, Massachusetts: Harvard University Press.

Chomsky, Noam (2012) Introduction. In *Chomsky Gengo Kiso Ronsyu* [Foundations of Biolinguistics: Selected Writings], ed. Naoki Fukui, 17-26. Tokyo: Iwanami Shoten.

Déprez, Viviane, and Amy Pierce (1993) Negation and Functional Projections in Early Grammar. *Linguistic Inquiry* 24:25-67.

Drozd, Kenneth F. (1995) Child English Pre-sentential Negation as Metalinguistic Exclamatory Sentence Negation. *Journal of Child Language* 22:583-610.

Fukui, Naoki, and Margaret Speas (1986) Specifiers and Projection. In *Papers in Theoretical Linguistics: MIT Working Papers in Linguistics 8*, eds. Naoki Fukui, Tova R. Rapoport and Elizabeth Sagey, 128-172. Cambridge, Massachusetts: MIT Working Papers in Linguistics.

Kitagawa, Yoshihisa (1994) *Subjects in Japanese and English*. New York: Garland Publishing.

Koopman, Hilda, and Dominique Sportiche (1991) The Position of Subjects. *Lingua* 85:211-258.

Kuczaj, Stan (1976) *-ing, -s, and -ed: A Study of the Acquisition of Certain Verb Inflections.* Doctoral dissertation, University of Minnesota.

Kuroda, Shige-Yuki (1988) Whether We Agree or Not: A Comparative Syntax of English and Japanese. *Linguisticae Investigationes* 12:1-47.

MacWhinney, Brian (2000) *The CHILDES Project: Tools for Analyzing Talk*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Merchant, Jason (2006) Why No(t)? *Style* 40:20-23.

Sachs, Jacqueline (1983) Talking about Here and Then: The Emergence of Displaced Reference in Parent-Child Discourse. In *Children's Language, Volume 4*, ed. K. E. Nelson. Hillsdale, New Jersey: Lawrence Erlbaum.

Stromswold, Karin, and Kai Zimmermann (1999/2000) Acquisition of *Nein* and *Nicht* and the VP-internal Subject Stage in German. *Language Acquisition* 8:101-127.

Sugisaki, Koji (2012) Subject-Auxiliary Inversion in Child English Revisited. Paper presented at EVOLANG IX: Workshop on Theoretical Linguistics / Biolinguistics, Campus Plaza Kyoto, March 13, 2012.

Suppes, Patrick (1973) The Semantics of Children's Language. *American Psychologist* 88:103-114.

Thornton, Rosalind, and Graciela Tesan (2013) Sentential Negation in Early Child English. *Journal of Linguistics* 49:367-411.

類義語間の機能的差異—法副詞 *maybe* と *perhaps* を例にして—*

(A Functional Analysis of the Synonymic Modal Adverbs *Maybe* and *Perhaps*)

鈴木大介（Daisuke SUZUKI）
日本学術振興会特別研究員
（JSPS Research Fellow）

キーワード：法副詞、コーパス分析、モーダル機能、談話機能、発話機能

1. はじめに

本発表では、機能言語学の観点から、コーパスデータに対して複数の語用論的な情報の数量化を行うことで、英語法副詞の機能の相違を実証する。具体的には、以下の(1)で表されるような法副詞の *maybe* と *perhaps* を分析していく。この 2 表現について、Biber et al. (1999: 854)は、話者の確信や蓋然性を示す Doubt and certainty という範疇に *maybe* と *perhaps* を含めている。この領域には他に *certainly, probably, no doubt, undoubtedly, I think* 等が属している。Huddleston and Pullum (2002: 768)は、その度合いに応じて法副詞の領域を (i)strong, (ii)quasi-strong, (iii)medium, (iv)weak の 4 つに分けているが、その 2 表現は最も弱い(iv)に分類をしている。このように *maybe* と *perhaps* は同じ意味範疇に属し、その度合いも同様であることがわかる。実際の使用例からは、両者が(2a, b)のように似通った生起環境で用いられていることが見てとれる。

(1) *Maybe*/*Perhaps* it'll stop raining soon. (Swan 2005: 348)

(2) a. *Maybe* it is true, *maybe* it isn't. (BNC: CH2)
b. *Perhaps* this was true; *perhaps* not. (BNC: CJJ)

2. 先行研究と研究の背景

生起位置や意味内容については、Swan (1988: 459-460)で、具体的なテクスト調査に基づき、*maybe* と *perhaps* が節頭で生起しやすいことが示されている。Swan (2005: 348)でも、(1)に示したように、節頭での生起頻度が高く、同じ意味を表すということが言及されている。

次に、生起位置に関する先行研究の分析を検討する。Quirk et al. (1985: 490-491)と Hoye (1997: 148)が法副詞の生起しうる位置に関して、以下の七か所を示している。

(3) a. ***I (initial)***
Possibly they may have been sent to London.
b. ***iM (initial-medial)***
They *possibly* may have been sent to London.
c. ***M (medial)***
They may *possibly* have been sent to London.
d. ***mM (medial-medial)***
They may have *possibly* been sent to London.
e. ***eM (end-medial)***
They may have been *possibly* sent to London.
f. ***iE (initial-end)***
They may have been sent *possibly* to London.

g. ***E (end)***
They may have been sent to London *possibly*.
(Hoye 1997: 148)

一方で、Ernst (2010: 178)では、(4a, b)に示すように、法副詞は節の高次の位置にしか生起しないと述べている。

(4) a. (*Maybe*) She (*maybe*) will (*maybe*) be (**maybe*) singing a ballad (**maybe*). (Ernst 2004: 756)
b. (*Perhaps*) Al (*perhaps*) should (*perhaps*) be (**perhaps*) seeing a doctor (**perhaps*). (Ernst 2010: 178)

実際の例を見てみると、(5)のような節の最後の位置にも生起する。以下は British National Corpus (BNC)における書き言葉の例である。

(5) At the time it appeared to be the most plausible *perhaps*. (BNC: A0U)

文末に関しては、Quirk et al. (1985: 620)が、疑問文の末尾における *perhaps* の使用について言及しており、以下の例のように、相手との親密さを確かめたり、フェイスを失うのを緩和したりするような効果的な使用が見られる、と説明している。

(6) Is Mary at home, *perhaps*? (Quirk et al. 1985: 620)

このように、意味や蓋然性の点で類似していることが指摘されているが、両者の差異については明らかにされていない。また生起位置に関しても見解が一致していない状況にある。そこで、本研究では、大規模コーパスを用いて、各表現の実際の生起パターンを示すと同時に、語用論的な機能に着目した定量的な分析を行うことで、それらの差異を明らかにする。

3. データと方法論

本研究では、一億語の大規模コーパスである BNC (XML Edition)を用いる。このコーパスから、*maybe, perhaps* について、それぞれ全 10080, 33521 例が検索できた。次に、文副詞として生起しているものを手作業で調べて抽出していくと、各 6694, 22189 例が得られた。[1] これらの用例を分析対象とし、以下の 3 点を分析項目（変数）として設定の上、調査を行い、それらとの関係性について考察を行う。まず、心的態度の観点から、モダリティ表現を強める機能（モーダル機能）に着目し、[1]節における法助動詞との共起情報を数量化する。次に、談話構造の観点から、法副詞の談話レベルでの振る舞い（談話機能）に焦点を当て、[2]法副詞の生起位置を調査する。最後に、対人的な観点から、話し手と聞き手のやりとり（会話/発話行為的機能）に注目し、[3]法副詞が生起する節の主語の定性を調べ、各代名詞との共起パターンを考察する。

4. 結果と考察

最初に、法副詞と同じくモダリティの意味を表す法助動詞との作用について見ていく。法助動詞との共起結果は、表 1 の通りとなり、*maybe* の方が *perhaps* よりも共起割合が有意に高いことが見

てとれる。法副詞も同様に命題の蓋然性に対する話し手の態度を示すことから、他の法助動詞と共起することによって、話し手の心的態度の表出が一層強められることになる。以上から、話し手によるモダリティの意味強化の一端を担っているため、*maybe* の方が話者の心的態度という意味を強める働きを有していると言える。(7a, b)は、その一例である。

表 1. 法助動詞との共起割合

	総数	共起数	%
maybe	6,694	2,317	34.6
perhaps	22,189	6,552	29.5

(χ^2 = 62.25, d. f. = 1, p < 0.001)

(7) a. Then *maybe* it**'ll** last for ever. (BNC: EFJ)
b. And so er we're expecting *perhaps* it **might** be a little bit lively. (BNC: HF0)

続いて法助動詞との共起パターンであるが、表 2 に示すように *maybe* は *will* や *would* との共起頻度が高く、(8a, b)のように蓋然性がより高いとされる *probably* との共起も数例見られた。一方で、*perhaps* の場合は *may* や *might* との共起が顕著に見られた。このような法助動詞との共起関係の観点から、*perhaps* よりも *maybe* の方が、蓋然性が高いと考えられる。

表 2. 共起した法助動詞とその頻度

	***maybe* (6,694 例)**		***perhaps* (22,189 例)**	
	生起数	**1,000 例あたり**	生起数	**1,000 例あたり**
must	5	0.7	39	1.8
will	701	**104.7**	1,222	55.1
would	581	**86.8**	1,510	68.1
shall	20	3.0	49	2.2
should	331	49.4	1,082	48.8
can	228	34.1	746	33.6
could	369	55.1	1,088	49.0
may	16	2.4	305	**13.7**
might	66	9.9	512	**23.1**

(8) a. It's **probably**, *maybe* member's ignorance that they don't know that, that already a lot of work has been done on it. (BNC: JJG)
b. *Maybe* it's **probably** has a rough working idea it's you that put the fountain on today. (BNC: KBP)

次に、法副詞の生起位置に関して、まず文副詞の一般的な生起位置から見て

いく。Biber et al. (1999)の調査によると、スタンスを表す副詞全体の生起位置は下の表 3 のように示されている。[2] 下の表から、全てのレジスターにおいて、節中に生起している割合が高いことがわかる。

表 3. レジスター毎のスタンスを表す副詞類の生起位置（Biber et al. [1999: 872]より抜粋）

	Initial position (%)	Medial position (%)	Final position (%)
CONVERSATION	●●●	●●●●●●●●●●	●●●●●●●
FICTION	●●●●●	●●●●●●●●●●●	●●●●
NEWSPAPER	●●●●●●●	●●●●●●●●●●●	●●
ACADEMIC	●●●●●●	●●●●●●●●●●●●●	●

●1 つで 5%を表す

上の表を踏まえ、本調査と比較する。生起位置とその割合は、以下の図 1 のような結果となり、法副詞の中では *maybe*, *perhaps* のどちらも(9a, b)のように節頭に生起する割合が非常に高いことが見てとれる。両者について、節頭に絞った上で、さらなる調査を行ったところ、*maybe* の方が統計的にも節頭に生起しやすいことがわかった（Initial vs. Non-Initial : (χ^2 = 701.02, d. f. = 1, p < 0.001)）。

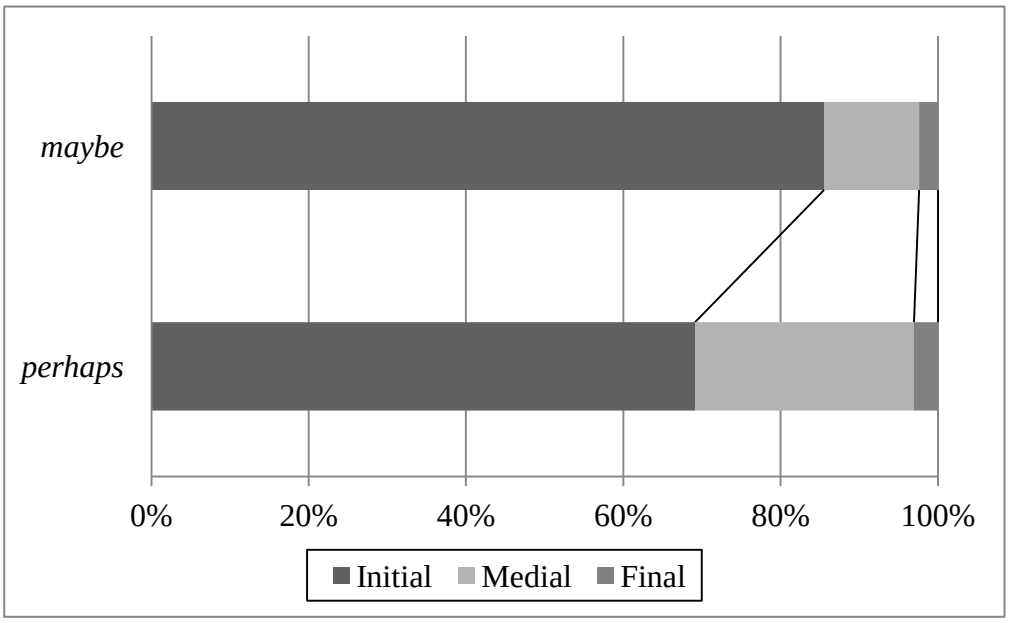

図 1. 生起位置とその割合

(9) a. *Maybe* she would even smell a whiff of perfume. (BNC: AC3)
b. *Perhaps* she would enjoy it more if Lydia stopped whimpering. (BNC: G0X)

この節頭という位置に着目すると、Halliday (1970: 335)では、以下の(10a, b)が「モダリティ」ではなく、「主題」の点で異なるとされている。節の最初に生起すると、そのモダリティの意味が主題/トピックとなることが指摘されている（Halliday 1970: 335, Hoye 1997: 148-152, Halliday and Matthiessen 2004: 79-85）。

(10) a. **Possibly** it was Wren.
b. It **may** have been Wren.

(Halliday 1970: 335)

このような節頭と談話機能の関係から、*maybe* の方が、その節内容についての蓋然性、すなわち、モダリティというトピック/主題を明示する傾向にある。

最後に、法副詞の 2 表現が生起している節の主語における代名詞との共起パターンを示した結果が以下の表 4 である。

表 4. 共起した代名詞とその頻度

	***maybe* (6,694 例)**		***perhaps* (22,189 例)**	
	生起数	**1,000 例あたり**	**生起数**	**1,000 例あたり**
I	849	**126.8**	1,610	72.6
you	682	**101.9**	1,764	79.5
he	619	92.5	1,658	74.7
she	351	52.4	852	38.4
it	889	132.8	2,899	130.7
we	512	**76.5**	1,216	54.8
they	501	74.8	1,121	50.5
this	82	12.2	559	25.2
that	238	35.6	395	17.8
these	5	0.7	35	1.6
those	2	0.3	3	0.1
there	183	27.3	537	24.2

perhaps と比較すると、*maybe* が生起する節では、*I, you, we* が主語となっている場合が多く、話し手と聞き手がお互いに関わる情報についての理解を得るというような文脈の中で、*maybe* が用いられる傾向にあると言える。また(11a, b)の例のように、*maybe* が疑問文の中に生起したり、付加疑問部のような働きをしたりする例も見られた。文末において話し手と聞き手のやりとりの際の確認を示したり、同意を促すような、間主観的な意味を表すコミュニケーション上の機能を発達させていることがわかる。

(11) a. D’ya think it was the rain, *maybe*? (BNC: KB8)
b. You wouldn’t recognise us with our clothes on, *maybe*? (BNC: HTS)

以上から、複数の語用論的な観点から見た場合、意味が同様とされる *maybe* と

perhaps のような類義語間においても機能が異なっていることがわかった。

最後に、なぜこのような機能的な相違が生じるのか、について考察する。特に、談話や対人的な観点から、もともと話し手の心的態度を明示する法副詞が、主観性を増して文頭に現れ、さらに話し手と聞き手のやりとりに関わるような間主観的なデバイスとなる、というような言語変化は、Traugott (1989, 2010), Traugott and Dasher (2002), Brinton (2008)で提唱される主観化・間主観化のプロセスと一致する。具体的には(12)に示すような変化の過程である。

(12) non-/less subjective > subjective > intersubjective (Traugott 2010: 35; Traugott and Dasher 2002: 225)

maybe と *perhaps* に関わる意味変化については、上述の主観化・間主観化の観点から説明が可能であるが、英語において類義語を成している両表現の差異を説明するにあたり、この言語変化の進行の円滑さと速度の差異として、2 表現を捉えることも可能ではないかと考える。

5. おわりに

本稿では、機能言語学の観点からのコーパス分析を通して、英語法副詞における類義語の差異を実証した。意味論レベルでは同様でも、節を超えた談話・語用論レベルにおいては表現間の機能に相違が見られることから、類義語分析に際しての語用論的な変数の重要性やその妥当性を示した。その相違については、（間）主観化という一般的な言語変化のメカニズムの観点からの説明を試みた。

注

* 本稿は、日本英語学会第 31 回大会での口頭発表に加筆・修正を加えたものである。発表・執筆に際して、貴重なご助言をくださった家入葉子先生、菅山謙正先生、龍城正明先生、西村秀夫先生にとりわけ御礼申し上げたい。また、司会をしてくださり、有益なご指摘をしていただいた丸田忠雄先生、ならびに貴重なご質問・ご指摘をしてくださった柏野健次先生、眞田敬介先生、家口美智子先生に深く感謝申し上げたい。なお、本稿の不備、誤りは全て筆者の責任である。

[1] “*Perhaps*.”といった一語表現はもちろん、(i)のような節を形成していない例や、(ii)のように句構造内に生起している例、さらに(iii)に示すように、節から切り離され、句修飾を明確にするコンマ(,)がある場合は句修飾と捉え、分析対象から除外した。

i *Perhaps* only in the next life. (BNC: A08)

ii I haven’t been to an organized campsite for *perhaps* fifteen years, so all this is new to me. (BNC: A6T)

iii An election may also be a realigning one in that it produces a long-term shift in the balance of support between the parties, *perhaps* installing one as the new majority. (BNC: A6F)

[2] ここで言うスタンス副詞には、*no doubt, probably, undoubtedly, I think, in fact, really, according to …, mainly, generally, in my opinion, kind of, so to speak* 等の epistemic adverbials や、*unfortunately, to my surprise, hopefully* 等

の attitude adverbials、さらには *frankly*, *honestly*, *truthfully*, *in short* 等の style adverbials が含まれる。

参考文献

Biber, Douglas, Stig Johansson, Geoffrey Leech and Susan Conrad (1999) *Longman Grammar of Spoken and Written English*, Pearson, Harlow.

Brinton, Laurel J. (2008) *The Comment Clause in English: Syntactic Origins and Pragmatic Development*, Cambridge University Press, Cambridge.

Ernst, Thomas (2004) "Principles of Adverbial Distribution in the Lower Clause," *Lingua* 114, 755-777.

Ernst, Thomas (2010) "Adverbs and Light Verbs," *Proceedings of the 22rd North American Conference on Chinese Linguistics (NACCL-22) and the 18th International Conference on Chinese Linguistics (IACL-18) 2*, eds. by Lauren E. Clemens and Chi-Ming L. Liu, 178-195, Harvard University, Cambridge, MA.

Fowler, Henry W. (1998) *Fowler's Modern English Usage*, 3rd ed., revised by Robert W. Burchfield, Oxford University Press, Oxford.

Greenbaum, Sidney (1969) *Studies in English Adverbial Usage*, Longman, London.

Halliday, Michael A. K. (1970) "Functional Diversity in Language as Seen from a Consideration of Modality and Mood in English," *Foundations of Language* 6, 322-361.

Halliday, Michael A. K. and Christian M. I. M. Matthiessen (2004) *An Introduction to Functional Grammar*, 3rd ed., Arnold, London.

Hoye, Leo (1997) *Adverbs and Modality in English*, Longman, London.

Huddleston, Rodney and Geoffrey K. Pullum (2002) *The Cambridge Grammar of the English Language*, Cambridge University Press, Cambridge.

小西友七（編）(2006)『現代英語語法辞典』三省堂, 東京.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language*, Longman, London.

Simon-Vandenbergen, Anne-Marie and Karin Aijmer (2007) *The Semantic Field of Modal Certainty: A Corpus-Based Study of English Adverbs*, Mouton de Gruyter, Berlin.

Swan, Michael (2005) *Practical English Usage*, 3rd ed., Oxford University Press, Oxford.

Swan, Toril (1988) *Sentence Adverbials in English: A Synchronic and Diachronic Investigation*, Novus, Oslo.

Traugott, Elizabeth C. (2010) "(Inter)subjectivity and (Inter)subjectification," *Subjectification, Intersubjectification and Grammaticalization*, ed. by Kristin Davidse, Lieven Vandelanotte and Hubert Cuyckens, 29-71, De Gruyter Mouton, Berlin.

Traugott, Elizabeth C. and Richard B. Dasher (2002) *Regularity in Semantic Change*, Cambridge University Press, Cambridge.

Conditions on Object Quantifier Raising in English

Shigeki Taguchi
Shinshu University*

Keywords: Control, Object Quantifier Raising, overt object shift, Phrasal Configuration Distinctness, Scope Economy

1. INTRODUCTION

This paper presents a novel, though highly speculative, account of the phase-boundedness of Object Quantifier Raising (henceforth OQR) in English, in terms of Phrasal Configuration Distinctness, as defined in (1). OQR is distinguished from other instances of QR in that it is exclusively motivated for type-resolution. I claim that Phrasal Configuration Distinctness given in (1) stipulates that every step of OQR must result in a syntactically distinct phrasal configuration throughout its derivational history, in tandem with Revised Scope Economy, as defined in (2), which is a slightly revised (or weakened, more precisely) version of Scope Economy proposed in Fox 2000):[1]

(1) Phrasal Configuration Distinctness:
Every step of OQR must result in a distinct phrasal configuration (i.e. $XP^n \rightarrow *XP^n$, where n stands for the number of segments).

(2) Revised Scope Economy:
The final landing site of QR is the closest phase necessary for type-resolution and a new interpretation.

The background idea is that, just like the word order information is recorded as the derivation proceeds under Fox and Pesetsky's (2005) system, the information on phrasal configurations (i.e. how many segments a resultant phrase consists of) might also be recorded throughout the derivation, and the derivation makes use of such information in order to filter out ill-formed outputs.[2] One of the main differences between operations that change word order and those that change phrasal configurations, I believe, is that the former opts for retaining the information gained in the previous steps as much as possible, whereas the latter goes in the opposite direction; namely, operations that change phrasal configurations hates the information gained in the previous steps to be identical. Thus, given the widely-held assumption that a certain syntactic configuration results in a semantic type-mismatch (e.g. the sister to V), and it is supposed to be solved by the application of QR, it might be the case that economy considerations require the derivation to avoid reproducing the same phrasal configuration that has been produced in the previous steps of the derivation.

One of the most important premises is that I develop an argument in support of the claim that QR is phase-bounded (cf. Miyagawa 2011, Takahashi 2010, 2011, among others). In Section 2, I introduce Takahashi's (2010, 2011) argument for contextual approach to phasehood, which is based on the assumption that Exceptional Case-marking (ECM) infinitives in English are CPs (cf. Ormazabal 1995, McCloskey 2000, Bošković 2007, Despić 2011, Takahashi 2011, Kang 2012, etc.). I also follow Takahashi in treating ECM infinitives in English as CPs. However, I point out in Section 3 that Takahashi's analysis, which is based on the

assumption that phases are contextually determined by Case-valuation (cf. Bošković 2012), should bring about a contradictory conclusion that CPs count as phases with respect to *wh*-movement but they do not count as phases with respect to QR. In Section 4, I thus put forth my own analysis of the relevant data, with recourse to the conditions given as (1) and (2), maintaining that CPs and (transitive) *v*Ps are phases by nature, following the traditional characterization. I further show that the proposed analysis provides an implication that the movement analysis of control might be on the right track (cf. Hornstein 1999, etc.)

2. PHASEHOOD DETERMINED BY CASE-VALUATION

Before discussing Takahashi's (2010, 2011) proposals, I would like to give an outline of the contextual approach to phasehood. Under the traditional minimalist assumptions, functional heads such as *v* and C are phase heads by nature (i.e. their phasehood remains constant regardless of the syntactic context they are in). On the other hand, some researchers (cf. Bošković 2012c, to appear, Despić 2011, Kang 2012, etc.) have recently taken the contextual approach to phasehood, under which functional heads acquire phasehood in the course of derivation, depending on the syntactic contexts they are in.

In line with the contextual approach to phasehood, Takahashi (2010, 2011) proposes an interesting generalization that only heads that participate in Case-valuation constitute phases (cf. Bobaljik and Wurmbrand 2005, Kang 2012, etc.). Let us overview Takahashi's (2011) analysis of English ECM on the basis of the generalization. Takahashi presents McCloskey's (2000) data from West Ulster English in (3) as a piece of evidence that ECM infinitives in English are CPs:

(3) a. Who did you expect your mother all to meet at the party?
b. *Who did you arrange for your mother all to meet at the party?

Roughly put, McCloskey claims that (3)a is well-formed because *your mother* has undergone object shift across the embedded SpecCP, where *all* associated with *who* has been stranded. However, in (3)b, *your mother* cannot undergo object shift due to the complementizer *for*, leaving no space for *all* to be stranded.

Given the contrast in (3), it might be the case that ECM infinitives in Standard English are CPs as well, being differentiated from those in West Ulster English in that they do not have their complementizers overtly realized in most cases and that they do not allow quantifiers to be stranded in their Spec for independent reasons. Now, let us turn to Takahashi's analysis. Crucially, Takahashi attributes to the lack of Case-valuing the extractability of the embedded subject out of the CP in (3)b without landing it in SpecCP; namely, in contrast to (3)b, where the complementizer *for* Case-values the embedded subject and hence constitute a phase, the CP in (3)a does not count as a phase because C (and T that it selects; henceforth C-T) never participates in Case-valuation, and hence object shift skipping the embedded SpecCP is tolerated. What should be note is that Takahashi extends this idea in order to explain the asymmetry in the applicability of cross-clausal QR exemplified in (4):

(4) a. Someone believes that John hates everyone.
(some > every, *every > some)

b. Someone believes John to hate everyone.

(some > every, every > some)

As Bošković (1998) observes, the object quantifier in the embedded *that*-clause cannot take scope over the subject quantifier in the matrix clause, as in (4)a, but such cross-clausal inverse scope reading is available with ECM infinitives, as in (4)b. Note that Takahashi follows the claim that QR is phase-bounded and cannot apply skipping the embedded CP (cf. Miyagawa 2011, etc.). Under Takahashi's analysis, where Case-valuation constitute a phase, coupled with the phase-bounded view of QR, the embedded CP in (4)a constitutes a phase and QR cannot skipped it, because C-T participates in Case-valuation. Adjoining *everyone* to the embedded SpecCP on the way to the matrix CP, where it c-commands *someone*, is not a solution, since it does not create a new scope interpretation, which is a violation of Fox's (2000) original version of Scope Economy, given as (5).[3]

(5) Scope Economy
Scope-shifting operations (SSOs) cannot be semantically vacuous.

On the other hand, QR skipping the embedded CP is possible in (4)b, because C-T never participates in Case-valuation, and hence does not constitute a phase.

3. PROBLEM

Interesting as it is, Takahashi's analysis faces with some empirical problems. I point out two of them here. As for his account of English ECM, it involves the following kind contradiction: on the one hand, he claims that ECM infinitives are CPs that allow QR to skip them (cf. (4)b), and on the other hand, he provides data showing that ECM infinitives require *wh*-movement to proceed via the embedded SpecCP (cf. (3)a). Given Chomsky's (2008) system (which Takahashi basically follows), where movement is solely motivated by the Edge-features on phase heads, how can *who* in (3)b stop by at the embedded SpecCP, if Takahashi's claim that CPs in ECM infinitives are not phases is correct? In short, Takahashi's analysis bring about a contradictory situation where CPs count as phases with respect to *wh*-movement but they do not count as phases with respect to QR.[4] However, such a problem would not arise once it is simply assumed that the embedded C in (3)b is predetermined to be a phase head but that in (4)b is not. In other words, it seems plausible that a Case-valuing functional head constitute a phase, but it does not seem to follow that non-Case-valuing functional head never constitute a phase. There may be other factors at work regarding the determination of phasehood.

Another problem is that there is a counterexample to Takahashi's generalization. Consider the contrast between (6)a and (6)b (cf. Fox 2000, Miyagawa 2011, Moltmann and Szabolcsi 1994, etc.):

(6) a. One girl knows that every boy bought a present for Mary.
b. One girl knows what every boy bought for Mary.

(one > every, every > one)

In (6)a, the embedded C-T participates in Case-valuation of the subject, just as in (4)a, which is what Takahashi's analysis predicts. In (6)b, on the other hand, the embedded C-T

participates in Case-valuation of the subject, but QR of *every boy* over *one girl* is still possible. This appears to what Takahashi's analysis cannot predict. However, this is not a problem, if it is assumed that *every boy* adjoins to the embedded CP on the way to the matrix CP, where it c-commands *one girl*, creating a new scope interpretation with respect to *what* (cf. Fox 2000, Miyagawa 2011, etc.). The question, however, is whether this is compatible with Takahashi's analysis. Crucially, Takahashi assumes that traces (or reconstructed copies of QP) left by A-movement can be used for quantifier interpretation (cf. Hornstein 1995).[5] Thus, in the embedded clause in (6)b, traces of *what* and *every boy*, which are supposed to undergo A-movement to Spec*v*P and SpecTP, respectively, should also participate in the scope calculation. If this is the case, both the *what* > *every boy* interpretation and the *every boy* > *what* interpretation should have already been established at the point when *every boy* is subject to QR, because *every boy* and *what* c-command the trace of each other left behind by the relevant A-movement. The intermediate structure is given in (7):

(7) $[_{TP}$ every boy $[_{vP}$ what $[_{vP}\ t_{\text{every boy}}\ [_{VP}$ bought t_{what} for Mary]]]]

Thus, the adjunction of *every boy* to the embedded CP does not in fact create a new interpretation, which results in a violation of Fox's (2000) original version of Scope Economy, given in (5).

One may be tempted to argue that Takahashi's analysis should be tenable even in the face of examples like (6)b, once Fox's original version of Scope Economy is weakened, as is proposed in Miyagawa (2011) (cf. footnote 1). Miyagawa (2011) deduces (8) on the basis of the fact that in (9), the universal object quantifier cannot take higher scope than the existential subject quantifier (cf. Johnson 2000):

(8) Application of Domain of Scope Economy: Scope Economy evaluates optional movement in one phase at the next higher phase. In the root phase the evaluation takes place simultaneous with the movement.

(9) Some student or other hasn't answered many of the questions on the exam.

Johnson (2000) claims that the lack of inverse scope in (9) is due to the unavailability of the lower copy of the subject quantifier in the lower *v*P phase. Building on (9), Miyagawa proposes (8), and argues that only QPs in the higher CP phase are visible for scope purpose. This is because the subject quantifier in the lower *v*P phase is subject to A-movement to the higher CP phase and is interpreted there. Thus, QR that has crossed the copy of the subject quantifier in the higher *v*P phase is invalidated, rendering the inverse scope between the existential quantifier and the universal quantifier impossible. Now, let us consider whether the availability of inverse scope between *one girl* and *every boy* in (6)b can be accounted for by way of (8) and Takahashi's claim that phases are contextually determined by Case-valuation. Note that in the embedded CP in (6)b, illustrated as (10), there is nothing that invalidates the QR of *every boy*:

(10) $[_{CP}$ every boy $[_{CP}$ what $[_{TP}\ t_{\text{every boy}}\ [_{vP}\ t_{\text{what}}\ [_{vP}$ $t_{\text{every boy}}\ [_{VP}$ bought t_{what} for Mary]]]]]]

Furthermore, under Takahashi's analysis, the matrix *v* in (6)b does not count as a phase, because it never participates in Case-valuation.

Thus, *every boy* is allowed to move at one fell swoop to the matrix CP, successfully yielding the *every boy* > *one girl* interpretation.

In sum, I have pointed out two problems with Takahashi's (2010, 2011) analysis. I have also demonstrated that one of these problems can be solved if Takahashi's analysis is coupled with Miyagawa's (2011) modification to Fox's (2000) Scope Economy, except for the problem that the *every boy* > *what* interpretation is established twice in the lower *v*P phase. In the next section, I propose my own analysis of the relevant data, and try to clear up the abovementioned problems.

4. PROPOSAL

The assumptions that ECM infinitives are CPs (cf. Ormazabal 1995, McCloskey 2000, Bošković 2007, Despić 2011, Takahashi 2010, 2011, Kang 2012, etc.) and that QR is phase-bounded (cf. Miyagawa 2011, etc.) both seem well-grounded, given the data in (3) and (4). Building on the abovementioned problems, I demonstrate that OQR across ECM infinitives are allowed but that across *that*-clauses are not, without recourse to the idea that phases are contextually determined by Case-valuation. I thus propose that OQR be subject to the condition (11), in tandem with Revised Scope Economy given in (12). These two conditions are shown to successfully allow object quantifiers to stop by at *v*Ps and CPs, which are widely taken to be phases by nature, still maintaining the phase-boundedness of QR:

(11) Phrasal Configuration Distinctness:
Every step of OQR must result in a distinct phrasal configuration (i.e. $XP^n \rightarrow *XP^n$, where *n* stands for the number of segments).

(12) Revised Scope Economy:
The final landing site of QR is the closest phase necessary for type-resolution and a new interpretation.

Let us suppose that OQR starts out from the sister to V, yielding a type-mismatch, as in (13). In order to satisfy (12), the final target of the relevant QR must be the matrix *v*P. Also, in order to satisfy phase-boundedneess of QR, the first step of QR must target the embedded *v*P, as in (14)a, followed by the movement to the embedded CP, as in (14)b:

(13) $[_{vP1}$ SUBJ $[_{v'}$ *v* $[_{VP}$ …V everyone]]]

(14) a. First Step for (4):
$[_{vP2}$ everyone $[_{vP1}$ t_{SUBJ} $[_{v'}$ *v* $[_{VP}$ …V $t_{everyone}$]]]]

b. Second Step for (4):
$[_{CP}$ everyone $[_{TP}$ SUBJ $[_{T'}$ T $[_{vP1}$ …V $t_{everyone}$]]]]

Obviously, each step in (14) does not violate (11) in both (4)a and (4)b, because the resulting phrasal configurations are *v*P-adjunction (i.e. vP^2) and CP-adjunction, respectively, which are entirely distinct from the base-generated phrasal configuration (13). Let us move on to the final step. In (4)a, the target must be the matrix *v*P, in accordance with phase-boundedness of QR and (12), but the resulting phrasal configuration, *v*P-adjunction (i.e. vP^2), is not convergent because it is identical to (14)a, as in (15)a (i.e. vP^2). The question is why the final step is convergent in (4)b, though it is not in (4)a. Crucially, this is because the embedded subject has undergone obligatory object shift to the matrix outer Spec*v*P in (4)b (cf. Postal 1974, Lasnik and Saito 1991, etc.), resulting in the vP^2 phrasal configuration. If *everyone* further

undergoes QR and adjoins to the vP^2 phrasal configuration, the derivation produces (15)b (i.e. vP^3), rather than (14)a (i.e. vP^2), which satisfies (11) and is well-formed:

(15) a. Final Step for (4)a:
*[$_{vP2}$ everyone [$_{vP1}$ $t_{someone}$ [$_{v'}$ v [$_{VP}$ V [$_{CP}$ …$t_{everyone}$…]]]]]
b. Final Step for (4)b:
[$_{vP3}$ everyone [$_{vP2}$ SUBJ [$_{vP1}$ $t_{someone}$ [$_{v'}$ v [$_{VP}$ V [$_{CP}$ …$t_{everyone}$…]]]]]]

Let us look at the scope interactions of another pair of examples which involve an object quantifier in the embedded clause and a subject quantifier in the matrix clause. Bošković (1998) reports that the inverse scope reading is less salient in (16)a than in (16)b:

(16) a. Someone wants for John to hate everyone.
(some > every, *every > some)
b. Someone wants to hate everyone.
(some > every, every > some)

The unavailability of the inverse scope reading in (16)a is predicted under the proposed analysis. Given McCloskey's (2000) claim that object shift has not taken place in (16)a (cf. (3)b), the second and the final steps of OQR should both result in the vP^2 phrasal configuration (cf. (14)a and (15)a), in violation of (11). The question is how to get the inverse scope reading in (16)b, if the embedded clauses in (16) are categorially identical (i.e. CPs). To answer this question, let us assume that the embedded Spec$v$P is occupied by PRO that is controlled by the subject quantifier in the matrix clause. Bearing this in mind, let us consider the derivation of (16)b from the base-generated structure in (17). What is important here is that due to PRO controlled by the subject quantifier in the matrix clause, the condition (12) requires OQR to target the embedded vP, rather than the matrix vP. Thus, only the first step of OQR suffices for type-resolution and a new interpretation, as in (18) below:

(17) [$_{TP}$ [$_{T'}$ T [$_{vP1}$ PRO$_{someone}$ [$_{v'}$ v [$_{VP}$ …V everyone]]]]]
(18) [$_{TP}$ [$_{T'}$ T [$_{vP2}$ everyone [$_{vP1}$ PRO$_{someone}$ [$_{v'}$ v [$_{VP}$ …V $t_{everyone}$]]]]]]

Of course, it does not seem to be the case that all control infinitives in English allow inverse scope because of PRO, but the above data seem to provide a piece of evidence that the movement approach to Control might be on the right track (cf. Hornstein 1999, etc.).

5. CONCLUSION

This paper pointed out problems with the idea that phasehood is contextually determined by Case-valuation, and proposed conditions on OQR to account for the availability and unavailability of the cross-clausal inverse scope reading in *that*-clauses and ECM infinitives in English.

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[1] Under the phase-based analysis of QR, it seems that Scope Economy must somehow be weakened. See (8) in the main text.

[2] I put aside here the problem of the Inclusiveness Condition, which seems to be inevitably violated under any theory that adds to the derivation the information absent in the numeration (i.e. the information related to word order or phrasal

configurations, which is recorded throughout the derivation).

[3] Note that Fox's (2000) original version of Scope Economy is strictly local; in other words, it requires every step of QR to create a new interpretation.

[4] I do not intend to exclude entirely the possibility that CPs count as phases with respect to *wh*-movement but do not count as phases with respect to QR. For example, let us tentatively assume that CPs in West Ulster English may be weak phases, as claimed by Otsuka (this volume), whereas those in Standard English may be strong phases. If overt operations like *wh*-movement target weak phases and covert operations like QR target strong phases, the contrast between (3) and (4) should follow quite naturally. I leave this issue open here.

[5] Under Chomsky's (2008) mechanism, A-movement of *what* should target SpecVP rather than Spec*v*P in the embedded clause in (7), because the Agree-features on *v* are supposed to be inherited by V. However, given that *wh*-movement is an instance of parallel movement, where one copy is attracted by the Agree-features inherited by V and the other is attracted by the Edge-features that remain on *v*, at least one of two copies of *what* should be moved to the embedded Spec*v*P. While the movement of a copy to Spec*v*P seems to be regarded as an instance of A′-movement, it is no wonder that the copy in Spec*v*P also participates in the scope calculation in question.

REFERENCES

Bobaljik, Jonathan. and Wurmbrand Susi (2005) "The Domain of Agreement," *Natural Language and Linguistic Theory* 23. 809-865.

Bošković, Željko (1998) "LF Movement and the Minimalist Program," *NELS* 28, 43-57.

Bošković, Željko (2007) "On the Locality and Motivation of Move and Agree: An Even More Minimal Theory," *Linguistic Inquiry* 38, 589-644.

Bošković, Željko (2011) "On Valued Uninterpretable Features," *NELS* 39, 109-120.

Bošković, Željko (2012) "On NPs and Clauses," *Discourse and Grammar: From Sentence Types to Lexical Categories*, ed. by Gunther Grewendorf Thomas Ede Zimmermann, 179-246, Walter de Gruyter, Berlin.

Chomsky, Noam (2008) "On Phases," *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, Carlos Peregrín Otero, and Maria Luisa Zubizarreta, 133-166, MIT Press, Cambridge, MA.

Despić, Miloje (2011) *Syntax in the Absence of Determiner Phrase*. Doctoral dissertation, University of Connecticut.

Fox, Danny (2000) *Economy and Semantic Interpretation*. MIT Press, Cambridge, MA.

Fox, Danny and David Pesetsky (2005) "Cyclic Linearization of Syntactic Structure," *Theoretical Linguistics* 31, 1-45.

Hornstein, Norbert (1995) *Logical Form: From GB to Minimalism*. Blackwell, Cambridge, MA.

Hornstein, Norbert (1999) "Movement and Control," *Linguistic Inquiry* 30, 69-96.

Johnson, Kyle (2000) "How Far Will Quantifiers Go?," *Step by Step: Essays on Minimalism in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 187-210, MIT Press, Cambridge, MA.

Kang, Jungmin (2011) "To have TP or Not: Evidence from Successive-Cyclic Movement via Spec CP," ms., University of Connecticut.

Lasnik, Howard and Mamoru Saito (1991) "On the Subject of Infinitives," *CLS* 27, 324-343.

McCloskey, James (2000) "Quantifier Float and *Wh*-movement in an Irish English," *Linguistic Inquiry* 31, 57-84.

Miyagawa, Shigeru (2011) "Optionality," *The Oxford Handbook of Linguistic Minimalism,* ed. by Cedrix Boeckx, 354-376, Oxford University Press, Oxford.

Moltmann, Friederike and Anna Szabolcsi (1994) "Scope Interaction with Pair-List Quantifiers," *NELS* 24, 381-395.

Ormazabal, Javier. 1995. *The Syntax of Complementation: On the Connection between Syntactic Structure and Selection*. Doctoral dissertation, University of Connecticut.

Otsuka, Tomonori. (this volume). "On Floating Quantifiers in an Irish English and Weak-Phases," *Papers from the 31st National Conference of the English Linguistic Society of Japan*.

Postal, Paul (1974) *On Raising: One Rule of English Grammar and Its Theoretical Implications*, MIT Press, Cambridge, MA.

Takahashi, Masahiko (2010) "Case, Phases, and Nominative/Accusative Conversion in Japanese," *Journal of East Asian Linguistics* 19, 319-355.

Takahashi, Masahiko (2011) *Some Theoretical Consequences of Case-marking in Japanese,* Doctoral dissertation, University of Connecticut.

濁りの表示と不透明性：日英語の有声音の深層と表層
(Turbid Representations for Opacity: The Overt and Covert Nature of Voicing in English and Japanese)

田中 伸一 (Shin-ichi Tanaka)
東京 大学 (University of Tokyo)

キーワード：不完全指定，適用不全，不透明性，濁りの表示，濁り依存の制約

１. 序説：何が言いたいか

本論文は，日英語の有声音の性質の違いについて有声同化の観点から着目し，そこで提起される不透明性の問題(opacity problem)が，濁りの表示(turbid representation)と濁り依存の制約(turbidity-sensitive constraints)によって解決されることを主張する。「濁りの表示」とは，文字通りの「有声音の表示」(representations for voicing)という意味にもここでは解釈できるが，もっと一般的に「不透明な表示」(Goldrick 2001)を意味するものである。

具体的には，出力表示に派生情報が組み込まれているとする仮説(containment hypothesis)に立ちつつ， Goldrick(2001)が提案する濁りの表示に則って，有声性に関する２種類の出力表示を提案し，提起される不透明性の問題がうまく解決できることを立証する。いわば，不透明性の問題を，Prince and Smolensky (1993/2004)への原点回帰の立場から解決する提案である。

２. 不透明性：有声音の何が問題なのか

2.1. 不完全指定＝適用不全

一般的にいって，規則の順序関係を最適性理論(Optimality Theory; OT)の枠組みで捉えるのはそれほど難しいことではない。(1)では，*AD→BD ⇒ *CB→CE という規則の供与順序(feeding order)によって得られる表層形 CED が，制約ランキングによってうまく出力できることを示している。

(1) 順序付けとランキング

a. 供与順序

UR	/CAD/
*AD→BD	CBD
*CB→CE	CED
SR	CED

b. ランキング

Input	Output	*CB	*AD	Faith
/CAD/ →	CAD		*!	
	CBD	*!		*
	☞ CED			*

しかしながら，２つの規則をひっくり返すと供与の逆順序(counterfeeding order)となり，望まれる表層形 CBD を OT では出力できなくなる。CBD が CED によって調和的に拘束(harmonically-bound)され，制約ランキングを逆にしても結果が変わらないからである。

(2) 適用不全の不透明性：田中(2013c, 2014)

a. 供与の逆順序

UR	/CAD/
*CB→CE	-
*AD→BD	CBD
SR	CBD

b. ランキング

Input	Output	*AD	*CB	Faith
/CAD/ →	CAD	*!		
	☹ CBD		*!	*
	☞! CED			*

これが適用不全(underapplication)の不透明性であり，表層形 CBD は，*CB→CE という規則の適用を受けないまま適格な形式となる。OT にとって致命的な問題となることがわかるだろう。

だとすれば，いわゆる不完全指定(underspecification)という操作は，どういった形で

あれ常に OT にとって不透明性の問題を喚起することになる。なぜなら，不完全指定とは，本来は供与の順序関係にある「素性値指定」と「その素性値に言及する規則」を，逆順序にすることで得られる効果だからである。

たとえば，(3)は日英語の有声同化(voicing assimilation; VA)のあり方を示しており，英語は有声阻害音と共鳴音の両方が有声同化を引き起こす「表層型」だが，日本語は有声阻害音のみが有声同化を引き起こす「深層型」だという違いが浮き彫りになる。

(3) 日英語の有声同化：田中(2013a,b,c)

a. 有声阻害音

英語： describe-[d]　hug-[d]

日本語： tob-[da]「飛んだ」　kag-[da]「嗅いだ」

b. 共鳴音

英語： borrow-[d]　score-[d]

tie-[d]

日本語：*kaw-[da]「買った」*tor-[da]「取った」

*oki-[da]「起きた」

ここで，日本語共鳴音の有声同化の適用不全(3b)は，(4)のような不完全指定により捉えられる。

(4) 日英語共鳴音の不完全指定:（田中 2011）

a. 英語: 供与の順序

UR　/score-t/ (no specification for voicing)

Default　score-t (r becomes voiced)

VA　score-d

SR　score-d

b. 日本語: 供与の逆順序

UR　/tor-ta/ (no specification for voicing)

VA　- (r remains voiceless)

Default　tor-ta (r becomes voiced)

SR　tor-ta

つまり，英語では共鳴音の有声性に関する「デフォールト指定(Default)」と「有声同化(VA)」が供与の順序関係にあるのに対し，日本語ではそれらを逆にすることにより，適用不全の効果を導き出している。したがって，(2b)に示したように，通常の OT の枠組みでは(4b)の適用不全，つまりは不完全指定の効果が適格に捉えられないことになる。

2.2. 共鳴音のジレンマ

共鳴音の有声性をめぐる不完全指定に関連して，さらに複雑な問題が日本語にはある。同じ共鳴音であっても，鼻音とその他の共鳴音とでは，(5)のように現象ごとに異なる振る舞いを見せるのである。

(5) 鼻音とその他の共鳴音：田中(2013b,c)

a. 連濁とライマンの法則

鼻音:

notare-zini「のたれ死に」　ase-bami「汗ばみ」

obore—zini「溺れ死に」　siri-gomi「尻込み」

その他:

yoku-bari「欲張り」　saki-dori「先取り」

ki-dukawi「気遣い」　sitto-guruwi「嫉妬狂い」

b. 有声同化

鼻音:

norare-zin-[da]「のたれ死んだ」　ase-bam-[da]「汗ばんだ」

obore-zin-[da]「溺れ死んだ」　siri-gom-[da]「尻込んだ」

その他:

*yoku-bar-[da]「欲張った」　*saki-dor-[da]「先取った」

*ki-dukaw-[da]「気遣った」　*sitto-guruw-[da]「嫉妬狂った」

ここで奇妙なのは，鼻音とその他の共鳴音ともに有声阻害音と違って，(5a)のようにライマンの法則(Lyman's Law; LL)の適用を受けずに連濁(sequential voicing; SV)が許されるのに対し，有声同化(5b)に関しては鼻音のみが適用し，その他の共鳴音は(4b)で見た通り適用を受けない点である。つまり，鼻音は(5a)ではその他の共鳴音と同様に振る舞うのに対し，(5b)では有声阻害音と同様に振る舞うというジレンマを，どのように扱うかという点が問題となる。

この謎解きは，規則の順序付けでは(6)の通りとなる。つまり，鼻音の有声性に関する「デフォールト指定(Default(N))」は「ライマンの法則(LL)」とは供与の逆順序なので LL が適

用不全だが,「有声同化(VA)」とは供与の関係にあるので VA の適用が許される。これに対し，その他の共鳴音の有声性に関する「デフォールト指定(Default(S))」は,「ライマンの法則(LL)」と「有声同化(VA)」の両方と供与の逆順序の関係にあるので, LL と VA のいずれも適用不全であることが捉えられる。

(6) 鼻音とその他の共鳴音の不完全指定

a. 鼻音: 供与の順序と逆順序

UR	/notare-sin-ta/	(no specification for voicing)
SV&LL	notare-zin-ta	(n remains voiceless)
Default(N)	notare-zin-ta	(n becomes voiced)
VA	notare-zin-da	
Default(S)	-	
SR	notare-zin-da	

b. その他の共鳴音: 供与の逆順序

UR	/yoku-par-ta/	(no specification for voicing)
SV&LL	yoku-bar-ta	(r remains voiceless)
Default(N)	-	
VA	-	(r remains voiceless)
Default(S)	yoku-bar-ta	(r becomes voiced)
SR	yoku-bat-ta	

しかしながら，(2b)に示したように，通常の OT の枠組みでは(4b)の適用不全はおろか, (6)のような複雑な不完全指定の効果を，適格に捉えることは到底できない点こそに，問題の所在がある。

以上をまとめると，不完全指定はある規則と素性値指定を供与の逆順序にする操作であることから，常に適用不全の不透明性問題が引き起こされ, OT にとっては致命的な問題となることが明らかにされた。Ito, Mester, and Padgett (1995)は，この種の問題を「素性の認可」(feature licensing)と「認可の解除」(licensing cancellation)という考え方で回避しようとしたが，新たなパワフルな道具立てを導入し問題を複雑にせざるを得なかった。新たな道具立てを必要とせずに，Prince and Smolensky (1993/2004)への原点回帰の立場から問題解決する提案が，以下の試みである。

3. 濁りの表示：どう問題を解くのか

3.1. 不透明性の元凶と透明化

濁りの表示とは, 出力表示に基底からの「派生過程」を組み込んだ表示であり，表層からすべての「派生過程」が見えるように透明化した表示である。概念自体は新しいものではなく, 含有理論(containment theory)の仮説に立つ Prince and Smolensky (1993/2004)で採用されたものである。のちに Goldrick(2001)が自律分節音韻論に応用して発展解消させ，“Turbidity utilizes a single complex representation which incorporates covert, structural relationships (projection) and audible, surface relationships (pronunciation).”(p. 13)と定義している。本稿でも，これを有声同化に応用した２種類の表示を提案する。

まず，原点となる含有理論とその後発展した対応理論(correspondence theory; McCarthy and Prince 1995)とを出力表示に関して比べてみると，両者の性質の違いが浮き彫りになる。

(7) 含有理論と対応理論の出力表示

	削除	変化なし	挿入	変化なし
対応理論	/ABC/ ↓ AB	/AB/ ↓ AB	/AB/ ↓ ABC	/ABC/ ↓ ABC
含有理論	/ABC/ ↓ AB<C>	/AB/ ↓ AB	/AB/ ↓ ABC	/ABC/ ↓ ABC

つまり，対応理論では，出力表示 AB が削除を経た結果なのか基底から存在するのかの違いが表層からは不明であり, 出力表示 ABC も挿入を経た結果か基底から存在するのかが表層からはわからない。要は，基底での対立が表層で失われてしまうのである。そして，これこそが不透明性の元凶であり，不透明性問題の所在だと考えられる。これに対し，含有理論は派生過程を組み込んだ出力表示を採用しているので，削除や挿入の派生過程は透明化され，AB<C> vs. AB と ABC vs. ABC は表層において発音(pronunciation)上は同じであ

っても投射(projection)上は基底での対立が反映されたものとなる（上記の“turbidity”の定義を参照）。したがって，不透明性の問題からは自由であり，不完全指定などの適用不全の効果を表層から導き出すことができる。

では，どのようにして出力表示から不透明性の効果を導き出すのか。まず，(8)のように，普遍文法の制約は，次の３種に区別されると仮定する（田中 2014）。

(8) 濁り依存の制約

a. X-依存の制約：基底から表層まで存在する要素 X に依存する制約

b. $\boxed{X}$-依存の制約：基底に存在しないが表層には存在する（派生過程で導かれた）要素 $\boxed{X}$ に依存する制約

c. <X>-依存の制約：基底に存在するが表層には存在しない（派生過程で失われた）要素<X>に依存する制約

だとすると，適用不全や適用過剰は，(9)のランキングスキーマにより捉えることができる。

(9) 不透明性のランキングスキーマ

a. 適用不全

基底から存在する要素 X は作用するが，基底に存在しないが表層には存在する（派生過程で導かれた）要素 $\boxed{X}$ は作用しない

→ X-依存の制約 >> Faith >> $\boxed{X}$-依存の制約

b. 適用過剰

基底から存在する要素 X は作用し，かつ基底に存在するが表層には存在しない（派生過程で失われた）要素<X>も作用する

→ X-依存の制約, <X>-依存の制約 >> Faith

つまり，適用不全は派生過程で導かれた要素 $\boxed{X}$ は作用しないので $\boxed{X}$-依存の制約が Faith より下位に，適用過剰は派生過程で失われた要素<X>が作用するので<X>-依存の制約が Faith より上位にそれぞれランクされることで，不透明性が原理的に捉えられるというわけである（田中 2014）。実際のところ，(2b)で得られなかった表層形 CBD は，(9a)のランキングスキーマを利用して，(10)のように導くことができる。

(10) 適用不全の不透明性

Input	Output	*AD	Faith	*CB
/CAD/ →	CAD	*!		
	☞ C$\boxed{B}$D		*	*
	C$\boxed{E}$D		**!	

ここで，*AD は基底にある要素 X のみを評価する X-依存の制約であり，*CB は基底に存在しないが表層には存在する要素 $\boxed{X}$ をも評価する $\boxed{X}$-依存の制約である。C$\boxed{E}$D の E は A→B→E となって導かれたもの（素性が２つ変わったもの）だから，Faith 違反を２つ犯している点が致命的となって，C$\boxed{B}$D が最適となる。もちろん，*CB が Faith より上位にあれば C$\boxed{E}$D が最適となり，(1)で示した供与順序の効果も得られるというわけである。その他，適用過剰の事例も同様に(9b)のランキングスキーマにより説明できるが，詳しくは田中(2014)を参照のこと。

3.2. 有声性の表示と不完全指定

こうした濁りの表示を利用した制約があれば，日英語の共鳴音の不完全指定や，鼻音とその他の共鳴音の不完全指定をめぐる適用不全の問題は，難なく解決することができる。

まず，前者については次ページの(11)のように，有声阻害音の有声同化を促す Agree-V と共鳴音の有声同化を促す Agree-$\boxed{V}$ が関わっており，それぞれ X-依存の制約と $\boxed{X}$-依存の制約に該当するものとなっている。共鳴音にとっての有声性は余剰的であるので，あとから導かれる $\boxed{X}$ となるのである。そして，英語では共鳴音の有声指定と有声同化とが供与の順序関係にあるので，Agree-$\boxed{V}$ が Fill-Link[voice] よりも上位にランクされる。これに対し，日本語では共鳴音の有声指定と有声同化とが供与の逆順序になるので，(9a)により Agree-$\boxed{V}$ が Fill よりも下位にランクされ，適用不全，すなわち不完全指定の効果が導かれるというわけである。もちろん，Agree-V は Fill より

も上位なので，有声阻害音も同化を導く。

(11) 日英語共鳴音の不完全指定

	Agree-V	Agree-V	Fill-Link[voi]		Agree-V	Fill-Link[voi]	Agree-V
/describe-T/				/tob-Ta/			
describe-[t]	*!			tob-[ta]	*!		
☞ describe-[d]			*	☞ tob-[da]		*	
/score+T/				/tor-Ta/			
score-[t]		*!	*	☞ tor-[ta]		*	*
☞ score-[d]			**	tor-[da]		**!	
/kick+T/				/kak-Ta/			
kick-[t]	*!			kak-[ta]	*!		
☞ kick-[t]			*	☞ kak-[ta]		*	

ここで，両言語の過去形接辞は，有声性について基底で指定を持たない T を持つと仮定しておく。

一方，鼻音とその他の共鳴音の不完全指定は，(12)のように説明される。ここで，和語は語頭で清濁の対立を持たないので，主要部語頭は有声性が無指定であると仮定しておく。R は基底から有声性を持つ連濁形態素である。

(12) 鼻音とその他の共鳴音の不完全指定

	Agree-V	Agree-NV	Fill-Link[voi]	Agree-SV
/yoku R par-Ta/				
yoku R par-[ta]	*!		*	*
☞ yoku R bar-[ta]			**	*
yoku R par-[da]	*!		**	
yoku R bar-[da]			***!	
/notare R sin-Ta/				
notare R sin-[ta]	*!	*	*	*
notare R zin-[ta]		*!	**	*
notare R sin-[da]	*!		**	
☞ notare R zin-[da]			***	

実をいうと，(11)の Agree-V は(12)の Agree-SV(sonorant voice)に該当するもので，鼻音を含む共鳴音一般の有声同化に関するものである。つまり，Agree-V は Agree-SV と Agree-NV(nasal voice)とに分割され，実際には Agree-NV のみが Fill よりも上位にランクさ

れているというわけである。それゆえ，鼻音のみが有声同化を導く点が保証される。そして,(12)の最適候補がライマンの法則に抵触しないのは，その制約が基底から存在する有声性 V が２つ以上共起してはならないと定義されるからである。つまり，定式としては*[V…V]となり，ライマンの法則は X-依存の制約に他ならない。

ここで重要なのは，連濁とは無声音が有声化されることから派生された V が導かれるように見えるが，実はそうではなく，複合を可能にする連濁接頭辞 R が，(12)のように音実現されるプロセスだという点にある（Ito and Mester 2003）。つまり，その有声性は基底から存在する V だということである（なので，「のたれ死んだ」「嫉妬狂った」を連濁させない人はこの R を持たず，(12)の Agree-V の違反がすべて消えることで導かれる)。この R の複合的機能は，*Franco- American, morpho-syntax, psycho-linguistics, chemo-receptor, Sino-Japanese* などのように形態素を複合する接尾辞*-o* や，*statesman, salesman, headsman, bandsman, swordsman, tradesman, linesman* などのように語を複合する接尾辞*-s* に似ている。また，有声性それ自体が形態素として振る舞う点は，英語の名詞ー動詞の交替を示す *mouth*[mauθ] ~ *mouth* [mauð], *house*[haus] ~ *house*[hauz], *advice* [ədvais] ~ *advise*[ədvaiz], *base*[beis] ~ *base* [beiz], *bath*[bæθ] ~ *bathe*[beið], *breath* [breθ] ~ *breathe*[briːð]といった例や，ウェールズ語文語体(Literary Welsh)における男性形ー女性形の交替を示す *hogin tal* ‘tall lad’ ~ *geneθ dal* ‘tall girl’, *dur klir* ‘clear water’ ~ *nos glir* ‘clear night’, *gwint poeθ* ‘hot wind’ ~ *teisen boeθ* ‘hot cake’といった例(Radford et. al 2009: 164-165)でも裏付けられる。

いずれにしても，連濁の有声性が基底から存在する V だという点については，田中(2013b)も参照のこと。また，本論文では有声性を「基底からの V」と「派生された V」とに区別することで適応不全の不透明性問題を解決したが,似たような試みとして Rice(1993, 2005)は有声性を「喉頭弁別有声」(laryngeal voice)と「自然発生有声」(spontaneous voice)に区別して，様々な有声性現象を説明している。しかしながら，この区別では本論文が問題にした不透明性問題が説明できない点については，田中(2013a,b)を参照されたい。

４. 同化の制約階層：どう主張を裏付けるか

本論文では，有声同化をめぐる不透明性問題を解決しようとした結果として，Agree-V >> Agree-NV >> Agree-SV という制約階層が明らかになった。最後に，この制約階層が現象を説明するためだけに仮定されたのではなく，原理的に導かれるものである点に触れておきたい。つまり，これまでの主張を理論的に裏付けるものである。

まず，個々の文節音が持つ有声性の強さについて，一般には聞こえ(sonority)に基づいて，(13a)の Scale 1 のような卓立性のスケール(prominence scale)が成り立つことは言を俟たないであろう。日本語でも，阻害音の有声性の際立ちは，濁点を付けることからも明らかである。一方で，位置に関わる卓立性のスケールとして，Gv[有声音＋母音]の前の位置の方が Cv[無声音＋母音]の前の位置よりも全体として聞こえが高く卓立性が高いと考えられ，Scale 2 も成り立つものと思われる。

(13) 調和的制約配置の原理

a. 内在的な有声性の強さ

Scale 1: 文節音

V (obstruents) > NV (nasals) > SV (other sonorants)

Scale 2: 位置

_Gv > _Cv

b. 制約階層

*V/_Cv >> *NV/_Cv >> *SV/_Cv

= Agree-V >> Agree-NV >> Agree-SV

だとすれば，この２つのスケールを Prince

and Smolensky(1993/2004)のいう調和的制約配置の原理(Harmonic Alignment)によりかけ合わせると，(13b)のような制約階層が導かれる（Gv の前の位置については省略する）。つまり，[有声阻害音+無声音]という構造は最も嫌われ，次に[鼻音+無声音]，そして[その他の共鳴音+無声音]は比較的許容されやすいということである（英語でも *bp, bt, bs, bk, dp, dt, ds, dk, gp, gt, gs, gk, zp, zt, zs, zk* といった子音連結は，複合語を除いて語中ではほとんど観察されない)。そして，この制約階層こそ，これまで述べてきた Agree-V >> Agree-NV >> Agree-SV に他ならない。

また，母音に挟まれた子音連続 $vC_1.C_2v$ という環境において，一般に尾子音 C_1 は聞こえが高い方が好まれ，頭子音 C_2 は聞こえが低い方が好まれる。Vennemann(1988)のいう音節接触の原理(Syllable Contact Law)である。ここで，C_1 を無声音とするなら，C_2 は聞こえが高い方が良い（低い方が嫌われる）わけだから，この点も(13b)の制約階層に一致する事実に注目したい。

５. 結論：何がわかったか

本論文では，１）不完全指定とは適応不全の不透明性問題に他ならないこと，２）適用不全や適用過剰などの不透明性問題は，濁りの表示とそれに基づく濁り依存の制約階層によって解決できること，３）説明に必要な制約階層は調和的制約配置から原理的に導かれること，などの帰結を得た。不透明性問題に対して，これまで OT の歴史の中で様々な解決法が提案されてきたが，４）濁り依存の制約のランキングスキーマにより原理的に解決できることを示したこと，５）原点回帰こそ有望な手立てだという点を示したことが，音韻論一般において最大の意味合いとなろう。

引用文献

Goldrick, Matt (2001) “Turbid Output Representations and the Unity of Opacity,” *NELS* 30, 231-245.

Ito, Junko, and Armin Mester (2003) *Japanese Morphophonemics: Markedness and Word Structure,* The MIT Press, Cambridge, Massachusetts:

Ito, Junko, Armin Mester, and Jay Padgett (1995) “Licensing and Underspecification in Optimality Theory,” *Linguistic Inquiry* 26:4, 571-613

McCarthy, John J. and Alan Prince (1995) “Faithfulness and Reduplicative Identity,” *UMOP* 18 (*Papers in Optimality Theory*, 249-384.

Prince, Alan, and Paul Smolensky (1993/2004) *Optimality Theory: Constraint Interaction in Generative Grammar*, Technical Report TR-2, Rutgers Center for Cognitive Science, Rutgers University, New Brunswick, NJ. [Reproduced by Blackwell, New York in 2004.]

Radford, Andrew et. al (2009) *Linguistics: An Introduction*, Cambridge University Press, Cambridge.

Rice, Keren (1993) “A Reexamination of the Feature [sonorant]: The Status of ‘Sonorant Obstruents,’” *Language* 69, 308-344.

Rice, Keren (2005) “Sequential Voicing, Postnasal Voicing, and Lyman’s Law Revisited,” *Voicing in Japanese*, ed. by Jeroen van de Weijer, Kensuke Nanjo, and Tetsuo Nishihara, 25-46, Mouton de Gruyter, Berlin.

田中伸一 (2011)「音のいちゃつきと仲たがい：セグメントの音声文法」『言語科学の世界へ』, 164-188, 東京大学出版会, 東京.

田中伸一 (2013a)「濁りの表示と不透明性(1)：日英語の有声音の深層と表層」, *Conference Handbook* 31, 9-12. [日本英語学会第 31 回大会，福岡大学，2013 年 11 月.]

田中伸一 (2013b)「濁りの表示と不透明性(2)：２種類の有声表示による透明化」, 日本言語学会第 147 回大会予稿集，4-9. [日本言語学会第 147 回大会シンポジウム「日本語研究とその可能性―音韻・レキシコン・文法を中心に―」，神戸市外国語大学，2013 年 11 月.]

田中伸一 (2013c) “Underspecification in Optimality Theory,” 東京音韻論研究会ワークショップ「“underlying representation” を考える」，東京大学，2013 年 12 月.

田中伸一 (2014)「濁りの表示と不透明性(3)：適用不全と適用過剰はどこからくるのか？」, 東京音韻論研究会月例会, 東京大学, 2014 年 1 月. 第 9 回音韻論フェスタ, KKR ホテル熱海，2014 年 2 月.

Vennemann, Theo (1988) *Preference Laws for Syllable Structure,* Walter de Gruyter, Berlin.

英語の中間態再考：
事態概念と言語習得の観点から*

(English Middle Voice Reconsidered:
From the Viewpoint of Event Conception and
Language Acquisition)

谷口一美 (Kazumi Taniguchi)
京都大学 (Kyoto University)

キーワード：中間態、自他交替、
get-passive、言語習得

1. はじめに

本稿は、英語において「中間態」に相当する言語形式をめぐって認知言語学の観点から考察し、英語の中間態が習得過程においてどのように発現するかを CHILDES コーパスのデータから示す。特に中間態から受動態へと発達する類型的・通時的方向性が習得過程においても観察されることを、英語の *get*-passive を中心に示していきたい。

2. 中間態の定義と形式

従来の研究では、能動態・受動態が統語的ヴォイスである一方、中間態は影響性を核とする意味的ヴォイスであるとみなされてきた。Klainman (1988) は、多くの言語において非派生的な文主語に“controller”と“affected entity” の 2 種類が認められることを指摘し、後者の affected entity を主語とするのが中間態であると定義している。この定義に基づき Arce-Arenales et al. (1994) は、主格・対格言語において、能動態主語が述語の表す行為により影響を受けるか否かという意味的区別があるとし、affected entity を主語とする場合を “middle diathesis”と呼んでいる。なお affected entity は意味役割的には Patient であり、Agent からの働きかけを前提とすることから、中間態が他動性の概念とも密接な関わりを持つことが分かる。

中間態のマーカーとして、スペイン語の再帰接語 SE を以下に例示する。

(1) a. La puerta *se* abrió. [intransitive]
the door SE opened

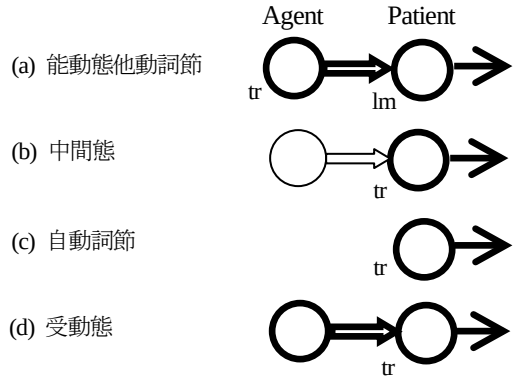
b. Juan *se* mató. [reflexive/ passive]
Juan SE killed

c. Esta fruta *se* llama aguacate. [passive]
this fruit SE call avocado

(1a) では他動詞 abrir が SE を伴い非対格自動詞化されている。(1b) は「Juan が自分自身を殺した」という再帰的解釈、「Juan が誰かに殺された」という受け身的解釈の 2 通りが可能である。実際、スペイン語の受け身は (1c) のように再帰接語 SE で表すのが一般的であり、*be*-passive の受動態は存在しているものの使用されることが稀である。すなわちスペイン語は受動態以上に中間態に依存した言語であると言える。

中間態の類型論的研究で知られる Kemmer (1994) は、中間態のマーカーがスペイン語の SE のように拡張的である事実をふまえつつ、中間態が意味的に統一的なカテゴリーであるとみなす立場をとる。特に Kemmer は、中間態によって表される状況の一般的特性として、事態の参与者の分離性の低さ (low degree of distinguishability of participants) を挙げている。確かに (1b) の再帰的用法では行為者と対象が同一指示であり、参与者の分離性は低いが、(1a) のように他動詞を非対格自動詞化する場合、行為者と対象は完全に分離した参与者であり、Kemmer の見方では必ずしも中間態の全体を捉えることはできない。しかし、中間態がどのようなタイプの「事態」を標示するかという Kemmer の認知言語学的観点は、ヴォイスの現象を捉えるにあたって有益である。

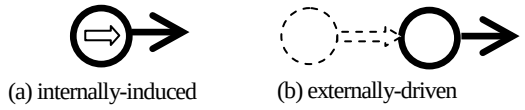
認知文法の Langacker (2008) はヴォイスに関し、受動態が能動態他動詞節に対するオプションである一方、中間態は能動態他動詞節及び自動詞節に対するオプションであると記述している。“The door opened easily.” という中間構文は他動詞節 “I opened the door.” の動作主性を減じたものとも、自動詞節 “The door opened.” の動作主性を高めたものともみなされる。図 1 は、事態認知モデルである action chain により、能動態、中間態、自動詞節、受動態をそれぞれ示したものである。[1]



【図 1 】(cf. Langacker 2008: 385)

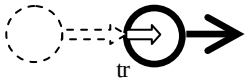
図では tr が最も際立つ参与者であり文主語、lm が tr に次いで際立つ参与者で目的語に対応する。線の太さは認知的際立ちの高低を表示する。図 1 (b)の中間態で Agent が細い実線であるのは、Agent が際立ちを受けず意味スコープ内に含意されていることを示す。

しかし、「中間態」は図 1 (b) の中間構文にのみ該当するのだろうか。冒頭で述べた中間態の定義上、affected entity を主語とするのが中間態であるならば、Patient を主語とする節表現はすべて中間態の候補となる。その場合、図 1 (c) の自動詞節 “The door opened.” も中間態とみなされることになる。実際に Langacker (1991) は、彼が thematic relationship と呼ぶ自動的事態を次のように分類している。図 2 (a) の internally-induced thematic relationship は参与者自らのエネルギーにより起こされる自動的事態であり非能格自動詞、図 2 (b) の externally-driven thematic relationship は他の参与者により外部から引き起こされる自動的事態であり非対格自動詞にそれぞれ対応する。図 2 (b) の externally-driven thematic relationship の事態構成は中間構文の図 1 (b) に極めて近似していることが分かる。



【図 2】(cf. Langacker 1991: 245)

さらに中間構文は、Langacker が図 1 (b) に示した以上の特性を持ち、特に主語が果たす役割は複合的である。中間構文の主語指示物は、Agent から影響を受ける affected entity である一方、その属性によって Agent の行為遂行の難易度が左右されるため、主語指示物自体も影響力を発揮するとみなされる。



【図 3 】

図 3 では tr 内部の二重矢印で、属性から発せられる影響力を表示している。中間構文は受け身とは異なり Agent を明示することができず、総称的な Agent の存在を強く含意するため、図 3 では Agent をより背景化させ、点線で表示している。

これらの図から分かるように、中間構文と非対格自動詞の違いは非明示的な Agent の背景化の程度問題であり、両者は連続的であると考えられる。実際に、中間構文で使用可能な他動詞は限られているものの、非対格自動詞は基本的に中間構文に使用することができ、”The door opened easily.” の open は非対格自動詞とも中間動詞とも解釈可能である。

以上、中間態の定義に照らし合わせると、英語の中間態には中間構文だけではなく非対格自動詞も該当すると言える。とりわけ本稿では Alexiadou (2012) を支持し、非対格自動詞、中間構文に加えて “*get*- passive” も中間態の一形式とみなし、英語の中間態に 3 つの形式があると想定する。例えば “I got dressed.” の場合、他

動詞 dress が同形態の自動的用法を欠くため、対応する自動詞形として “get dressed” が機能しており、そのヴォイスは事実上受動態ではなく中間態である。

一方で、中間態と受動態にも連続性が認められるのも事実である。受動態の主語も意味的には affected entity であり、英語の受動文の成立に影響性という意味制約が関与することはすでに明らかにされている通りである (高見 1995)。また類型論的にも、Shibatani (1998) が指摘するように、中間態から受動態への通時的変化は一般的傾向であり、中村 (1999) も中間態から受動態への変化を一種の文法化と分析している。本稿では、中間態から受動態への移行が類型的・通時的傾向のみならず、言語習得においても認められると主張する。言語習得過程において中間態は受動態に先行し、自動的事態の記号化の主たる手段として機能していることを、中間態の 3 つの形式の習得から示していきたい。

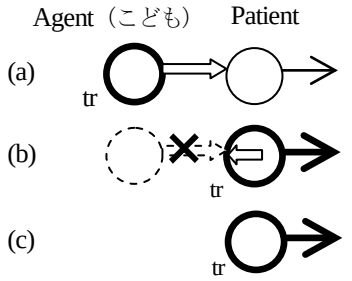
3. 自他交替の習得

本節では、非対格自動詞と中間構文の両者に関わる「自他交替」の習得について調査した谷口 (2011) の結果を手短に示す。

英語は非対格自動詞用法が固有の標識を持たず他動詞と同一形態であるため、どの他動詞が自動詞へと交替可能であるかを習得するのは容易ではないと推測できる。Lord (1979)は、こどもが “I can’t hear it.. (puts clock to ear) It can *hear* now.” のように非対格自動詞用法を持たない他動詞から自動詞を産出し、結果的に中間構文的な発話を産出していることを示している。Lord はこの現象が、open など非対格自動詞との類推により他動詞から自動詞の交替が過剰生成されていると述べている。

また、自他交替の習得に関する先行研究である Budwig et al. (2001) によると、Agent を主語としない middle をこどもが用いるのはこども自身の意図する行為を対象が抵抗し阻み、結果的に行為が失敗する場合、つまり “The door won’t open.” のような場面である。

こうした事実から、谷口 (2011) は図 4 のように自他交替の習得の段階を仮定した。典型的な他動的事態に対し、こどもは初めに (a) のように、自分自身が Agent であり最も際立つ tr である他動詞用法を獲得する。こども自身が行為の対象に注意の焦点をシフトすることが容易なのが、(b) のように行為の対象物が抵抗力を自分に発しており、対象物のせいで自分の意図する行為が失敗したと責任を転嫁するような場合である。これを図 3 で示した中間構文の事態把握と比較すると、対象物が何らかのエネルギーを発するものとして認識されている点で、極めて近い事態把握であることが分かる。このような中間構文的な段階を経て、最終的にこどもは (c) のように、行為の対象そのものに焦点をシフトすることができるようになり、Agent を完全に切り離した非対格自動詞を習得するに至る。



【図 4 】

谷口 (2011) では CHILDES コーパスで非対格自動詞 open, move を含むこどもの発話と対話者である大人の発話を収集・分析し、この習得段階の妥当性を示しているが、紙幅の都合上、詳細は谷口 (2011) を参照されたい。

4. *Get*-passive の特性

残る 1 つの中間態の形式である *get*- passive について、本節では先行研究で指摘されている通時的・共時的特性を概要する。

Get-passive の通時的成立過程については Givón and Yang (1994) で詳細に分析されている。彼らによると、*get*-passive は 場所句を伴う get の用法 (He got her into the house) から使役用法 (He got her to go)、さらに再帰的使役用法 (She

got herself to go) が生じ、補文が *be*-passive を伴う形 (She got herself to be admitted) から She got to be admitted, She got admitted と 2 段階の形式的単純化により *get*-passive が生じた。このように再帰的用法からの拡張であるため、*get*-passive は多くが人を主語とすることも特徴の 1 つである。なお、“get angry” のように get が形容詞補語をとる *get*-inchoative の用法は *get*-passive の成立後に生じており、過去分詞が形容詞的に用いられることからの類推であると Givón and Yang は述べている。

そのほか、Arce-Arenales et al. (1994)がスペイン語の SE と英語の *get*-passive の平行性を主張し、*get*-passive が類型論的にみても中間態に相当することを示唆している。また比較的近年の共時的分析として Alexiadou (2012), Wanner (2013) などがあり、それらの先行研究で指摘されている *get*-passive の特性は次のようにまとめることができる。

(i) *get*-passive は、“get hit,” “get hurt,” “get stuck” など、悪影響を被る「被害性」を表す場合が多い。

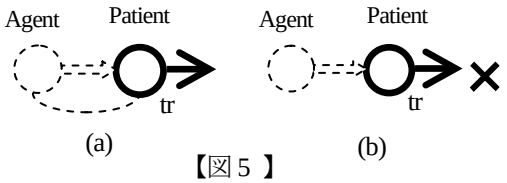
(ii) *get*-passive の主語は Patient ではあるものの、責任(responsibility) を帯びるという点で Agent 的な性質を併せ持つ。例えば “Samantha got hurt.” の場合、怪我をしたのは Samantha が不注意な行動をしたなど Samantha 自身にも責任があると解釈される（一方で “Samantha was hurt.” ならば主語の Samantha に責任はない）。

(iii) Agent の明示可能性に関し、*get*-passive は (ii) で挙げたようにその主語指示物自体が責任を帯びており、責任の所在を表す by 句で Agent を提示することはかつて容認されていなかったが、近年は *be*-passive との類推により by 句を伴う *get*-passive が容認されつつある。

(iv) *get*-passive は非対格自動詞用法を持たない他動詞を自動詞化する（”get dressed,” “get married” など）。

(v) *get*-passive は起動相のアスペクトに結合しており、状態的な *be*-passive と対照的に用いられる。

以上の観察に基づき、*get*-passive の表す事態として図 5 に示す 2 つの下位分類を action chain で示す。 図 5 (a) は Agent と Patient (affected entity) が同一指示となる再帰的な場合で *get*-passive の原初的用法である。図 5 (b) は Agent と Patient が分離しており、Patient の被害性を含意する場合である。



【図 5 】

5. *Get*-passive の習得

5.1 先行研究

次に *get*-passive の習得について、はじめに先行研究を概要する。Budwig (1990), Slobin (1994) は共に *get*-passive の習得が *be*- passive の習得に先行するという重要な事実を示している。さらに Slobin は、get が過去分詞のみを伴う起動相用法が 3 歳頃に生じ、その後 full *get*-passive が習得されるという順序を示唆しており、Budwig はこどもが 3 歳 6 カ月時点で *get*-passive と *be*-passive を機能的に区別し使用していることを示している。

しかし彼らの調査は、観察対象のこどもの人数が Budwig は 2 名・Slobin は未就学児 27 名と限られており、これらの傾向が一般的に認められるか、量的に確認する必要がある。そこで本稿は、CHILDES コーパスのデータにより、こどもの *get*-passive の使用状況を示す。

5.2 CHILDES に基づく調査と分析

データの収集は 2012 年 9 月、アメリカ英語話者のコーパスから *get*-passive （現在形、過去形）を含むこどもの発話を抽出した。そのうち、

コーパスに年齢記載があり年齢特定のできるこどもの発話が 788、年齢が特定できないこどもの発話が 260、合計 1,048 の発話が収集された。

まず全体的な分布から見ていきたい。(2) は年齢特定分の 788 の発話の年齢別分布を示したものである（括弧内は発話数）。

(2) 1 歳 (5); 2 歳 (146); 3 歳 (260); 4 歳 (211);
5 歳 (66); 6 歳 (30); 7 歳(17); 8 歳 (15);
9 歳 (10); 10 歳 (20); 11 歳以上 (8)

get-passive は 2 歳から出現しており、3 歳のデータが最も豊富である。以降はデータ数が減少するが、4〜5 歳頃に *be*-passive が獲得されることを考慮すると、それまで *get*-passive でカバーされていた表現の多くが *be*-passive へ移行していると考えられる。

また、by 句を伴う full *get*- passive の事例数は総数 42 で、全体に占める割合は 5.8%、2 歳・3 歳時点でもすでに 5%程度生起しており、年代による顕著な分布特性は認められない。なお、こどもは受動態の Agent を by 以外に from などの前置詞により標示することが Budwig (1990) で指摘されているが、この事実は CHILDES コーパスでも(3) のように認められた（角括弧内は発話者の年月齢）。

(3) a. those two guys got hurt from that big wreck. [4;3]
b. so he won't get killed from Gollum. [3;8]

(3a) の場合、from が示しているのは agent ではなく「原因」である可能性があるが、(3b) は *Lord of the Ring* のゴラムという Agent が from により提示されている。Agent を from で標示する選択自体は、他動的事態を action chain で表示した場合に Agent がエネルギー伝達の起点であることから自然に説明される。

次に(4)で、*get*-passive に使用される過去分詞の分布を年齢別に示す。下線は「被害性」を意味するものを示しており、すべての年齢において *get*-passive は被害性との結びきは強い。なお紙幅の都合上、3 件以上の発話が見られた過去分詞を挙げる（括弧内は発話数）。

(4)
2 歳： hurt (32), stuck (14), **broken (8),** dressed (8), lost (7), tired (7), scared (6), caught (5), crunched (5), done (5), fixed (3), glued (3), killed (3), rained (3), set (3)
3 歳： hurt (34); lost (26); dressed (15); set (15); killed (12); **broken (11),** caught (11); stuck (10); tired (8); eaten (7); scared (7); burned (5); fixed (5); married (5); saved (4); spoiled (4); trapped (4); bent (3); knocked (3); shot (3)
4 歳： killed (23); hurt (16); dressed (11); married (11); shot (10); caught (9); lost (9); stuck (9); **broken (7)**; mixed up (6); tired (6); run over (5); scared (5); burned (4); buried (3); eaten (3); set (3); tangled (3)
5 歳： set (10); hurt (8); mixed up (5); hit (4); killed (3); lost (3)
6 歳： stuck (8); caught (7); lost (5); done (4); married (4); paid (4); shot (4); hit (3); killed (3); scared (3)

年齢が低いほど特定の過去分詞と生起しており、年齢が上がるにつれてデータ全体における過去分詞使用の偏りが解消されていく。特に 2 歳の発話では 32 例が "get hurt"であり、*get*-passive の発話全体の 22%を占めている。このとき「痛い」のはこども自身であり、こどもにとって自らの身体経験によって受けた被害はもっとも知覚しやすく、"get hurt"の頻繁な使用には動機づけがある。3 歳でも"get hurt"は依然として多く用いられているが、年齢が上がるにつれてその使用は減少し、6 歳以上のデータでは観察されない。これには獲得語彙数の増加などの要因も考えられるが、初期段階では語彙項目ごとに

“get hurt”など特定的表現を習得しており、5〜6歳の段階で *get*-passive という「構文」を獲得し、それによって特定の過去分詞によらず *get*-passive を使用できると推測される。

また、被害性を持たない過去分詞は、大半が “get dressed,” “get married,” “get set” など再帰的用法である。非再帰的で被害性もない事例としては、“get done,” “get fixed,” “get paid,” “get glued” など限られていることから、図 5 で示したように、*get*-passive は被害性または再帰性を含む事態把握が中心的であり、被害性のない中立的な状態変化は図 5 (b) から拡張的に生じていると考えられる。

(4)でもう 1 点興味深いのは、“get broken” の使用の出現である（太字で表記）。「(モノが) 壊れた」という起動相の事態を表すならば、大人の発話では非対格自動詞が予測されるところ、こどもは *get*-passive を代用していることが分かる。4 歳までは各年齢で 10 例前後 “get broken” が用いられているが、5 歳以降ではまったく観察されなくなることから、5 歳頃に break の非対格自動詞用法が定着していると想定される。

次に、個別の発話データに見られる興味深い特性を挙げる。

(5) a. they get broke half easily. [2;7]
b. he was got lost. [4;6-5]
(6) a. I get rained. [2;6]
b. it got rained. It got rained in there. [2;10]

(5) は *be*-passive と *get*-passive の混用であり、両者の獲得が 4〜5 歳時点でも実際には不完全である可能性を示している。(6) は自動詞 rain を *get*-passive として用いている事例で、2 歳の発話に数例あり、2 通りの主語選択が見られた。(6a) は「私が雨に降られた」という被害受け身的表現であり、*get*-passive が文法的な項構造より被害性という意味要因に動機づけられていることを示している。また、(6b) の場合は本来 get が不要である。

(6b)と同様、自動詞が get を過剰に伴う事例として、(7) を参照されたい。

(7) a. he get died [3;7].
b. and it fell down and it got died. [4;4]
c. the finger gets healed when the bandaids get healed. [3;10]
d. it’s gonna get splashed on you. [年齢不明]
e. I got waked up in the morning. [4;2]
f. I got played in the sand. [3;7]
g. I got sit by you. [4;6]

(7c) の bandaids は heal という行為の道具であり対象物ではない。(7d) の splash は非対格自動詞用法を持つため、get は過剰である可能性がある。また、(7e), (7f) は非能格自動詞に対しても get が過剰生成されている。(7g) の sit は過去分詞形ではないが、明らかに自動詞 sit が get を伴っている。これらのデータから、こどもの発話において get は一種の「自動詞マーカー」として機能し汎用されている可能性が示唆される。

さらに (8a-c) は get を伴う他動詞句であり、自動詞化が起こっていない事例である。

(8) a. he got put the towel. [2;8]
b. we got put it on the ham. [2;6]
c. we got found the pig. [2;8]

これらの事例は、get が起動相のアスペクトマーカーなど、ヴォイス以外の機能を果たしている可能性を示唆している。実際にスペイン語の中間態マーカーである SE も完了のアスペクトマーカーに拡張していることが知られており、中間態の拡張の方向性に英語の *get*-passive が符合していると言える。[2]

6. おわりに

本稿では英語の中間態の 3 つの形式が相互作用し、受動態に至る前段階として、自動的事態

の記号化に一定の役割を果たしていることを示した。特に本稿では *get*-passive を中間態の一形式とみなし、その習得過程を詳細に示した。こどもの *get*-passive の発話状況から、3～4 歳頃に *get*-passive が自動的事態のマーカーとして汎用されていると想定される。年齢が上がるにつれ非対格自動詞や *be*-passive の習得が進み、*get*-passive は適用範囲を狭めていく。*get*-passive は、形式的にも意味機能的にも、中間態から受動態への橋渡しとして *be*-passive に先行して習得されると位置づけることができる。

注

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1. 図の action chain では、円が事態の参与者、二重矢印がエネルギーの伝達、一重矢印が位置または状態の変化を示す。
2. 例として、スペイン語の自動詞 ir (行く) が再帰接語 SE を伴った ir*se* は「行ってしまった」という完了のアスペクトを示す。

参考文献

Alexiadou, Artemis (2012) "Noncanonical Passives Revisited: Parameters of Nonactive Voice," *Linguistics* 50-6, 1079-1110.

Arce-Arenales, Manuel, Melissa Axelrod and Barbara A. Fox (1994) "Active Voice and Middle Diathesis: A cross-linguistic perspective," B. Fox and P. J. Hopper (eds), 1-21.

Brown, Roger (1973) *A First Language: The Early Stages*, Harvard University Press, Cambridge, MA.

Budwig, Nancy (1990) "The Linguistic Marking of Non-prototypical Agency: An Exploration into Children's Use of Passives," *Linguistics* 12, 21-52.

Budwig, Nancy, Sarera Stein and Catherine O'Brien (2001) "Non-agent Subjects in Early Child Language: A Crosslinguistic Comparison," K. Nelson, A. Aksu-Ko and C. Johnson (eds.) *Children's Language* vol. 11: *Interactional Contributions to Language Development*, 49-67, Lawrence Erlbaum.

Fox, Barbara and Paul J. Hopper (eds.) (1994) *Voice: Form and Function*, John Benjamins.

Givón, Talmy and Lynne Yang (1994) "The Rise of the English *Get*-passive," B. Fox and P. J. Hopper (eds), 119-149.

Kemmer, Suzanne (1994) "Middle Voice, Transitivity, and the Elaboration of Events," B. Fox and P. J. Hopper (eds), 179-230.

Klainman, Miriam H. (1988) "Affectedness and Control: A Typological Study of Voice Systems," M. Shibatani (ed.) *Passive and Voice*, 25-84, John Benjamins, Amsterdam.

Langacker, Ronald W. (1991) *Concept, Image and Symbol*, Mouton de Gruyter, Berlin.

Langacker, Ronald W. (2008) *Cognitive Grammar: A Basic Introduction*, Oxford University Press, Oxford.

Lord. Carol (1979) "'Don't You Fall Me Down': Children's Generalizations Regarding Cause and Transitivity," *Papers and Reports on Child Language Development* 17, 81-89.

MacWhinny, Brian (2000) *The CHILDES Project: Tools for analyzing talk*, 3rd ed. Vol.2. The Database. Mahwah, N.J.: LEA.

Shibatani, Masayoshi (1998) "Voice Parameters," in L. Kulikov and H. Vater (eds.) *Typology of Verbal Categories*, 117-138, Niemeyer, Tübingen.

Slobin, Dan I. (1994) "Passives and Alternatives in Children's Narratives in English, Spanish, German, and Turkish," B. Fox and P. J. Hopper (eds), 341-364.

Wanner, Anja (2013) "The *Get*-passive at the Intersection of *Get* and the Passive," A. Alexiadou and F. Schäfer (eds.) *Non-Canonical Passives*, 43-61. John Benjamins, Amsterdam.

高見健一 (1995) 『機能的構文論による日英語比較―受身文、後置文の分析―』くろしお出版. 東京.

谷口一美 (2011) 「英語における自他交替の習得―open, move を例に―」『阪大英文学会叢書 6：意味と形式のはざま』（大庭幸男・岡田禎之 編著）, 5-16, 英宝社. 東京.

中村芳久 (1999)「ヴォイス・システム：態間関係の認知メカニズム」金沢大学文学部論集言語・文学篇 19, 39-65.

Complement Clause Selection and Exceptional Case-Marking

Naoto Tomizawa
Yamagata University

Keywords: complementation, ECM, multiple root structures, selection mismatch

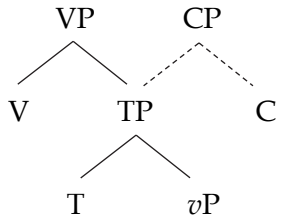
1. INTRODUCTION

This paper examines the syntactic properties of the construction that is subject to what Postal (1997, 1993) calls "Derived Object Constraint," hereafter abbreviated as DOC construction for brevity, and argues within the Minimalist framework (Chomsky 2008) that the unique syntactic properties of the DOC construction, exemplified in (1), follow from the interaction of the linguistic option of "exceptional" complement clause selection, specific featural value of C, and linearization/pronunciation conventions.

(1) a. *John wagered Peter to be crazy.
b. *John wagered to be crazy.
c. Who did John wager to be crazy?
d. John was wagered by the press to be crazy.
e. John wagered there to have been a stranger in that haunted house.

Specifically, I will propose that a predicate that selects CP may in principle take as its syntactic complement the TP complement of the C head (instead of the CP itself), yielding a so-called "multiple root" structure as in (2), where TP serves as the syntactic complement of both V and C.

(2)



Multiple root structures are generally prohibited because they usually run afoul of the linearization convention. In the discussion that follows, however, I will propose that such structures are available in the DOC construction and are successfully linearizable.

The paper is organized as follows. Section 2 introduces a feature classification of C and characterizes the C head of the infinitival complement of the DOC construction (hereafter, "DOC infinitival clause") with [-finite, -tense] features. Section 3 shows how the "multiple root structure" analysis deals with the paradigm given in (1). Section 4 applies the "multiple root" analysis to the account of "unselected embedded questions" discussed in Bresnan (1979) and Adger & Quer (2001). Section 5 concludes the discussion.

2. FEATURE-SPECIFICATION OF C

DOC infinitival clauses and the infinitival complement clauses of ECM verbs behave similarly in that both prohibit eventive predicates, which distinguishes them from the infinitival complement clauses of control predicates, as shown in (3) (see Bošković 1997, Martin 2001, Stowell 1982).

(3) a. *John was wagered to arrive late yesterday.
b. *John was believed to arrive late yesterday.
c. John tried to arrive late yesterday.

I will follow the leading idea of Bošković (1997) in assuming that the [+tense] specification of the infinitival C is the key factor to license the occurrence of eventive predicates, from which follows the difference in grammaticality between (3a) and (3c). In addition, I will assume, following Chomsky (2008), that ECM infinitives are bare TPs. Since bare TPs lack a [tense]-marked C head, they are incompatible with eventive predicates, as seen in (3b).

Clauses may, then, be classified as in (4).

(4) a. Finite clauses: $C_{[+finite, +tense]}$
b. Control infinitives: $C_{[-finite, +tense]}$
c. DOC infinitives: $C_{[-finite, -tense]}$
d. ECM infinitives: T

Those C heads that are marked with a [+tense]-feature have an Agree-feature, which is transferred to T and values uninterpretable Case-features: Nominative Case in (4a) and Null Case in (4b). On the other hand, the C heads that lack the [+tense]-feature do not have an Agree-feature.

3. DOC INFINITIVES

In addition to the incompatibility with eventive predicates, the DOC and ECM constructions have other similarities. They both allow passivization. The DOC construction in example (5) below, drawn from Radford (2004), has an expletive *there*, which strongly indicates that the subject of the infinitival clausal complement of *alleged* be its A-movement trace rather than PRO.

(5) There are alleged to have been stolen a number of portraits of the queen.

Moreover, the grammatical status of the following example also indicates that the subject DP (*the driver*) stops at the subject position of the infinitival complement clause of *alleged* on its way to the subject position of *was alleged*.

(6) ?It was the car of which the driver was alleged to have caused a scandal.

This is because the intermediate position is the sole position from which *of which* can be successfully extracted with no violation of the PIC or the "inactivity" condition in (7).

(7) An A-chain becomes invisible to further computation when its uninterpretable features are valued. (Chomsky 2008, p. 150)

The derivation for sentence (6) is essentially on a par with the one offered by Chomsky (2008) to the derivation of the ECM sentence in (8).

(8) Of which car did they believe to have caused a scandal?

Given these similarities between the DOC and ECM constructions, the ungrammatical status of (1a) may be surprising:

(9) *John wagered [$_{CP}$C [Peter to be crazy]]

According to our characterization of the DOC construction, however, this is not, because the infinitival head C of the DOC construction lacks an Agree-feature and fails to value the Case-feature on the lexical subject. Notice here that because of the presence of C, the matrix *v*/wagered* cannot value the Case-feature on *Peter*, either.

The inability to value Case-features explains the unavailability of PRO subject, too:

(10) *John wagered [$_{CP}$ C [PRO to be crazy]]

Let us now turn to A'-movement cases like (1c). For expository convenience, consider the derivation for sentence (11).

(11) Who did you allege to know French?

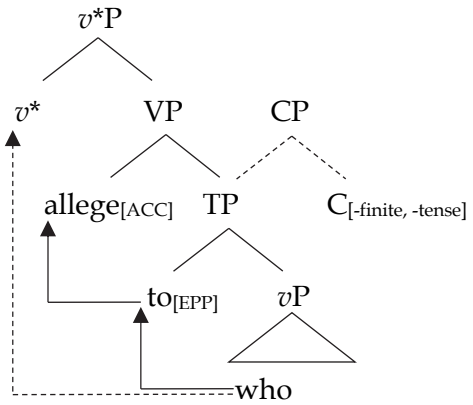
If it has the structure schematized in (12), the Case-feature on *who* remains unvalued,

as in (9) above.

(12) [$_{vP*}$ *v** [$_{VP}$ allege [$_{CP}$ C [$_{TP}$ to [$_{vP}$ who *v* know French …

Alternatively, I will propose that the derivation involves a "multiple root" structure as in (13), where *allege* takes as its complement not CP but TP and, as a result, the TP and C form an independent root constituent.

(13)



Here, *who* first A-moves to Spec-TP. Since C does not intervene between *allege* and the Spec-TP, the Agree-feature on *allege*, transferred from the matrix *v**, finds *who* in Spec-TP as its goal and, importantly for our discussion, the Case-feature on the latter is successfully valued. Independently of this A-movement, *who* A′-moves directly targeting the matrix *v** since C is absent.

Let us turn to $C_{[-finite, -tense]}$ and its maximal projection CP that have been disconnected from the projection of *allege* and constitute an independent root structure. Although multiple root structures are generally prohibited, I will hypothesize that they are in principle available and are actually well-formed when the following two conditions are both met: (i) phonetic emptiness condition and (ii) identification condition. One of the plausible candidates for the general unavailability of multiple root structures is linearization. However, linearization matters only when the relevant objects have phonetic contents: phonetically empty elements are exempt from the linearization condition. Another reason for the general ban on multiple root structures comes from the function of roots. A root is the interface between the sentence-internal grammar and the external discourse, as given in case (i) in Root condition (14).

(14) A label must (i) be linked to discourse or (ii) find a goal.

Relaxing this sentence-discourse linkage, I will allow a head that enters into an Agree-relation with an appropriate goal to terminate as a root even when it is not linked to discourse, as in case (ii) in (14).

In short, multiple root structures are permitted when either of the multiple roots finds a goal and its otherwise unlinearizable constituent(s) have the offending phonetic feature(s) eliminated.

With this in mind, return to (13). By definition, every lexical item is endowed with an edge feature (EF). $C_{[-finite, -tense]}$ has one, too. Suppose that EF on C happens to find *who* in (13) as a goal and attracts it to Spec-CP. Then, the whole derivation involves three different chains that share *who*: A-chain, A′-chain targeting matrix *v** (and ultimately, C_Q), and A′-chain targeting $C_{[-fin, -tns]}$. The fact that the initial copy of the matrix A′-chain is pronounced is captured by the following algorithm.

(15) Chain pronunciation algorithm

Given chains $CH_1 = (\alpha_1, \ldots, \alpha_i, \ldots, \alpha_n)$ and $CH_2 = (\beta_1, \ldots, \beta_j, \ldots \beta_m)$, where $\alpha_i = \beta_j$, CH_1 is pronounced iff α_1 c-commands more constituents than β_1.

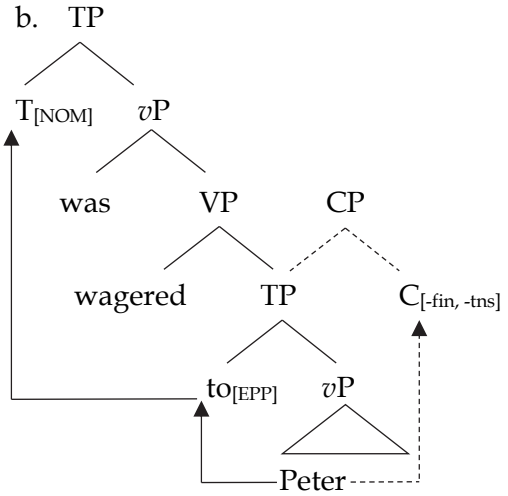
In other words, a chain member of the "largest" chain (which is defined in terms of the number of constituents the chain c-

commands) is pronounced and all the chain members of "smaller" chain(s) have their phonetic contents eliminated. In the three chains that share *who* in (13), the matrix A′-chain is the largest and its topmost copy is pronounced, whereas the copy of *who* that occupies Spec-$C_{[-finite,\ -tense]}$ has its phonetic content eliminated. Consequently, neither $C_{[-finite,\ -tense]}$, which lacks phonetic contents, nor *who* in its Spec, which also has its phonetic content eliminated, pose difficulties in linearization.

This analysis can be directly extended to the availability of passive sentences like (1d) and (16a), which has a "multiple root" derivation in (16b).

(16) a. Peter was wagered to be crazy.

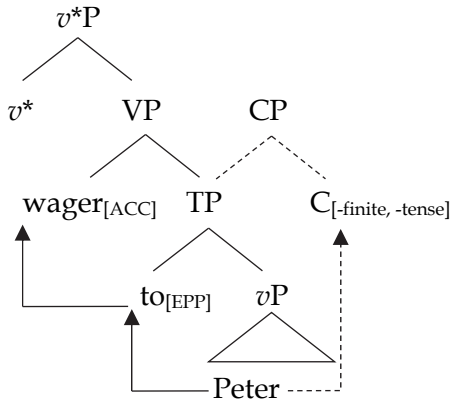
b.



Peter is involved in two independent chain formations: the Agree-feature on the matrix T motivates its A-movement, as indicated by the solid lines in (16b), whereas $C_{[-fin,\ -tns]}$ (by accident) finds it as a goal and A′-moves it to the Spec-CP position, which is indicated by the dotted line. Obviously, the A-chain is "larger" than the A′-chain; and hence, the copy in Spec-$C_{[-fin,\ -tns]}$ has its phonetic content eliminated. As a result, the multiple root structure in (16b) can be successfully linearized.

Before proceeding, let us go back to the active counterpart of (16b), namely the ungrammatical example in (9), and look at its "multiple root" derivation illustrated in (17).

(17)



The A-chain of *Peter* that is motivated by the Agree-feature on *wager*, transmitted from *v**, is not "larger" than the A′-chain created by A′-movement of *Peter* to Spec-$C_{[-fin,\ -tns]}$; nor is it "smaller" than the latter. Hence, Chain pronunciation algorithm (15) cannot eliminate the phonetic content of *who* in Spec-$C_{[-fin,\ -tns]}$ and consequently the structure cannot be linearized.

Unlike full-fledged DPs such as *Peter*, expletives like *there* in (1e) and pronouns are allowed (see Postal 1974 and Bošković 1997).

(18) a. John wagered there to have been a stranger in that haunted house.

b. Mary alleged him to have kissed Jane.

The "multiple root" derivation cannot distinguish the grammatical cases in (18a,b) from the ungrammatical case we just saw in (17). I will follow Bošković (1997) and assume that the Case-features on *there* and *him* in (18a,b) are valued by the mechanism of Noun Incorporation. In example (18b), *him* first incorporates into $C_{[-fin,\ -tns]}$ and then to *alleged*, as shown in (19).

(19) [*v** $alleged_V$ [$_{CP}$ $C_{[-fin,\ -tns]}$ [$_{TP}$ him to have *t* kissed Jane …

This Incorporation option is available only to D^0 elements.

Now that the paradigm in (1) has been accounted for, let us turn to the DOC construction with a three-place predicate such as *assure* and *guarantee*. Unlike *allege* or *wager*, these verbs allow neither full-fledged DPs (such as *John*) nor expletives to stay in the subject position of the infinitival complement clause, as shown in (20).

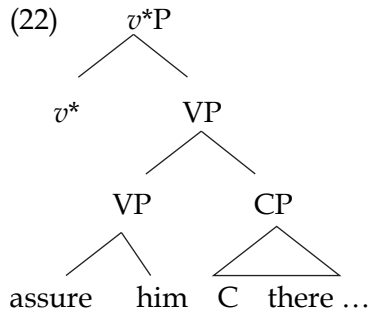
(20) a. *I assure you [John to be the best]
b. *I assure him [there to be stolen documents in the drawer]

These sentences become grammatical only when the subject of the infinitival clause undergoes A′-movement, as in (21)

(21) John, who I assure you [*t* to be the best], ...

The unavailability of the derivational option of Noun Incorporation in (20b) is easily accounted for if the Goal and Theme arguments of *assure* are structurally configured as in (22), where Goal (*him*) occupies the "internal" position and Theme (CP) occupies the "external" position.

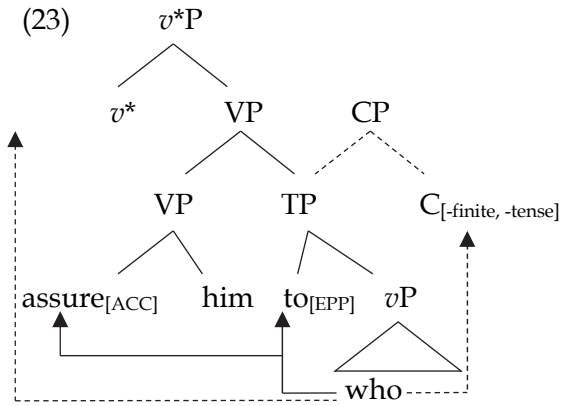
(22)



In this configuration, incorporation of *there* to C and, then, to $assure_V$ is illicit because the head movement from C to $assure_V$ violates the c-command requirement on chain members.

The landing position of Noun Incorporation is different from the landing position of A-movement of *who* in (21) that is triggered by the Agree-feature on *assure*, transmitted from *v**. Given the "multiple root" option, the following derivation is available for (21).

(23)



Suppose that the Agree-feature on *assure* somehow finds *who* as a goal and forces it to move. Movement of *who* to incorporate into $assure_V$ is illicit, just as we saw above; rather, it adjoins to the maximal VP projection headed by $assure_V$, which is licit in the light of the c-command requirement on chain members. In sum, *who* A-moves to adjoin to VP and has its Case-feature valued successfully.

In addition to this A-movement, *who* in (23) has engaged in two other chain formations: the A′-movement triggered by *v** and (ultimately, by the relative clause head C) and the A′-movement induced by the EF on $C_{[-finite,\ -tense]}$. Of the three chains, the *v**-triggered A′-chain is the "largest" and all the chain members of the other two chains have their phonetic contents eliminated, with the consequence that the "multiple root" structure in (23) is successfully linearizable.

4. UNSELECTED EMBEDDED QUESTIONS

This section attempts to extend the derivational option of the "multiple root" structure to the account of the distribution of what Adger & Quer (2001) call "unselected

embedded questions" (see also Bresnan 1979 and Öhl 2007). The difference in grammaticality between (24a) and (24b) below indicates that the matrix verb *admit* selects as its complement a propositional clause but it cannot select an interrogative clause. However, this usually unselected interrogative clause can actually appear after *admit* in restricted environments as in (23c), which provides a typical example of unselected embedded questions.

(24) a. Julie admitted that the bartender was happy.
b. *Julie admitted if the bartender was happy.
c. Julie didn't admit if the bartender was happy.

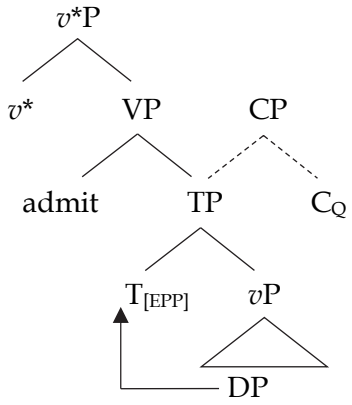
Selection mismatch is usually intolerable, as (24b) indicates. Then, how is the mismatch in (23c) tolerated?

Notice here that an important contribution of Adger & Quer (2001) is that unselected embedded questions are licensed not by the selecting predicates but by other elements. Specifically, they are licensed by the same elements as the ones that are responsible for the licensing of negative polarity items (NPIs), as shown in (25).

(25) a. No one admitted if the bartender was happy.
b. Only Julie admitted if the bartender was happy.
c. If Julie admitted if the bartender was happy, we could order another drink.
d. We refused to admit if they had the keys.

Given the presence of the independent licensers of unselected embedded questions, the riddle of selection mismatch can be solved with the introduction of a "multiple root" structure. Suppose that *admit* in (24c) takes not CP but TP as its complement, as illustrated in (25), with the C_Q head (*if*) disconnected from it.

(26)



In this configuration, the head of the embedded question (C_Q) does not occur within the domain of *admit*. This is why selection mismatch does not arise.

In the "multiple root" structure in (26), C_Q has a phonetic content (*if*) that is not freely eliminable, which might pose linearization difficulties. Remember here Adger & Quer's (2001) analysis: unselected embedded questions are independently licensed by an appropriate (NPI) licenser. Let us assume then that the whole CP constituent headed by C_Q (namely, *if the bartender was happy*) undergoes movement so as to make itself ready to be licensed by an appropriate (NPI) licenser. This requirement forces the CP to be integrated into the configuration that contains the (NPI) licenser, with the consequence that this newly created copy of the CP can be properly linearizable and the original copy, which could in principle cause linearization difficulties, can have its otherwise offending phonetic contents eliminated.

A similar unselected embedded question construction is observed in Japanese, as well.

(27) a. [John-ga tensai-da to] issyun sinzi-

rare-ta
'We could believe for a brief moment that John is a genius.'

b. *[John-ga tensai-na-no ka] issyun sinzi-rare-ta
'We could believe for a brief moment if John is a genius.'

c. [John-ga tensai-na-no ka] issyun sinzi-rare-nakat-ta
'For a brief moment, we could not believe if John is a genius.'

What is interesting about this Japanese unselected question construction is that TP-internal question expressions are disfavored. Compare (27c) and (28a), on the one hand, and (28b), on the other.

(28) a. [naze sonna koto-o sita ka] issyun sinzi-rare-nakat-ta
'For a brief moment, I could not believe why I did it.'

b. *[dare-ga sonna koto-o sita ka] issyun sinzi-rare-nakat-ta
'For a brief moment, I could not believe who did it.'

Given the "multiple root" option of the derivation, this contrast is predictable because only *dare* 'who' in (28b) is required to be base-generated within the TP complement of the matrix predicate, which gives rise to a selection mismatch.

5. CONCLUSION

With the characterization of DOC infinitives by [-finite, -tense]-features, the introduction of "multiple root" structures, and linearization and pronunciation conventions, this paper has accounted for the distributional patterns of the DOC construction and has also shown that the "multiple root" analysis can account for the distribution of unselected embedded questions in English and Japanese.

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REFERENCES

Adger, David & Josep Quer (2001) "The Syntax and Semantics of Unselected Embedded Questions," *Language* 77, 107-133.

Bošković, Željko (1997) *The Syntax of Nonfinite Complementation*, MIT Press, Cambridge, MA.

Bresnan, Joan (1979) *Theory of Complementation in English Syntax*, Garaland, NY.

Chomsky, Noam (2008) "On Phases," *Foundational Issues in Linguistic Theory*, ed. by Robert Freidin et al., 133-166, MIT Press, Cambridge, MA.

Martin, Roger (2001) "Null Case and the Distribution of PRO," *Linguistic Inquiry* 32, 141-166.

Öhl, Peter (2007) "Unselected Embedded Interrogatives in German and English," *Linguistische Berichte* 212, 403-437.

Postal, Paul M. (1974) *On Raising*, MIT Press, Cambridge, MA.

Postal, Paul M. (1993) "Some Defective Paradigms," *Linguistic Inquiry* 24, 347-364.

Radford, Andrew (2004) *English Syntax*, Cambridge University Press, Cambridge.

Stowell, Tim (1982) "The Tense of Infinitives," *Linguistic Inquiry* 13, 561-570.

Syntactic Distinctness and Phase Head*

Masashi Totsuka
Tohoku University

Keywords: Cartography, Distinctness, Phase, Relative Clause, Transfer

1. Introduction

In this paper, I propose that Rel, Top and Force, which are functional heads in the Cartographic approach, are phase heads whereas Foc and Fin are not, by exploring some problems of *Distinctness* introduced by Richards (2010). Distinctness is a condition that bans two identically labeled constituents from being linearized in the same syntactic domain. This condition can uniformly explain a variety of syntactic phenomena. However, when Topicalization occurs in relative clauses, it has two problems. First, in this case, a linearization statement <α, α>, such as <PP, PP>, are in the same Spell-out domain, so it is the violation of Distinctness. Therefore, Richards wrongly predicts that this sentence is ungrammatical. Second, multiple Topicalization of English is banned. I address two problems by modifying his approach.

This paper is organized as follows. Section 2 overviews framework used in this paper. Section 3 summarizes Distinctness condition, and I point out two problems with his approach. In section 4, in order to solve this problem, I propose that Force, Top, Rel are phase heads. In section 5, I show that my proposal accounts for these problems. Section 6 concludes this paper.

2. Framework

In Minimalism (Chomsky (1995, 2000, 2001, 2004, 2008)), syntactic objects (SOs) are built from bottom to top, by iterative application of the operation *Merge*, which combines two SOs. SOs built by Merge are mapped onto the semantic interface of the *Conceptual-Intentional system* (C-I) and the phonological interface of the *Sensorimotor system* (SM). The operation which maps SOs onto these two interfaces is called *Transfer* (in particular, mapping SOs onto the phonological side is called *Spell-Out*). Chomsky (2004, 2008) assumes that Transfer applies by syntactic derivational chunks which are called *phases*. In this phase theory, syntactic computations are derivationally determined by application of iterating Merge and Transfer phase by phase. Phases are assumed to be CP and *v*P, whose head triggers Transfer.

While Minimalism focuses on the elementary syntactic operations, Rizzi's (1997, 2004) Cartographic approach focuses on the fine details of syntactic structures. It is the attempt to draw maps as precise as possible by relating syntactic configurations with information structures. This research topic assumes that CP is split into a number of different functional projections. This approach offers an interesting question when it meets the phase theory: if CP has a number of functional projections, which head is a phase head and triggers Transfer?

Following Cartographic approach (Rizzi (1997)), I adopt the Split CP hypothesis, where CP is not a single projection, but layered projections. In particular, I assume that CP has the following structure.

(1) CP =[ForceP [TopP [FocP [FinP [TP ...

(1) assumes that each projection has a single projection and cannot be recursive in English.

Rizzi (1997) supposes that the left periphery in a clause is a kind of interface with TP and the higher clausal domain than CP, or discourse.

ForceP gives to discourse the information of clausal type, for example, a question, a declarative, an exclamative, a relative, a comparative, an adverbial of a certain kind, etc. On the other hand, Fin(iteness)P gives to TP the information of the verbal system of the clause. For example, if a complementizer is that, an embedded TP clause must be a finite clause in English, or if a complementizer is for, an embedded TP clause must be a non-finite clause in English. CP should be divided as ForceP and FinP.

Top and Foc also have one and only one head in each projection because multiple specifier cannot be linearized under the Kayne's Linear Correspondence Axiom (LCA). A topicalized or focalized element moves to a specifier position of each phrase to satisfy Topic or Focus feature. Thus, the specifier of TopP is occupied by one topicalized element. On the other hand, the specifier of FocP is occupied by one focalized element, one *wh*-element, or one element of Neg-Preposing.

In the following sections, based on these frameworks, I discuss Distinctness condition Richards (2010) proposes.

3. Distinctness: Its property and problems

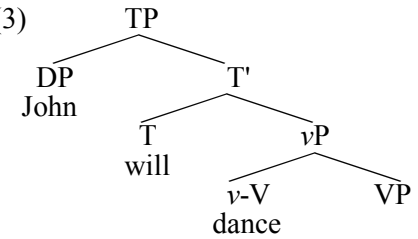
Richards (2010) proposes *Distinctness* to account for a variety of syntactic phenomena that bans two identically labeled constituents from being linearized in the same Spell-Out domain. Distinctness is the condition on the syntax-phonology interface.

(2) Distinctness

If a linearization statement <α, α> is generated, the derivation crashes.

This condition is based on Kayne's (1994) LCA. In particular, Richards (2010) assumes that one of the tasks of the grammar is to establish a linear order between the terminal nodes of the sentence at least by the point of Spell-Out, and that this linear order is determined by properties of the tree. Kayne's theory establishes a set of linearization statements <α, β>, such that α asymmetrically c-commands β, and such linearization statements are taken to determine that α must precede β.

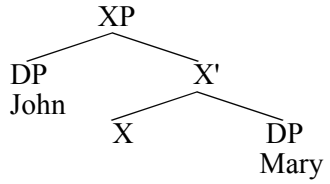
(3)



In the tree in (3), for example, the grammar constructs linearization statements like <DP (John), T (will)>, <T (will), *v*-V (dance)>, and so forth.

However, Richards (2010) assumes that linearization statements are limited to node labels. Let us consider the linearization of a tree in (4):

(4)



If a tree like the one in (4) are sent to PF, the linearization algorithm will generate the linearization statement <DP, DP>, since the DP *Mary* asymmetrically c-commands the DP *John*. Crucially, linearization process is unable to make reference to any of the richer information that would distinguish these DPs from each other; the linearization statement cannot say, for example, <DP (Mary), DP (John)>, or <DP-in-specifier-of-X, DP-complement-of-X>. Since the linearization statement <DP, DP> is uninterpretable, such a structure will be rejected at PF or SM interface. Thus, Distinctness effectively bans structures in which different syntactic objects with the same label in an asymmetric c-command relation occupy the same Spell-Out domain.

The proposal makes crucial use of the

approach to Spell-Out developed in Chomsky (2000, 2001) and much subsequent work, in which material is sent to PF or SM interface periodically throughout the derivation, whenever a phase has been completed.

Let us consider concrete examples of a Distinctness effect in English: Quotative Inversion and Multiple Sluicing.

(5) Quotative Inversion

a. "It's cold," said John.

b. "It's cold," said [$_{DP}$ John] [$_{PP}$ to Mary].

c. *"It's cold," told [$_{DP}$ John] [$_{DP}$ Mary].

(Richards (2010: 13))

(5a) is an instance of Quotative Inversion, in which the subject remains in a post verbal position and a quotation appears before the verb. We can see in (5b) that Quotative Inversion is possible because DP *John* and PP *to Mary* are not the same label in a post verbal position, that is the Spell-Out domain, so this sentence does not violate Distinctness condition. However, in (5c), since, in a post verbal Spell-Out domain, DP *John* and DP *Mary* have the same label, this sentence offend Distinctness condition and then Quotative Inversion is impossible.

(6) Multiple Sluicing

a. I know everyone danced with someone, but I don't know [$_{DP}$ who][$_{PP}$ with whom]

b. *I know everyone insulted someone, but I don't know [$_{DP}$ who][$_{DP}$ whom]

(Richards (2010: 3))

The contrast in (6) shows that sluicing with multiple remnants is in principle possible, but not if both of the sluicing remnants are DPs. Distinctness allows us to capture this difference.

In Richards (2010), he uniformly tries to explain phenomena like these, which ban two identically labeled constituents from being linearized in the same Spell-Out domain.

Moreover, consider the case of infinitival relatives in English, as in (7)

(7) Relativization

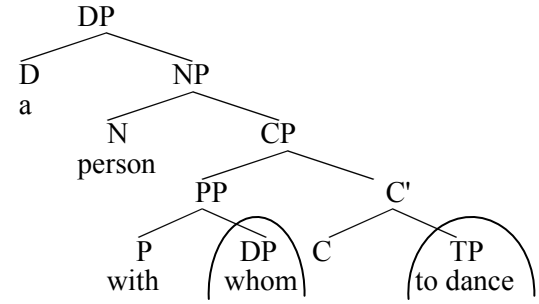
a. [$_{DP}$ a person][$_{PP}$ with whom] to dance

b. *[$_{DP}$ a person][$_{DP}$ whom] to admire

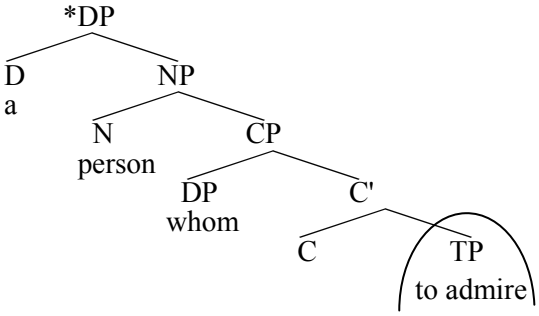
(Richards (2010: 34))

The structure of (7) are shown in (8) and (9) respectively.

(8)



(9)



In (8), the PP *with whom* may appear as a relative operator, but the DP *whom* cannot. Richards (2010) explains that the relative operator in this example cannot be the DP because the DP is in the same Spell-Out domain where the D of the relative clause's head is involved and this linearization statement is <DP, DP> or <D, D>, causing violation of Distinctness condition. However, if the PP is a relative operator, a linearization statement becomes <DP, PP>, or <D, P>, and so this does not violate Distinctness condition. Richards (2010) assumes that PP is a phase and a phase head P Transfers the complement DP into PF or SM interface. Therefore DP *whom* and the D of the relative clause's head are not in the same Spell-Out domain

In (9), the relative operator DP *whom* is in the highest specifier of the CP phase. The DP *whom* is not Transferred with the TP, but rather with the next higher spell-out domain. Therefore, the D of the relative clause's head and the DP

whom are linearized in the same Spell-Out domain, and the resulting linearization statement <D, D> is uninterpretable, so the derivation crashes.

However, English tensed relative clauses have some problems, because the constraints discussed above do not hold of these tensed relative clauses.

Richards (2010) adopts the proposal of Bianchi (1999), who offers arguments that finite relative clauses have more layers in the CP field than infinitival ones do. She assumes that tensed relative clauses in English involve not just a CP, but a ForceP along with a TopP, and the overt relative Operator *whom* occupies the lower of these positions as in (10).

(10) a. the man whom I admire

b. [$_{DP}$ the [$_{ForceP}$ [$_{NP}$ man][Force [$_{TopP}$ [$_{DP}$ whom][Top [$_{TP}$ I admire]]]]]]

(Richards (2010: 36-37))

In this case, Force is a phase head and Transfers its complement TopP. As a result, DP *the man* and DP *whom* are not in the same Spell-Out domain and so the derivation converges.

But there are problematic examples to the analysis.[1]

(11) a. This is the man [with whom *next year* I will dance.]

b. This is the man [with whom, *about linguistics*, I talked.]

In (11), Topicalization occurs in the finite tensed relative clause, and PP *next year* and *about linguistics* occupy the specifier of TopP respectively.[2] These structures are shown in (12).

(12) a. [$_{DP}$ the [$_{ForceP}$ [$_{NP}$ man][Force [$_{TopP}$ [$_{PP}$ **with whom**][Top [$_{TopP}$ [$_{PP}$ ***next year***][Top [$_{TP}$ I will dance]]]]]]]

b. [$_{DP}$ the [$_{ForceP}$ [$_{NP}$ man][Force [$_{TopP}$ [$_{PP}$ **with whom**][Top [$_{TopP}$ [$_{PP}$ ***about linguistics***] [Top [$_{TP}$ I will dance]]]]]]]

(12) has two problems. First, if Force is a phase head following Richards (2010), two PPs are in the same Spell-Out domain, so the resulting linearization statement violates Distinctness condition. Therefore, Richards wrongly predicts that this sentence is ungrammatical. Second, generally, multiple Topicalization in English is banned as in (13)

(13) a. **This book*$_i$, *to Robin*$_j$ I gave t_i t_j.

(Culicover (1991:31))

b. **Last year*, *in St. Louis*, we were living.

(Culicover (1991:33))

English has only a single TopP, so multiple Topicalization in (13) cannot occur. Sentences of (11), however, are grammatical and therefore the structures of (12) may be wrong.

In this section, we overviewed Distinctness condition. This condition has to do with the process of imposing a linear order on the same labeled constituents of the tree and explain. a variety of syntactic phenomena that bans two identically labeled constituents from being linearized in the same Spell-Out domain. However, it has the two problems as we saw above. In the next section, I try to solve these problems.

4. Proposal

In this section, in order to account for two problems discussed above, I modify the structure of (12). The modified structure is (13).

(13) [$_{DP}$ the [$_{ForceP}$ [$_{NP}$ man][Force [$_{\mathbf{RelP}}$ [$_{PP}$ with whom][**Rel** [$_{TopP}$ [$_{\mathbf{PP}}$ *next year*][Top [$_{TP}$ I will dance]]]]]]]

Based on this assumption, I propose (14).

(14) Three functional heads Rel, Top and Force are phase heads, trigger Transfer, and form Spell-out domains.

First, let us consider the case where Top is introduced into derivations. In this case, Spell-Out occurs when Top probes a topic element in its complement and then attracts it to its specifier, transferring its complement FocP or

FinP to PF or SM interface, as shown in (15a). And then, Force merges with TopP and then Transfer it as shown in (15b).

(15) a. $[_{TopP}$ Top $[_{FocP}$ Foc $[_{FinP}$ Fin $[_{TP}$ ... Transfer

b. $[_{ForceP}$ Force $[_{TopP}$ Top... Transfer

On the other hand, when Top does not occur in derivations, Force merges with FocP (or other phrases) and Transfer it as shown in (16).

(16) $[_{ForceP}$ Force $[_{FocP}$ Foc $[_{FinP}$ Fin $[_{TP}$ ... Transfer

In the same way, the derivation of Rel head proceeds as in (17).

(17) $[_{RelP}$ Rel $[_{TopP}$ Top $[_{FocP}$ Foc $[_{FinP}$ Fin $[_{TP}$ ... Transfer

Three phase heads, Force, Rel, and Top, are subject to Phase Impenetrability Condition (PIC).

(18) Phase Impenetrability Condition (Chomsky (2000: 108))

In phase P with head H, the domain of H is not accessible to operations outside P and only H and its edge are accessible to such operations.

Given PIC, we predict that extraction of syntactic objects is banned from the complements of these phase heads. In the following subsections, I will discuss empirical supports for my proposal.

4.1. Top as Phase Head

The contrast between Topicalization and Focalization shows that Top head is a phase head. The former induces a syntactic island from which extraction of elements is banned, while the latter does not. This is illustrated in the following examples.

(19) a.*Which books did Becky say that *to Aaron* she will give?

b. Which books did Becky say that **only to Aaron** will she give? (Koizumi (1999:141))

When Topicalization occurs in an embedded clause, Top as a phase head triggers Transfer and then sends its complement to two interfaces. Then, the complement will be inaccessible to further syntactic operations due to PIC. First, in step 1, Top attracts *to Aaron* to the specifier of TopP. Second, in step 2, the head Transfers TP. Finally, in step 3, *which books* tries to move to the specifier of ForceP, but this movement violates PIC. Accordingly, this sentence is ungrammatical. On the other hand, when Focalization occurs in an embedded clause, Foc as a non-phase head does not trigger Transfer of its complement which will be accessible to further syntactic operations. Therefore, which books can be extracted from the embedded clause. In step 1, Foc attracts **only to Aaron** to the specifier of FocP. Then, in step 2, *which books* moves into the specifier of ForceP, which serves as an escape hatch. Finally, in step 3, Force Transfers FocP. The *wh*-element at the specifier of ForceP is accessible to the attraction of Foc in the matrix clause. Thus, this sentence becomes grammatical.

4.2. Rel as Phase Head

Next, let us consider the case of Rel head.

(20) a. This is the man [with whom *next year*$_i$ I will dance t_i.]

b. **Next year*$_i$, this is the man [with whom I will dance t_i]

c. *This is the man [*next year*$_i$ with whom I will dance t_i]

d. *Next year*$_i$, I think [that I will dance with the man t_i]

In finite relative clauses, Topicalization can be applied as shown in (20a). topicalized elements,

however, cannot be extracted from relative clauses as shown in (20b) and also move into the highest positions of relative clauses in (20c). On the other hand, topicalized elements can be extracted from finite that-complement clause as shown in (20d). a phase head Rel triggers Transfer and then sends its complement to two interfaces. Then, the complement will be inaccessible to further syntactic operations due to PIC.

4.3. Force as Phase Head

Finally, let us consider the case of Force head. Force is the highest head of C-domain and has the same function of standard C as a phase head. Therefore, it is a phase head, but the phasehood differs between finite clauses and non-finite clauses.

(21) a. *Sam$_i$, who I know [when you said you saw t$_i$], …

b. Sam$_i$, who I know [when to try to see t$_i$],

(Frampton (1990: 69-70)

In (21a), Sam cannot be extracted from finite clauses, whereas it can be extracted from non-finite clauses as shown in (21b). This asymmetry shows that Force head of non-finite clauses is not subject to PIC, and therefore does not operate as a phase head.

Furthermore, on the contrary to finite tensed clauses, non-finite clauses in English do not have the layered projections.

(22) a. John wants to give a book to this student.

b. **EVEN THIS STUDENT**, John wants to give a book to.

c. *John wants **EVEN THIS STUDENT** to give a book to.

d. *This student*, John wants to give a book to.

e. *John wants *this student*, to give a book to.

(Barrie (2010: 272))

As (22) shows, Topicalization and Focalization cannot occur in non-finite clauses though topicalized or focalized elements can move to a sentence first position. Therefore, non-finite clauses in English do not have functional projections such as TopP or FocP.

5. Analysis

In this section, I will solve the two problems we saw in section 3, and also can explain examples of (7) by my proposal.

First, let us consider (11), which has the following modified structure (23) by my proposal.

(11) a. This is the man [with whom *next year* I will dance.]

b. This is the man [with whom, *about linguistics*, I talked.]

(23) a. [$_{DP}$ the [$_{ForceP}$ [$_{NP}$ man][Force [$_{RelP}$ [$_{PP}$ **with whom**][Rel [$_{TopP}$ [$_{PP}$ ***next year***][Top [$_{TP}$ I will dance]]]]]]]

b. [$_{DP}$ the [$_{ForceP}$ [$_{NP}$ man][Force [$_{RelP}$ [$_{PP}$ **with whom**][Rel [$_{TopP}$ [$_{PP}$ ***about linguistics***] [Top [$_{TP}$ I will dance]]]]]]]

In (23), Phase heads, Top, Rel, Force, trigger Transfer, and then, linearization statements which violate Distinctness condition are not in the same Spell-Out domain. Moreover, two different positions, the specifier of RelP and the specifier of TopP, are occupied by two different PPs respectively. Therefore, my proposal can solve the two problems for Richards (2010).

Secondly, my proposal can explain the asymmetry between finite relative clauses and non-finite relative clauses as shown in (7). Non-finite relative clause (7) has the following structures (24) by my proposal.

(7) a. [$_{DP}$ a person][$_{PP}$ with whom] to dance

b. *[$_{DP}$ a person][$_{DP}$ whom] to admire

(24) a. [$_{DP}$[a [$_{ForceP}$ [$_{NP}$ person][Force$_{\mathbf{[non\text{-}phase]}}$ [$_{RelP}$ [$_{PP}$ with whom [Rel [$_{TP}$ PRO to dance]]]]]]]]

b.* [$_{\mathbf{DP}}$[**a** [$_{ForceP}$ [$_{NP}$ person][Force$_{\mathbf{[non\text{-}phase]}}$

[$_{RelP}$ [$_{DP}$ **whom** [Rel [$_{TP}$ PRO to dance]]]]]]]]

In (24a), Force head in non-finite relative clause is not a phase head and cannot trigger Transfer. Therefore, it has no linearization statements which are bans on Distinctness condition in the Spell-Out domain. In contrast, in (24b), it has a linearization statement which violates Distinctness condition in the Spell-Out domain, <DP, DP>.

6. Conclusion

In this paper, by exploring some problems of Distinctness introduced by Richards (2010), I proposed that Rel, Top and Force in the Cartographic approach are phase heads whereas Foc and Fin are not. This proposal solved the problems for Richards (2010) and also tried to unify Cartographic approach with phase model.

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Notes

[1]. In this paper, I owe the judgment of sentences with no reference to my informants.

[2]. Following Larson (1985), I assume that bare-NP adverb *next year* is PP.

References

Barries, Michael (2007) "Control and WH-infinitives," *New Horizons in the Analysis of Control and Raising*, ed. William Davis and Stanley Dubinsky, 263-279, Springer, Dordrecht.

Bianchi, Valentina (1999) *Consequences of Antisymmetry: Headed Relative Clause*, Mouton de Gruyter, Berlin.

Culicover, Peter (1991) "Topicalization, Inversion and Complementizers in English," ms., The Ohio State University.

Chomsky, Noam (1995) *The Minimalist Program*, MIT Press, Cambridge MA.

Chomsky, Noam (2000) "Minimalist Inquiries: The Framework," *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels and Juan Uriagereka, 89-155, MIT Press, Cambridge, MA.

Chomsky, Noam (2001) "Derivation by phase," *Ken Hale: A Life in language*, ed. by Michael Kenstowicz, 1-50, MIT Press, Cambridge MA.

Chomsky, Noam (2004) "Beyond Explanatory Adequacy," *Structure and Beyond: The Cartography of Syntactic Structures* Volume 3, ed. by Adriana Belletti, 104–131, Oxford University Press, Oxford.

Chomsky, Noam (2008) "On Phases," *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 133-166, MIT Press, Cambridge, MA.

Frampton, John (1990) "Parasitic Gaps and the Theory of WH-Chains," *Linguistic Inquiry* 21, 49-77.

Kayne, Richard (1994) *The Antisymmetry of Syntax*, MIT Press, Cambridge, MA.

Koizumi, Masatoshi (1999) *Phrase Structure in Minimalist Syntax*, Hituzi Syobo, Tokyo.

Larson, Richard (1985) "Bare-NP Adverb," Linguistic Inquiry 14, 595-621.

Richards, Norvin (2010) *Uttering Trees*, MIT Press, Cambridge, MA.

Rizzi, Luigi (1997) "The Fine Structure of the Left Periphery," *Elements of Grammar*, ed. by Liliane Haegeman, 281-337, Kluwer, Dordrecht.

The Head Raising Analysis of Reduced Relative Clauses in English*

Takahiro Tozawa
Kitami Institute of Technology

Keywords: full relative clauses, reduced relative clauses, head raising analysis, head, edge feature

1. Introduction

Full relative clauses (FRCs) in English in (1a) have been analyzed in two different ways: an operator movement analysis in (1b) and a head raising analysis in (1c).

(1) a. the book which I bought
b. [$_{DP}$ the [$_{NP}$ [$_{NP}$ book]$_i$ [$_{CP}$ which$_i$ I bought t_i]]]
c. [$_{DP}$ the [$_{CP}$ [$_{DP}$ book$_j$ which t_j]$_i$ I bought t_i]]

According to the operator movement analysis in (1b), the relative operator *which* moves to [Spec,CP] and then the relative clause CP adjoins to the NP *book*. The relative operator establishes the predication relation to be licensed. Under the head raising analysis, the relative clause head *book* is a complement of *which*. The DP headed by *which* moves to [Spec,CP], and then *book* moves to [Spec,DP] to derive the surface word order. Although there is controversy regarding which analysis is more adequate, we agree with Miyamoto (2010) that both analyses are available in the theory of grammar.

In this paper, we deal with the reduced relative clauses (RRCs) in (2).

(2) Do you know [the woman talking to our boss]?

We propose the head raising analysis of RRCs: the head of the RRC is base-generated inside the RRC and then moves outside of it to become the head of the RRC. On the basis of this analysis, we will account for differences in syntactic behaviors between FRCs and RRCs.

2. Theoretical Assumptions

We introduce Narita's (2011) H-α schema. Narita adopts Chomsky's (2008) proposal about edge features (EFs). This is shown in (3).

(3) The EF is a property only of LIs. (Narita (2011: 81))

As a consequence of (3), Narita proposes the H-α schema (4).

(4) Merge must take at least one LI as its input. (Narita (2011: 82))

The H-α schema, which is a constraint on Merge, says that if Merge of X and Y occurs, either of them must be a lexical item (LI). The H-α schema follows from (3) since EFs trigger Merge. For example, consider (5).

(5) a. {H, XP}
b. *{YP, XP}

Merge of H and XP in (5a) observes the H-α schema: H is a head. In contrast, Merge of XP and YP in (5b) violates the H-α schema since both of them are phrasal categories. The reason why (5b) is not permitted is that both YP and XP, which are phrasal, do not have the EF due to (3), and Merge cannot be triggered.

There is a case of an apparent violation of the H-α schema: Merge of an external argument and *v**P. Let us consider (6).

(6) [[$_{KP}$ the man] [$_{v*P}$ wrote the book]][1]

The subject KP merges with *v**P.[2] This Merge seemingly violates the H-α schema since both KP and *v**P are phrasal categories. This apparent

problem is avoided if Transfer applies to the sister of *v** and the constituent of *v** and VP, as shown in (7a).

(7) a. [$_{v*P}$ wrote the book] $\xrightarrow{\text{Transfer}}$ wrote$_e$

b. [[$_{KP}$ the man] wrote$_e$]

In (7a), *v**P and the complement of *v** undergo Transfer, so that the *v** *wrote* remains. The *v** *wrote* has the EF (indicated by the subscript "*e*") since it is an LI. This EF triggers Merge with KP as shown in (7b). The Merge in (7b) observes the H-α schema since the *v** is an LI.

3. A Proposal

We propose the head raising analysis of RRCs along the line of Bhatt (1999). We propose that the RRC in (8a) has the structure in (8b).

(8) a. I know [the girl playing the guitar].

b. [$_{DP}$ [$_D$ the girl]$_i$ [$_{TP}$ [$_T$ -ing [non-finite]] [$_{v*P}$ t_i play the guitar]]]

c. [$_{DP}$ the girl] $\xrightarrow{\text{Transfer}}$ the$_e$

The RRC is non-finite TP headed by *-ing*. As for the RRC subject, Transfer applies at the DP phase level, removing NP *girl* and the constituent of D and NP from the derivational workspace, as indicated in (8c).[3] As a result, the D is left. Then, D moves from [Spec,*v**P] and projects at the landing site, deriving the RRC.[4]

4. The Category of Reduced Relative Clauses

4.1. RRCs as TP

In this section, we see that the RRCs are TP. If RRCs are TP, we predict that TP adverbs can occur in RRCs. This prediction is borne out:

(9) Please tell me what you know about [the person probably being a worker on the ship].

In (9), the sentential adverb *probably* can appear in the RRC.[5] If we assume that it is a TP adverb, (9) supports that the RRC has the TP projection.

4.2. The Lack of the CP Projection

Our analysis of RRCs as TP predicts that neither a relative operator nor a complementizer can be overtly realized in RRCs. This prediction is correct.

(10) A man [(*who/*that) working for John] visited us yesterday. (Krause (2001: 27))

The overt occurrence of a relative operator and a complementizer in RRCs is not allowed. Given that the relative operator and the complementizer occur in the CP domain, (10) indicates that RRCs has no CP projection.

4.3. CP Adverbs

The distribution of CP adverbs indicates that RRCs are TP. Cinque (1999) argues that the adverbs such as *evidently*, *unfortunately*, and *honestly* are CP adverbs. Then, it is predicted that CP adverbs cannot occur in RRCs. This is borne out:

(11) a. A fire crew extinguished a blazing roadside car which evidently contained a bomb.

b. *I met the boy evidently/ unfortunately/ honestly reading the book.

While the CP adverb *evidently* can occur in the FRC, it cannot occur in the RCC. This supports the idea that RRCs lack the CP projection.

5. The Consequences of the Head Raising Analysis

5.1. Idioms

Our head raising analysis of RRCs predicts that a part of an idiom can be the head of the RRC. This prediction is correct:

(12) a. The headway that we made was satisfactory.

(Schachter (1973: 31, attributed to Brame (1968)))

b. I was surprised at the headway being made by Mary.

(12a, b) show that *headway* of the idiom *make headway* can be the head of the relative clause, whether it is the FRC or the RRC. The RRC in (12b) has the structure shown in (13).

(13) $[_{DP}$ $[_{D}$ the headway$]_i$ $[_{TP}$ $[_{T}$ -ing$]$ $[_{vP}$ be made $[_{D}$ the headway$]_i$ by Mary$]]]$

The D moves and projects, deriving the RRC.[6] Here, *the headway* in *v*P forms a constituent with *make*, so that the idiomatic interpretation is allowed.

5.2. Binding Principle C

Let us consider the derivation of the RRC again.

(14) a. $[_{DP}$ D_i $[_{TP}$ ..t_i..$]]$

b. $[_{VP}$ V $[_{DP}$ D_i $[_{TP}$ ..t_i..$]]]$

c. $[_{v*P}$ Subject *v** V $[_{DP}$ D_i $[_{TP}$ ..t_i..$]]]$

In (14a), D moves to TP and projects at the landing site, deriving the RRC.[7] Then, Merge of the matrix V and DP takes place, as indicated in (14b). The derivation proceeds further, yielding the structure in (14c). In this way, the RRC is contained in the base-generated object. That is, according to the head raising analysis, the RRC cannot be late-inserted in the sense of Lebeaux (1991). Now, the head raising analysis predicts that a Condition C effect is observed in the RRC. This prediction is confirmed:

(15) a. Which student who was reading Chomsky's$_i$ book did he$_i$ say was smart?

b. *Which student reading Chomsky's$_i$ book did he$_i$ say was smart?

(Thompson (2001: 308))

Condition C is obviated in the FRC as illustrated in (15a), while it is not in the RRC as in (15b). The FRC has the operator movement strategy, which allows the late-insertion of the relative clause. Therefore, Condition C is obviated in FRC. On the other hand, the RRC adopts only the head raising analysis, which disallows the late-insertion of the relative clause. Then, the derivation of (15b) is shown in (16).

(16) a. $[_{DP}$ $[_{D}$ which student$]_j$ $[_{TP}$ $[_{T}$ -ing$]$ $[_{v*P}$ t_j read Chomsky's book$]]]$

b. $[_{CP}$ $[_{DP}$ $[_{D}$ which student$]_j$ $[_{TP}$ $[_{T}$ -ing$]$ $[_{v*P}$ t_j read Chomsky's book$]]]$ was smart$]$

c. [he$_i$ say $[_{CP}$ $[_{DP}$ $[_{D}$ which student$]_j$ $[_{TP}$ $[_{T}$ -ing$]$ $[_{v*P}$ t_j read Chomsky's$_i$ book$]]]$ was smart$]]$

In (16a), the RRC is derived by movement and projection of D. Then, the derivation proceeds, the RRC becoming the subject of the embedded clause as in (16b). At the point the matrix subject *he* is merged, it binds the R-expression *Chomsky*, violating Condition C. Therefore, (15b) is ungrammatical.

5.3. Extraposition

As we have seen, the RRCs are TP as indicated in (17).

(17) $[_{DP}$ $[_{D}$ the girl$]_i$ $[_{TP}$ t_i playing the guitar$]]$

Given that TP cannot be moved, it is predicted that the RRC cannot be extraposed. This prediction is correct:

(18) a. A man said hello to me who was wearing a fedora.

b. *A man said hello to me wearing a fedora. (Thompson (2001: 309))

Extraposition of the FRC is allowed as illustrated in (18a), whereas that of the RRC is not as in (18b). Note that it is TP that is extraposed in the case of the RRC. This is shown in (19).

(19) $[_{DP}$ A man $t_i]$ said hello to me $[_{TP}$ wearing a fedora$]_i$

Generally speaking, movement of TP is prohibited. This is why (18b) is ungrammatical.[8]

6. Further Consequences

6.1. Object Relativization

Let us consider the Case assignment to DPs in RRCs. This is indicated in (20a, b).

(20) a. $[_{v*P}$ $v*$ …$[_{DP}$ $[_D$ the man$]_i$ $[_{TP}$ $[_T$ -ing]

$[_{v*P}$ t_i V Object]]]]

b. $[_{DP}$ Subject $[_T$ -ing] $[_{v*P}$ $v*$ V Object]]

In (20a), the RRC is non-finite and therefore, the subject is not Case-assigned in the RRC. It receives Case from a matrix element (for example, $v*$). On the other hand, the object is Case-assigned by $v*$ in the RRC as shown in (20b). Then, if the object is relativized, it will be doubly Cased-marked: once by the $v*$ in the RRC and once by the matrix element. Given that DP cannot be doubly Case-marked, we predict that subject relativization is permitted whereas object relativization is not. This prediction is borne out:

(21) a. Do you know the guy wearing the green suit?

b. *I bought the gift giving *e* to him.

(cf.I bought the gift to give *e* to him.)

The contrast between (21a) and (21b) shows that the subject, not the object must be relativized. The structures of (21a, b) are (22a, b), respectively.

(22) a. know $[_{DP}$ $[_D$ the guy$]_i$ $[_{TP}$ [T -ing] $[_{v*P}$ t_i

wear the green suit]]]

b. bought $[_{DP}$ $[_D$ the gift$]_i$ $[_{TP}$ PRO [T -ing]

give t_i to him]]

In (22a), the relativized subject receives only one accusative Case from the matrix $v*$. In (22b), the relativized object gets two accusative Cases: one from the $v*$ in the RRC and one from the matrix $v*$. DP must not be doubly Case-marked. Therefore, (21b) is ungrammarical.[9] Now, we are in a position to discuss the case in which passivization takes place in the RRC. Consider (23).

(23) $[_{v*P}$ $v*$ … $[_{DP}$ $[_D$ the …$]_i$ $[_{TP}$ $[_T$ -ing] $[_{vP}$ be

V-en $t_i]]]]$

In (23), the passivized v in the RRC loses its ability to assign Case. Thus, the object receives Case at the landing site. That is, it gets only one Case. Then, we predict that when the predicate of the RRC is passivized, the object can be relativized. This prediction is correct:

(24) a. the suspects being examined by the police (Quirk, et al. (1985: 153))

b. $[_{DP}$ $[_D$ the suspects$]_i$ $[_{TP}$ $[_T$ -ing] $[_{vP}$ be examined t_i by the police]]]

In (24a), object relativization is possible. In (24b), which is the structure of (24a), the object is not assigned Case in the RRC. It is Case-marked only once in the derivation. Therefore, (24a) is grammatical.

6.2. Movement of Phrasal Categories

When XP occupies [Spec,DP], the DP is phrasal, not lexical , even if Transfer applies to the complement of D and the constituent of D and NP. This is indicated in (25).

(25) $[_{DP}$ XP [D NP]] $\xrightarrow{\text{Transfer}}$ $[_{DP}$ XP D]

D has XP in its specifier. Therefore, DP remains

phrasal after the Transfer operation. Here, let us consider the case where the RRC subject DP has a specifier.

(26) *[$_{DP}$ [$_{DP}$ XP D]$_i$ [$_{TP}$ T [$_{v*P}$ t_i…]]]

In (26), the RRC subject DP is a phrasal category and therefore, Internal Merge of DP and TP violates the H-α schema since neither DP nor TP is lexical. Then, we predict that no element occupies the specifier position of the RRC subject DP. Before confirming this prediction, let us digress for a moment and consider Degree Inversion in DP.

(27) It is nice to meet so beautiful a girl as you.

In (27), Degree Inversion takes place: *so beautiful* moves to the DP edge. Suppose that *so beautiful* moves to [Spec,DP]. With this in mind, let us return to the prediction. Given that Degree Inversion moves Degree Phrase to [Spec,DP], it is predicted that Degree Inversion cannot occur in the RRC subject DP. This prediction is correct:

(28) a. I met a very beautiful girl playing the guitar.

b. *I met so beautiful a girl playing the guitar.

As illustrated in (28b), Degree Inversion takes place in the RRC subject DP and the DP cannot be the head of the RRC. The structures of the (28a, b) are (29a, b), respectively.

(29) a. [$_{DP}$ [$_D$ a very beautiful girl]$_i$ [T -ing] [$_{v*P}$ t_i play the guitar]]

b. [$_{DP}$ [$_{DP}$ [$_{DegP}$ so beautiful]$_j$ a [$_{NP}$ t_j girl]]$_i$ [$_{TP}$ [T -ing] [$_{v*P}$ t_i play the guitar]]]

In (29a), nothing occupies [Spec,DP] and therefore, DP becomes a lexical item D after the application of Transfer. Internal Merge of D and TP observes the H-α schema. Thus, (28a) is grammatical. In (29b), the Degree Phrase is in [Spec,DP], which makes the RRC subject DP phrasal. Then, DP is merged with TP and this is a violation of the H-α schema. Therefore, (28b) is ungrammatical.

6.3. Ambiguity

Let us adopt Chomsky's (2007) hypothesis in (30).

(30) EF is undeletable.

(Chomsky (2007: 11))

(30) suggests that the EF can be accessed more than once. Actually, the EF is accessed twice under our head raising of the RRC. Consider (31a).

(31) a. [$_{DP}$ D$_e$ [T -ing] [$_{v*P}$ *t v** …]]

b. [$_{TP}$ [T -ing] [$_{v*P}$ D$_e$ *v** …]]

In (31a), the EF of D triggers the Merge operation twice: once a Merge operation of D and *v** and once Merge of D and TP. On the other hand, the EF may be accessed only once as shown in (31b): the EF of D drives Merge of D and *v**P, deriving the participial clause. Then, we predict that there is a case in which a structural ambiguity arises between DP (the RRC) and TP (the participial clause). Consider (32).

(32) Mary saw the boy walking towards the railroad station. (Chomsky (1964: 44))

The complement of *saw* in (32) is ambiguous between the RRC and the perception verb complement. This ambiguity is accounted for in terms of whether the EF of D is accessed once or twice.

The structures of the complement of *saw* are shown in (33a, b).

(33) a. see [$_{DP}$ [$_D$ the boy]$_i$ [T -ing] [$_{v*P}$ t_i walk towards the railroad station]]

b. see [$_{TP}$ [T -ing] [$_{v*P}$ [$_D$ the boy] walk towards the railroad station]]

In (33a), the EF of D triggers Merge twice: Merge of D and *v** and Merge of D and TP, which derive the RRC. In contrast, the EF of D

drives Merge only once: Merge of D and *v**, which derives the perception verb complement.[10] In this way, the ambiguity follows from whether the EF of D is accessed once or twice.

7. Conclusion

In this paper, we have argued for the head raising analysis of the RRCs: the RRC subject moves from within *v*P and projects at the landing site. We also assumed with Miyamoto (2010) that both the operator movement analysis and the head raising analysis are available for the derivation of FRCs. Then, the question arises as to why only the head raising analysis is available for the derivation of RRCs. The answer is that the RRCs project up to TP, not CP. That is, they lack the CP projection, so that they have no landing site for operator movement. Therefore, only the head raising analysis becomes available for the derivation of RRCs.

Notes

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1. Narita eliminates label from the theory of grammar. For convenience, we use labels in (6).
2. Narita assumes that noun phrases are headed by K.
3. We assume that the noun phrase is DP and a phase.
4. We suppose that if it is an LI, a moved element can be the label at the landing site. See Donati (2006) and Chomsky (2008), for details.
5. Katsuya Sugiura pointed out to me that there is variation in acceptability judgments. Thompson (2001) judges the sentence like (i) to be ungrammatical.

   (i)*The person probably playing the music you heard used to be my roommate.

   (Thompson (2001: 297))

   We leave this issue for future research.
6. As Hisatsugu Kitahara correctly pointed out, only the D head *the* moves to TP since the NP *headway* is sent out to the interfaces. We represent *the headway* as D for convenience. The reason why *headway* is immediately subsequent to *the* in linear order is that when the constituent {the, headway} is sent to the PF component, a word order principle specifies that *headway* is immediately subsequent to *the*. See Narita (2011) for details.
7. Our head raising analysis predicts that the RRC subject DP can be reconstructed into its base position. Verifying this prediction is left for future research. I thank Hiroshi Terada for bringing the reconstruction test to my attention.
8. Tohru Noguchi pointed out to me that there is a case in which extraposition of RRCs is possible. This is illustrated in (i).

   (i)A man arrived wearing a fedora.

My informant judged this sentence to be grammatical and the participial clause to have the reduced relative reading. As Tohru Noguchi suggested, (18b) may be ruled out for an extra-syntactic reason. We leave this issue open.

9. Yasuyuki Kitao asked me why object relativization is allowed under the head raising analysis of FRCs. We suggest that the structure of FRCs like (ia) is (ib) under the head raising analysis.

(i)a. the girl who you met

b. $[_{DP}$ the $[_{CP}$ $[_{DP}$ girl$_j$ who $t_j]_i$ you met $t_i]]$

We assume with Kayne (1994) that the D head *the* takes CP as its complement. It is this D head that receives Case from a matrix element. Thus, the DP *girl who* is not doubly Case-assigned. This is because the DP gets Case from the embedded verb *met* and the D head *the* gets Case from a matrix element.

10. Satoru Kanno wonders whether the subject in the perception verb complement remains within *v*P. It may move to the matrix clause to get accusative Case from the matrix *v** or it may get accusative Case via Agree. We leave this issue for future research.

References

Bhatt, Rajesh (1999) *Covert Modality in Non-Finite Contexts*, Doctoral dissertation, University of Pennsylvania.

Brame, Michael (1968) "A New Analysis of the Relative Clause: Evidence for an Interpretive Theory," ms., MIT.

Chomsky, Noam (1964) *Current Issues in Linguistic Theory*, Mouton, The Hague.

Chomsky, Noam (2007) "Approaching UG from below," *Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax-Semantics*, ed. by Uli Sauerland and Hans M. Gärtner, 1-30, Mouton de Gruyter, Berlin.

Chomsky, Noam (2008) "On Phases," *Foundational Issues in Linguistic Theory*, ed. by Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 133-166, MIT Press, Cambridge, MA.

Cinque, Guglielmo (1999) *Adverbs and Functional Heads: A Cross-Linguistic Perspective*, Oxford University Press, Oxford.

Donati, Caterina (2006) "On *Wh*-Head Movement," *Wh-Movement: Moving on*, ed. by Lisa L.-S. Cheng and Norbert Corver, 21-46, MIT Press, Cambridge, MA.

Kayne, Richard S. (1994) *The Antisymmetry of Syntax*, MIT Press, Cambridge, MA.

Krause, Cornelia (2001) *On Reduced Relatives with Genitive Subjects*, Doctoral dissertation, MIT.

Lebeaux, David (1991) "Relative Clauses, Licensing, and the Nature of the Derivation," *Syntax and Semantics 25: Perspectives on Phrase Structure: Heads and Licensing*, ed. by Susan D. Rothstein, 209-239, Academic Press, New York.

Miyamoto, Yoichi (2010) "On Chinese and Japanese Relative Clauses and NP-Ellipsis," *Nanzan Linguistics* 6, 13-46.

Narita, Hiroki (2011) *Phasing in Full Interpretation*, Doctoral dissertation, Harvard University.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language*, Longman, London.

Schachter, Paul (1973) "Focus and Relativization," *Language* 49, 19-46.

Thompson, Ellen (2001) "Temporal Dependency and the Syntax of Subjects," *Journal of Linguistics* 37, 287-312.

心理形容詞の意味と従える補文標識 that の有無との関連性 *

(The Relation between Psychological Adjectives and the Existence/Nonexistence of the Complementizer *That*)

土屋知洋（Tomohiro Tsuchiya）
防衛大学校（National Defense Academy）

キーワード：意味的統語研究，心理形容詞，補文標識 that の有無，コーパス

0．はじめに

本稿の目的は、以下(1)にイタリックで示される感情を表す分詞形容詞（participial adjectives）、本稿では“心理形容詞”と呼ぶ、の従える補文標識 that の有無を実証的に調査し、各心理形容詞の有する意味と補文標識 that の有無とが密接に結びついているという原理を新たに提案することである（以降、イタリック、下線、φの記号は全て研究者による）。

(1) a. We were *surprised* (that) she came.
(Swan (2005: 578))
b. I'm very *pleased* that so many people have agreed to help us.
(LEA (s.v. HAPPY))
c. Everyone is *satisfied* that the decision taken is the best all-round solution. (瀬戸[編] (2007: 811))
d. I was *frightened* that my parents would get divorced.
(LEA (s.v. FRIGHTENED))
e. She was *concerned* that her address might be broadcast over the radio.
(MED (s.v. concerned))

尚、本稿では補文標識 that を従える形式を THAT 型、that を従えない形式を ZERO 型と二形式が存在することを前提とし、従来の that 省略(*that*-deletion)という考え方はとらない。

1．先行研究

1.1 一般的見解

動詞が従える補文標識 that の有無に関する研究は、古くは Jespersen (1928)、そして Storms (1966)、Bolinger (1972)など枚挙にいとまがないが、形容詞に焦点を当てた研究は多いとは言えない。一般に、形容詞全般をまとめ(2)のような記述が見られる。

(2) a. We can leave out that in clauses after some common adjectives
(Swan (2005: 578))
b. In conversation, the omission of that is the norm, while the retention of that is exceptional
(Biber *et al.* (1999: 680))

つまり、“馴染みのある高頻度”“話し言葉”のどちらか、或いは両条件で補文標識 that を従えない ZERO 型になる傾向があるという。しかしながら、(1)であげた心理形容詞が補文標識 that を従えるかどうかは、以下表 1 が示すように英米の学習辞典に於いても揺れが見られ、(2)の一般的見解では説明しきれない側面が見られる。

表１．英米の学習辞典に於ける that の記述

	LDCE	LAAD	CALD	MED
surprised	(that)	(that)	(that)	
pleased	(that)	(that)		
satisfied	that	that	(that)	(that)
frightened	that	(that)	(that)	that
concerned	(that)	(that)	(that)	that

(that) : 小見出し或いは例文で ZERO 型の掲載を示す

1.2 Bolinger (1972)と土屋 (2011)の研究

心理形容詞を取り上げている Bolinger (1972)では、以下(3)のように対比する形で、補文標識 that のない ZERO 型と that を従える THAT 型の違いを説明している。

(3) a. I'm overjoyed (tickled) you won it.
b. I'm overjoyed (tickled) that you won it.
(Bolinger (1972: 53))

ZERO 型((3a))では、話し手のその場での感情の状態、つまり「即断的心理状態」を表し、THAT 型((3b))では、命題内容を回顧し生じる感情の状態、「反芻的心理状態」を表すという。この "即断" と "反芻" という概念は、土屋 (2011)の「主観的確信性」と「客観的確信性」にも通ずるものがある。[1]

土屋 (2011)では、sure, confident, certain の従える統語形式から各形容詞の語義を明確にし、各形容詞が ZERO 型と THAT 型のどちらの形式を従える傾向にあるかを実証的に調査している。その結果、"It BE 形容詞 that"の形式を従える certain では THAT 型傾向が見られ、この形式をとらず "S BE 形容詞 that" の形式のみ従える sure と confident では ZERO 型の傾向であることを明らかにしている。また、sure に比べ confident は信念などに基づく確信性を表すため THAT 型傾向であると提示している。つまり、依拠するものが存在する客観的確信性か、その場での主観的な確信性という各形容詞の意味と補文標識 that の有無が密接に結びついていると結論付けている。

1.3 従える統語形式と心理形容詞の意味

客観的に各心理形容詞の意味を特定するため、統語形式と心理形容詞の意味に関する先行研究をここで概観する。まず、影山 (編) (2001)では、(4)のように共起する前置詞との関係から心理形容詞の意味を論じている。

(4) a. at: 点的・瞬間的感情
b. with, of: 持続的感情
(影山 (編) (2001:84-85))

また、八木 (1999)では以下(5)に示すように、心理形容詞が従える構文から心理形容詞の有する性質を論じている。

(5) a. that 節を従える感情形容詞 : 非一時的
b. to 不定詞を従える感情形容詞 : 一時的
(八木 (1999: 167-169))

上記の二つの先行研究から、前置詞 at と to 不定詞構文を従える傾向にある心理形容詞は "瞬時的感情" を持ち、一方、前置詞 with や of と共起し、また that 節を頻繁に従える心理形容詞は "持続的感情" を有すると推察できる。

次節では、本節の先行研究の問題点、そして統語形式と意味との関係から、次の(6)にあげる具体的な問題について調査する。

(6) a. 話し言葉に於ける心理形容詞の各型の生起状況と意味との関係について

b. 同一心理形容詞に於ける各型を引き起こす要因と各型の表す意味について

２．量的調査

以下の表２は、BNC の話し言葉のデータを用いて、本稿の冒頭(1)であげた各心理形容詞の従える統語形式を調査したものである。この量的調査より、主に三点が明らかとなる。

一点目に、各心理形容詞の BNC における総件数から、1398 件の concerned が ZERO 型を従えず、ほぼ同じ件数といえる surprised と pleased の間で補文標識 that を従える傾向が正反対であるということは、先行研究(2)の大きな反証といえる。二点目に、to 不定詞を従えない心理形容詞は THAT 型傾向にあり、逆に、前置詞 at と to 不定詞と共起傾向にある心理形容詞（surprised）は ZERO 型傾向にあることが明らかとなる。

表２．心理形容詞とその従える統語形式 [2]

心理形容詞	前置詞	to V	Z	T
surprised [538]	at-19	37	69	36
pleased [583]	with-98	23	18	31
satisfied [178]	with-41	1	8	26
frightened[305]	of-49	1	6	9
concerned[1398]	about -170	0	0	44

to V：to 不定詞；Z：ZERO 型；T：THAT 型

三点目に、前置詞 with と of と共起する心理形容詞は THAT 型の傾向であるが、to 不定詞を従えるものは ZERO 型を従えること自体には何ら問題がない（pleased, satisfied, frightened）。

この量的調査からは、高頻度やレジスターだけが補文標識 that の有無に影響を与えるのではないという先行研究への反証が上がるだけでなく、統語形式による各心理形容詞の意味の特定と、その意味と補文標識 that の有無に関係性が見られることが明らかとなったといえる。

３．質的調査

第 2 節の量的調査の結果は、あくまで数値による傾向である。したがって、本節では、BNC の話し言葉のデータから、実際に検索された用例を精査し、同一心理形容詞に於ける各型（ZERO 型と THAT 型）を引き起こす要因と、各型を従える際の心理形容詞の意味の違いについて調査する。

3.1 surprised

従える統語形式から“瞬時的感情”を表す surprised は(7)の ZERO 型が無標形式であるが、(8)にあがる命題内容との間に明らかな時間の差がある場合（(8a)）、進行中の命題内容である場合（(8b)）、そして感情に至った理由が明示されている場合（(8c)）、に THAT 型を従える傾向がある。

(7) I'm surprised φ the boys let it (= a dog：著者による) run their garden.

(8) a. I'm surprised *that* you <u>haven't segregated</u> the men from the women ….

b. … he's not surprised *that* his colleagues <u>are looking into the matter</u>.

c. I was surprised *that* I got round the room, <u>cos I'm awful at remembering names</u> I think I'm gonna have to try and … .

また、ZERO 型では「…に驚いた」という

その場での驚きを、THAT 型では「…ということに驚いた」と命題内容を反芻した驚きを表しているといえる。

3.2 pleased

頻繁に to 不定詞を従える一方で、前置詞 with と共起する pleased の扱いは難しいが、THAT 型傾向にあることは量的調査結果からも明らかである。THAT 型で現れる用例の多くは、(9)の各用例のように感情の強意を表す副詞との共起、命題内容との時間の差、そして感情の要因となる命題内容への反芻の場合である。一方、ZERO 型は(10a)に見られる、瞬時性が表される場面、そして(10b)の未だ実現していない命題内容に対して満足感を表す場面である。

(9) a. I must confess I was surprised, curious and highly delighted when er you invited me to speak to you here today and er I'm very and sincerely pleased *that* you did.
b. Er, I'm glad that he's pleased *that* Wales got an extra seat, it has got an extra.

(10) a. I'm pleased ϕ we've got this record now.
b. And I'm very pleased ϕ I'm gonna have a bit of a result this afternoon.

意味の面では、THAT 型では「…ということを喜ぶ・喜んでいる」と解釈でき、ZERO 型では「…して（しそうで）嬉しい」と推断的解釈が当てはまると考える。

3.3 satisfied

Satisfied は、(11)のような命題内容との間に時間の差がある場合を含め THAT 型が無標形式である。しかし、(12)の二つの要因で ZERO 型を従える傾向が見られる。一つは、相手にその場で命題内容に対する感情を聞く疑問文の場合である（(12a)）。そして、もう一つが、(12b)のような Oh, oh という一時性や feel を連結詞として用い推断的な表現を伴う場合である。

(11) A simple signature is fine, and then I, when I'm satisfied *that* I have seen that work in your file done in the way you say you've done it, I will sign the teacher column on your sheet Okay, … .

(12) a. … can I ask a very general question erm are you satisfied ϕ every one of the participants is now totally locked in.
b. … pull it (= the bottom soap : 著者による) out then, that's it well done now what time is it now? Twelve Oh, oh I feel very satisfied ϕ I've managed to clean the place.

THAT 型の「…ということに満足している」という意味解釈に対して、ZERO 型では意味が薄れ「…に満足している・嬉しい」という意味解釈が適切と言えよう。

3.4 frightened

量的調査結果に於いて、先の satisfied と同じ傾向にある frightened を精査すると、pleased と satisfied とほぼ同じ要因が補文標識 that の有無に影響していることがわかる。(13)では、感情を強める副詞との共起や感情に至る理由の明示がなされ、THAT 型で表現されている。一方、frightened が ZERO 型を従える場合は、そのほとんどが(14)のよ

うに未だ実現していない命題内容をとっているのである。

(13) a. We are all frightened *that* fossil fuels are going to run out in the foreseeable future, ….
b. … he was frightened *that* he was getting a bit panicky cos if, you know, frightened a combine had had run over it (=the sort of corn and barley).

(14) … if they (= children : 著者による)'ve got a job or something they're frightened φ they're not gonna do well and ….

形式によって frightened の意味も変化している。THAT 型では「…ということを恐れる」の解釈が適切だが、ZERO 型では「…ではないかと心配する・恐れる」という afraid と類似した意味解釈となる。

3.5 concerned

前置詞 about と共起し、to 不定詞を従えない concerned は "持続的感情" の意味を有するといえ、ZERO 型を従えることはない。THAT 型の用例では、(15)に見られる感情を強める副詞との共起が一般的である。

(15) He was very concerned that the integration of the races might lead to violence and public disorder on a large scale.

3.6 質的調査の結果

本節では用例を一つ一つ取り上げたが、その結果、以下の二点に集約できると考える。

(16) a. 感情と命題内容との間に明らかな時間の差がある場合、命題内容が現在進行形で表現される場合、強意副詞が共起する場合、では THAT 型傾向【命題への反芻・反芻的感情】
b. その場での感情表出の場合、未だ実現していない命題内容を従える場合、では ZERO 型傾向【即断的感情・推断的感情】

4．インフォーマント調査 [3]

本節では、これまでの調査結果の妥当性を裏付けるためネイティブスピーカーの反応を確認する。本調査では 7 名の英語母語話者に依頼をし、以下(17)にあげる著者がコーパスのデータから加工した質問文で補文標識 that のない形式（質問用紙では φ 記号）が自然か、that がある方が自然か、また両形式共に自然か、という三つの選択肢から一つ選ぶ形で調査を行った。

(17) a. I was surprised { φ / that } I had forgot to check e-mail, because I have never done so before.
a'. I'm surprised { φ / that } they smoke in a nonsmoking area.
b. I'm pleased { φ / that } I've just got a new job.
b'. I'm very pleased { φ / that } I got a phone call from Chris last night.
c. Oh, do you feel satisfied { φ / that } your staff is busy right now?
c'. We're satisfied { φ / that } we made a go of the business.
d. We are very frightened { φ / that } she is getting mad, because recently she broke up with her boyfriend and lost her favorite wallet.
d'. He's frightened { φ / that } he

won't sing well in front of a large audience.

上記(17)の質問と以下の表3を参照しながら考察を行う。

表3．インフォーマント調査の結果

設問	ZERO	THAT	両型 OK	BNC
(17a)	1	5	1	THAT
(17a')	1	3	3	ZERO
(17b)	1	2	4	ZERO
(17b')	1	4	2	THAT
(17c)	2	3	2	ZERO
(17c')	1	4	2	THAT
(17d)	2	4	1	THAT
(17d')	2	4	1	ZERO

BNC：各設問と類似した英文の BNC の質的調査での傾向を示す

(17a)及び(17a')の surprised の結果を考察すると、命題内容が過去完了で表現され、感情に至る理由が明記されている(17a)では THAT 型のみ可能とするものが 5 名と、両型とも容認の数値が高い(17a')と大きく異なる結果といえる。心理形容詞 pleased では、一時性の just を含む(17b)では本来 THAT 型傾向にある当該形容詞が両型とも容認 4 名という ZERO 型の容認度が上がることがわかる。(17b')では、命題内容との明らかな時間の差があり、これまでの調査結果通り THAT 型のみ容認とする数値が高い。

(17c)(17c')の satisfied では、これまでの調査結果と完全に一致するものではない。その場での感情表出を表す(17c)では、確かに(17c')より ZERO 型のみ容認する被験者が 1 名多いが、THAT 型のみ容認とするものも 3 名いる。(17d)及び(17d')の frightened に於いても、特に命題内容が未だ実現していない(17d')に於いて、質的調査の結果とは異なり THAT 型のみ容認とする被験者が 4 名と多かったことは予想外の結果となった。この satisfied と frightened の結果は更なる調査の余地があることを示すと同時に、共に話し言葉に於いても THAT 型のみを選択するというレジスターの違いによる数値だけの研究への警鐘を鳴らす結果ともいえよう。

5．おわりに

本稿では、これまで補文標識 that の有無の議論に於いてあまり焦点が当てられてこなかった心理形容詞を取り上げ、各心理形容詞の意味が補文標識 that の有無のメカニズムに密接に関係していることを実証的に論じた。インフォーマント調査で僅かながら、今後に課題を残す形となったが、本稿の議論を以下の形で結論付けることができる。

(18) a. レジスター・頻度に関わらず、心理形容詞の意味が従える形式を決定
b. 命題内容への反芻・要因への依拠による感情では THAT 型傾向、命題内容への即断的・推断的な感情では ZERO 型傾向
c. ZERO 型では形容詞の意味が推断的

本稿の語法研究的手法の議論とその結果が、数値や理論だけによらず、補文標識 that の有無という難解な現象を説明する新たな原理を導く契機となると考える。

注

*本稿は、日本英語学会第 31 回大会（2013 年 11 月 10 日、福岡大学）に於ける口頭発表の内容に加筆修正したものである。研究発表当日、フロアから貴重なご意見を頂いた柏野健次先生、川崎修一先生ほか諸先生方に深

く感謝申し上げる。

1. 中右（1981, 1983)では、Bolinger（1972）と類似した「既定性」という概念を用い補文標識 that の有無について説明している。中右（1981: 427)では「補文化辞 that は、その補文の命題内容が非既定的なときにかぎり省略できる」とし、中右(1983: 553)には既定述語として be surprised をリストに含めている。しかし、心理形容詞が命題内容に対する反応だと考えれば、全ての心理形容詞は“既定的”といえ、第２節でみるように 実際にZERO 型を頻繁に従える surprised のリスト化には修正が必要といえる。

2. 表中の[　]は検索総数を表し、前置詞は共起頻度の最高のものを示している。尚、to V の件数では、pleased の挨拶として英米の学習辞典で成句扱いされている表現、frightened の「～するのを怖がる」の意味を省いた件数が提示されている。

3. 本インフォーマント調査の被験者の国別内訳は以下の通りである：アメリカ人３名，カナダ人２名，アメリカ人・ニュージーランド人各１名

参考文献

（文献）

Biber, D., S. Johansson, G. Leech, S. Conrad and E. Finegan. (1999) *Longman Grammar of Spoken and Written English*, Longman, London.

Bolinger, D. (1972) *That's That*, Mouton, The Hague.

Jespersen, O. (1928) *A Modern English Grammar* Ⅲ, Allen and Unwin, London.

影山太郎（編）(2001)『日英対照　動詞の意味と構文』大修館書店，東京.

中右実（1981)「変形と意味の原理」『英語青年』第 127 巻，第 7 号，2-6，研究社出版，東京.

中右実（1983)「文の構造と機能」『英語学大系５：意味論』548-626，大修館書店，東京.

瀬戸賢一（編）(2007)『多義ネットワーク辞典』小学館，東京.

Storms, G. (1966). “That-clause in Modern English,” *English Studies*, 47 249-270.

Swan, M. (2005) *Practical English Usage* 3rd ed, Oxford University Press, Oxford.

土屋知洋（2011)「「客観性」と補文標識 that の出没－“確信性”を表す sure, confident, certain の比較―」『岐阜工業高等専門学校紀要』第 46 号，15-20，岐阜工業高等専門学校.

八木克正（1999)『英語の語法と文法　意味からのアプローチ』研究社出版，東京.

（学習辞典とその略称）

CALD: *Cambridge Advanced Learner's Dictionary* 3rd ed.

LAAD: *Longman Advanced American Dictionary* 2nd ed.

LDCE: *Longman Dictionary of Contemporary English* 5th ed.

LEA: *Longman Essential Activator* 2nd ed.

MED: *Macmillan English Dictionary* 2nd ed.

（コーパス）

BNC: the British National Corpus, world edition

前置詞 against の多義について
(On the Polysemy of the Preposition *Against*)

辻　早代加 (Soyoka TSUJI)
大阪市立大学大学院
(Osaka City University)

キーワード: 前置詞, イメージ・スキーマ, 多義, force dynamics

１．はじめに

本発表の目的は、英語の前置詞 against の多義を、認知意味論のやり方にもとづき、イメージ・スキーマを用いて明らかにすることである。
その際、against の多義分析には、力の及ぼし合い、トラジェクターの front/back、観察者の視点、という３つの観点を考慮に入れた、他の前置詞分析とは異なる説明が必要であることを主張する。

against は、多義的で抽象的な意味も多い前置詞であり、その多義は以下のように、様々に広がりを見せる。

(1) A shovel was leaning <u>against</u> the wall.
(2) There are strong arguments for and <u>against</u> euthanasia.
(3) His red clothes stood out <u>against</u> the snow.
(4) The elections are taking place <u>against</u> a background of violence.
(all from OALD)

例文(1)や(2)にみられるような「もたせかけて」や、「反対して」という意味の他に、against は(3)や(4)のように、「背景にして」という特徴的な意味で使われることがある。(1), (2)におけるような意味と、「背景にして」という意味は、一見かなりかけ離れており、「背景にして」という語義は、against の持つ意味の中ではとても例外的に思われる。

本発表においては、「背景にして」という意味は、たまたま against の語義に加わったものだというわけではなく、against の持つ本来的なものから生じた意味であるととらえ、このことを、against の多義全体の構造を明らかにして行く上で論じる。

２．これまでの against に対する扱い

認知言語学においては英語の前置詞について分析した論文は多いが、against について詳しく触れているものはあまりない。特に、「背景にして」という語義については、辞書の記述においても、「対比」の意味と同じ項目であつかわれていたり、また別の辞書では「接触」と同じ項目に分類されていたりと、全く一貫しない。

Lindstromberg (2010)は、 against の大本の意味は “Firm or forceful contact” であるとしている。

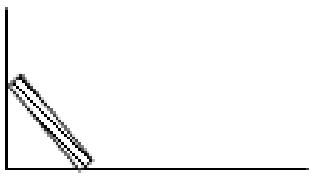

図１: It's leaning *against* the wall.

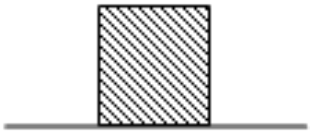

図２：Horizontal view of a black book positioned against a white wall.

against の最も典型的な意味は図１の状態（壁に本がよりかかっている状態）であると説明し、そして、「背景にして」という意味には、視点の位置を考慮することが重要であると述べ、その視点とは、図１の視点を 90 度回転させ、図２のように、本を正面から見る視点であるとしている。また、このとき、本が黒、壁が白なので、とても本がはっきりと見える、と論じている。

では、黒い本と白い壁、のように、視覚的に対照的でない場合はどうなるのか。また、against の「背景にして」という意味が、どのように他の意味と関連しているのか。そういったことを明らかにし、against の多義構造に一貫した説明を与えるために、次節で against のイメージ・スキーマの提案と考察を行う。

３．against のイメージ・スキーマ

説明には、認知言語学におけるトラジェクター（以下 TR）とランドマーク（以下 LM）の概念を用いる。

against は抽象的な意味においても多く使われる前置詞だが、他の前置詞と同様に、TR と LM 間の物理的な関係を表す意味が元になっており、そこから比喩的に、抽象的な意味で用いられるようになったと考えられるので、まずは具体的・物理的な関係について考察する。この際の物理的関係というのは、ほかの前置詞一般において重要となる単純な位置関係ではない。TR が単なる物体ではなく、人間であると想定した場合に、TR が前後どちらを向いているか、つまり「TR の front/back」と、「LM と TR の二者間の力の及ぼし合い」による関係となる。

３．１．物理的な意味の against

説明にあたり、LM と TR のそれぞれが、どのような状態にあるかについて、以下のように場合分けを行う。のちに説明するが、E は F からメタファー的に生じている。

●LM

S：static
（静的である）

D：dynamic
（動的に TR に力を加えている）

●TR

CFR：confront
（LM と対面している）

B：back
（LM に背を向けている）

C：contact
（LM に接している）

F：force
（LM に力を加えている）

E：eyes
（TR の方から LM に視線が及んでいる）

この場合分けの組み合わせによって、against のイメージ・スキーマとして、以下の６つのスキーマを提案する。

●スキーマ１：S. CFR. F. C　【中心義】

・LM は静的である（S）
・TR と LM は対面している（CFR）
・TR から LM に力が加えられる（F）
・TR と LM は接触している（C）

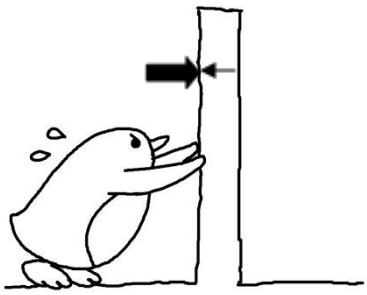

図３：スキーマ１

図３は、スキーマ１における典型的な状態を表すものである。TR が、LM である壁に力を加えている。TR から LM に積極的に力を加えようとする場合、もちろん TR が LM に対して背を向けたり、横向きになったりすることも可能ではあるが、TR が人であれば LM に対面しているのが通常である。このとき、LM から TR へは反作用の力が働くため、通常 LM が壊れたり倒れたりすることはない。図において、太い矢印は力が加わっていることを表し、細い矢印は、それに対する反作用を示す。以下で挙げるスキーマ２～６においても同様である。

スキーマ１には下記のような例が含まれる。以下特に表記のない場合、例文は BNC による。

(5) When Lee pressed <u>against</u> the door it would not open so that she panicked, standing in the enveloping steam.
(6) He crashed <u>against</u> the wall then fell, rolled the last few stairs to the hallway.
(7) Sir Bryan nodded at the rain beating <u>against</u> the window.
(8) …smash your head <u>against</u> the ceiling.

図３においては力のやり取りは水平方向で行われるが、スキーマ１においては力の方向は問わず、例文(8)のように垂直方向や、それ以外である場合もある。

他のスキーマに比べ最も用例の頻度が高いことと、また、他のスキーマへの展開が、スキーマ１を中心とする場合に最も自然に捉えられることから、このスキーマ１を中心義と考える。

●スキーマ２：D. CFR. F. C

・LM が動的である（D）。それ以外はスキーマ１と同様。

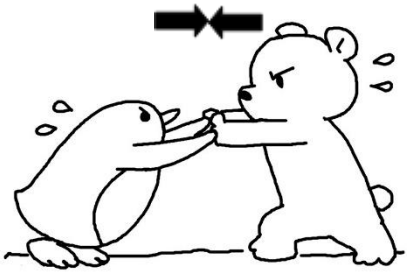

図４：スキーマ２

TR は LM の力に対抗する力を持つが、どちらの力が勝つか負けるかは含意されない。

(9) Shannon fought <u>against</u> him as hard as she could…
(10) Fish instinctively fight their way upstream <u>against</u> the current…
(11) They walked in a line, the yaks' bulky bodies braced <u>against</u> the wind…

●スキーマ３：S. CFR

・スキーマ２における力の及ぼし合いが失われ、TR と LM が接触することもなく、対面していることだけを表す。

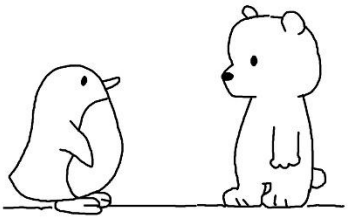

図５：スキーマ３

(12)And so handed me to the coach … and sat backwards over against me. (OED)

(13)My house is against the church. (OALD)

●スキーマ４：S.B.F.C

・スキーマ１で LM と対面している TR が、LM に背を向け（B)、もたれている状態を表す。

・TR から LM へ力が加わるが、重力によるものであり、TR も静止状態にある。

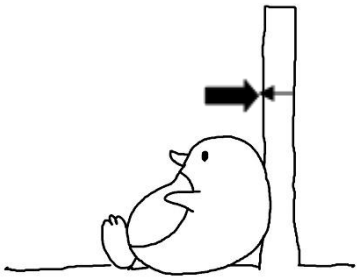

図６：スキーマ４

スキーマ１の場合は、TR が LM に向かい、積極的に力を加えているのに対し、このスキーマ４においては、TR は LM に背を向けており、力は重力によるものとなる。日本語でいうならば、「押す」ではなく「もたれる」状態である。また、スキーマ１においては、TR が LM に対し、どの方向から力を加えてもよいが、スキーマ４の場合、力のやりとりは水平方向に近い軸に限られる。というのも、重力で力が加わっている（つまり、TR の重さを LM が支えている）ので、TR が LM の下にある可能性はなく、また逆に TR が LM の上に乗っている状態は、通常 on で表されるためである。

(14)The manager leaned against the wall, arms folded, ankles crossed, in a typical hotelier's pose….

(15)I sit up and rest against the wall.

(16)A shovel was leaning against the wall. (OALD)

●スキーマ５：S.C

・スキーマ４における力の及ぼし合いが失われ、TR と LM が接触していることだけを表す。

・本来は力が働いている物の位置関係だけを知覚的に捉えなおしている。

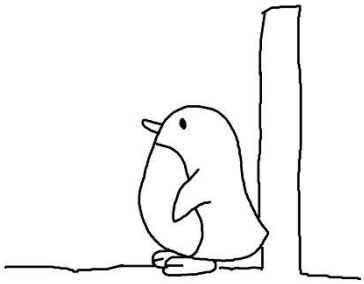

図７：スキーマ５

(17)Mrs Cullam lit a cigarette and stood against the table, her hands hanging by her sides, the cigarette dangling from her mouth.

(18)Put the chair against the wall. (Lindstromberg 2010)

●スキーマ６：S.B.E

・スキーマ４における「力」がメタファーによって視線に置き換えられ（E)、LM を背にしている TR が前景、LM が後景となることを表す。

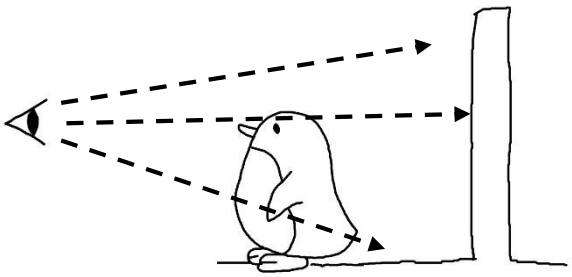

図８：スキーマ６

TR が front/back という向きを持たない場合や問わない場合は、「背を向ける」という観点はなくなるが、視点の位置から見て TR が手前にあり前景となり、LM が後ろにあり後景としてはたらいていれば、against を用いることができる。また、例(21)からわかるように、TR と LM が必ずしも視覚的に対照的である必要はない。

(19)…they like to photograph her in supermarkets against the Ecover, looking wholesome and fresh, youthful but still somehow serious.

(20)…they were taking pictures of each other against the background of the Gatun Locks…

(21) Arctic mammals and birds have evolved pure white fur or feathers that help to camouflage them against the white expanses of the frozen north.

また、スキーマ 6 を、視線によって見えているように回転したものが図 9 、さらにそれを簡略化したものが図 10 である。

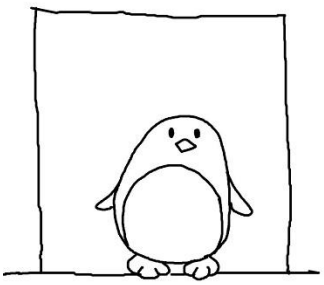

図 9

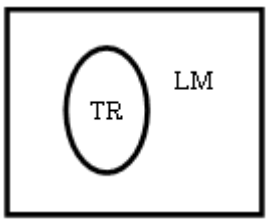

図 10

TR と LM が図 10 のように見えていて、TR が前景、LM が後景として認識できれば、TR が実際の空間的には LM の手前（視線上の手前）になくとも、against を用いて表せる。ただし、この場合は、実際には前に来ていない TR を前景として捉える動機付けとして、一見してわかる色などの対比が必要となる。

(22) … his teeth gleamed white against a dark red beard.

(23)Veins stood out bluish against pale skin.

TR である teeth と veins は、実際に空間的には LM である beard と skin の前ではなく、奥にあるが、その色合いが対照的であることと、平面的には図 10 のように見えていることから、各 TR は前景として捉えられる。例(22)、(23)において against が用いられるのは、単にふたつのものが「対比」されているからというだけでなく、図 10 のような状態で TR が前景となっているからこそである。

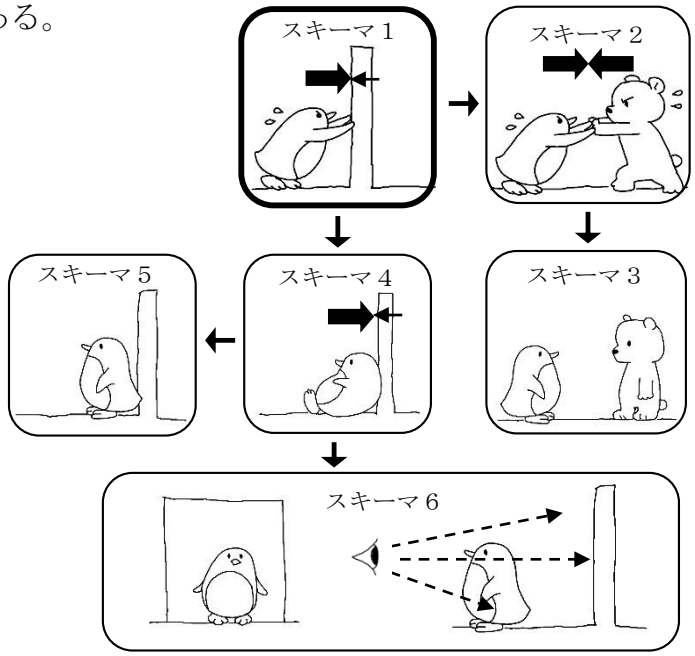

図 11

以上で述べてきたスキーマ１～６によって、against の表す物理的な意味と「背景にして」という意味の説明が可能となった。図 11 は、スキーマ同士のつながりを表したものである。

against の多義を説明するには、他の前置詞の説明に大きく関わるような TR と LM の形状や位置関係というよりも、TR と LM が力を及ぼし合うということと、TR の front/back、そして観察者の視点を考慮に入れることが必要である、ということが明らかになった。図１においては、本発表におけるスキーマ１と４との区別が曖昧であったが、TR を、front/back をもつ人間として考えることによって、より意味の違いがはっきりと捉えられるようになった。また、図２に示した「本を正面から見た場合」というのは、観察者の視点が導入され、メタファーによって視線に置き換えられた力が及ぼされているということであると示すことができた。以上のように、一見例外的である「背景にして」という語義も、他の語義と一貫した説明が可能となる。

３．２．抽象的な against の意味の分類

抽象的な against の意味について、少ないが例を上げて見ていくことにする。

●スキーマ１より

（LM が負担・嫌悪の一方的な行き先）

まず、スキーマ１から得られる抽象的な例として、以下のようなものがある。

(24)Did you know anyone who had a grudge <u>against</u> her?

抽象的な意味になると、TR の front/back は考慮されず、負担や嫌悪といった TR が、LM に一方的に向かうことを表す。このときの TR には、いい意味のものでなく、負担や嫌悪といった、悪い意味のものが現れる。これは、スキーマ１の図を見るとわかるように、TR が LM に向かって積極的に力を加えることが、LM に対して攻撃や拒否の姿勢をとることにつながるからであると考えられる。

●スキーマ２より

（LM に対して逆行・反対・抵抗）

これらの場合は、スキーマ２の比喩的なものである。抽象的な意味で力を加えてきたり、はっきりと流れや向きを持つ LM に対して、TR は逆行したり、反対したり、抵抗したりすることを示す。

(25)Harold was a tie-wearer, <u>against</u> the fashion, but he had already removed it…

(26)…they would prefer to pay extra for insurance <u>against</u> sickness and unemployment.

●スキーマ６より

（LM が比喩的な意味での「背景」）

最後に、スキーマ６の背景を表す against の抽象的な例である。

(27)The love story unfolds <u>against</u> a backdrop of civil war. （OALD）

例(27)は、civil war を背景として、the love story が展開した、という意味になる。TR は前景であり、LM はその後ろだてとなる後景として捉えられている。against が抽象的な意味での背景を表すのに使われる場合、“against a backdrop of ~”や“against the background of ~”といった表現がよく用いられる。これは、単に“against ~” だけでは、「～に反対して」という意味と区別がつきづらいためである。

以上のように、抽象的な意味の against をみても、against という前置詞には、比喩的にであってもそうでなくても、力を及ぼしあうという観点が重要であることがわかる。

４．おわりに

前置詞の分析が広く行われてきた認知言語学においても、未だ記述が少ない against の多義を、イメージ・スキーマを用いて説明した。その際、against は、他の前置詞分析における幾何学的な要素のみではその多義が分析できないことが明らかとなった。

例えば、Lakoff (1987)や Brugman (1983)による over の分析においては、ほぼ純粋に TR と LM の形状や位置関係によって説明が可能となっていたが、against の場合は、力の及ぼし合いという観点、つまり広義での force dynamics、観察者の視点、そして TR の front/back という３点が必要不可欠であるということがわかった。

主要参考文献

Brugman, C. M. 1983. *Story of OVER.* Indiana: Indiana University Linguistics Club.

Lakoff, G. 1987. *Women, Fire, and Dangerous Things*: What Categories Reveal About the Mind. Chicago: University of Chicago Press.

Lindstromberg, S. 2010. *English Prepositions Explained*. Revised edition. Amsterdam: John Benjamins.

Talmy, L. 1988. Force dynamics in language and cognition. *Cognitive Science* 10, 2:117-149.

辞書

OALD : *Oxford Advanced Learner's Dictionary of Current English*, 8th ed. 2010. Oxford: OUP.

OED : *Oxford English Dictionary*, 2nd ed. 20 vols. 1989. Oxford: OUP.

コーパス

BNC: British National Corpus. (http://bnc.jkn21.com/)

‘time’-away 構文の多義ネットワーク (Network of the ‘time’-*away* construction)

山本恵子（YAMAMOTO Keiko）
大阪大学大学院（Osaka University）

キーワード：‘time’-away 構文、コーパス、プロトタイプ、意味拡張

１．はじめに

(1) の文の目的語は動詞に下位範疇化されず、また、意味も各要素の総和以上の意味を持つ。そこで、Jackendoff (1997) は (1) のような文に関して、(2a) の形式に (2b) の意味を持つ構文であるという趣旨の分析をしている。

(1) We're *twistin' the night away*.
(Jackendoff 1997: 534)

(2) a. [$_{VP}$ V NP away]
b. ‘waste [$_{Time}$ NP] V-ing’ (Ibid.: 555)

これに対して、高見 (2007) は、Jackendoff の意味定義にある「無駄 (waste)」という意味は必ずしもこの構文の十分条件ではないことを指摘し、その代案として、(3) の意味的機能的制約を提案している。

(3) Time-away 構文の意味的・機能的制約：Time-away 構文は、主語指示物が、非生産的 (nonconstructive) 行為、活動を、時間表現が表す時間全体にわたって行うと解釈される場合に適格となる。　（高見 2007: 645）

このように、2 つの先行研究は食い違っていることを主張しているが、両先行研究は作例に基づくため、実際のところどうなのかは明らかでない。そこで、コーパスの実例に基づき、‘time’-away 構文とは一体どんな現象であるかを実証的に検証する。尚、本稿では紙面の関係上、この構文を捉える上で最も重要だと思われる時間句 night に絞って議論を展開する。

２．BNC と COCA のデータと考察

２．１．‘time’-away 構文の時間句

先行研究では ‘time’-away 構文の時間句に何が入るかについて区別されずに分析されていたが、BNC, COCA コーパスを使って区別して検索してみたところ、いくつか面白いことが明らかとなった。表１，２は ‘time’-away 構文の生起数を時間句別に上位から順に並べた結果である。

	V ___ away	V away ___	TOTAL
night	50	3	53
time	12	25	37
hour	2	19	21
day	8	7	15
evening	3	10	13
life	7	2	9
afternoon	5	4	9
minute	2	6	8
summer	1	1	2
moment	0	2	2
winter	1	0	1
morning	0	1	1
fall	0	0	0
TOTAL	91	80	171

表１　BNC　時間句別生起数

	V ___ away	V away ___	TOTAL
night	145	17	162
hour	7	98	105
day	37	51	88
time	11	70	81
life	47	14	61
afternoon	14	39	53
evening	3	10	13
morning	4	8	12
summer	3	8	11
minute	2	6	8
fall	2	1	3
moment	0	3	3
winter	0	2	2
TOTAL	263	327	590

表 2　COCA　時間句別生起数

まず、night の生起数が他の時間句と比べて圧倒的に多いことがわかった。次に、night の場合、他の時間句と違って、[V ___ away] の語順が多くみられ、また、away と共起する動詞の種類に大きな違いがあることがわかった。

night 以外の時間句の場合、主として、(4) のような while, laze, idle など動詞自体に「のんびり」、「怠惰」といった意味を含む種類の動詞が最も多くみられた。

(4) a. She decided to *while away the time* […]. (BNC)
b. Rosie Essa was just *idling away a few hours* […]. (COCA)

(4) の動詞は時間句と away が一まとまりとなってイディオム表現を成しているため、 away と共起することは何ら不思議なことではない。また、(4) のようなタイプの他に night 以外の時間句と共起する動詞は、(5) の sleep, doze のような比較的不活発な動作を表す動詞が生起する傾向がみられた。

(5) a. […] she *slept the afternoon away* […]. (COCA)
b. Sergeant *dozed the day away* […]. (BNC)

一方、night の場合、動詞自体に「無駄」といった意味を含む動詞はほとんどみられず、むしろ dance, drink, talk のような比較的活発な動作を表す動詞が多くみられた。このように、night と共起する動詞とそれ以外の時間句と共起する動詞の種類に関して明らかな違いがみられた。

さらに、インフォーマント９人に ‘time’-away 構文の例をいくつか提示したところ、ほとんどの人が ‘dance the night away’ しか耳にしたことがなく、それ以外の表現には非常に違和感を覚える人が大半であった。実際の日常会話でも ‘dance the night away’ を含めて、‘time’-away 構文を使用しないということであった。このようなインフォーマント調査の結果はコーパスの実例がいずれも文学作品や歌のタイトル、新聞記事の見出しやパンフレットの宣伝文に特化したものばかりであったことからも裏付けられる。

このように時間句の生起数と共起する動詞の種類から判断して、‘time’-away 構文は決して均質な現象ではないと考えられる。また、ここまでの考察を踏まえても、 [V night away] は ‘time’-away 構文のプロトタイプだと考えられるので、以下では、 [V night away] に絞って、議論を展開する。

２．２. [V night away]

表３，４は night と共起する動詞を上位から順に並べた結果である。

dance	24
drink	3
while, talk, love	2
fritter, disco, cha-cha-cha, rock and roll, quickstep, boogie, shimmy, swing, prance, cut, scratch, sing, chat, sup, relax, laugh, smooch, shiver, whittle, walk	1
TOTAL	53

表３　BNC　night と共起する動詞の件数順

dance	82
party, drink, talk	6
while, dream	4
two-step, gamble, sleep	3
pass, idle, tango, boogie , waltz, sing, eat , snooze	2
disco, twist, sway, swirl, rant, bugle, dine, sip, nosh, suck, wince, love, baby, flirt, drift, snuggle, doze, snore, sit, wait, dwell, pray, study, read, grade, loiter, pace, walk, run	1
TOTAL	162

表 4 COCA　night と共起する動詞の件数順

両コーパスともに、dance の使用例が他の動詞と比べて群を抜いて多く、BNC では５３例中２４例、COCA では１６２例中８２例みられた。

(6) はコーパスで一番多くみられる dance の例である。

(6) a. Come on, Ms. Perdue, let's *dance the night away*. (COCA)
b. Diana *danced the night away* with friends in a disco. (BNC)

このような ‘dance the night away’ の文は、ディスコやそれに類する場所で、「主語は自分の意思で（本来寝るべき時間の）夜、踊って過ごす。」ことを表し、また、「（主語は好きなことをしているので）その活動は当然、楽しい。」という意味で特徴づけることができる。

また、dance 以外にも、(7) のような「踊り」に関する動詞が多く見られた (BNC 8/53, COCA 13/162)。それらの動詞は、ヨーロッパのフォークダンス系の踊りを表す waltz, two-step や、ラテンアメリカ系の踊りを表す tango, chachacha, shimmy, boogie, twist や、前者と後者の踊りの融合体である quickstep, rock and roll で、いずれも社交ダンスの種類に相当するものばかりであった。また、(8) のような swing, sway, swirl, prance はいずれも踊りの様態やステップを表し、(9) の disco は踊りの場所を表す。このような動詞はすべて「踊り」に関する動詞として一つのグループにまとめられる。

(7) a. […] *to tango the night away*, there are halls in the deep, deep woods. (COCA)
b. *Two-step the night away* at Blanco's. (COCA)
(8) […] we *swung the night away*. (BNC)
(9) I have *discoed the night away*. (BNC)

次にコーパスでみられた (10)-(13) のような踊り以外の動詞の例を見てみよう。

(10) […] the local Irish folk and other from Berlaymont go to *talk the night away*. (BNC)
(11) […] discos are filled with visiting Brits and Scandinavians *partying and drinking the night away*. (COCA)
(12) Norman began *cutting and scratching the night away* […]. (BNC)
(13) […] a disco bar where those of us with any energy left after a hard

day's sport were able to *relax the night away*! (BNC)

これらの動詞は一見、何の繋がりもないようにみえるが、図１のようなディスコの ICM を想定すればそこに当てはまるものばかりである。ディスコと言えば、「夜、若者たちがダンスミュージックに合わせて踊って楽しみ、その結果、憂さなど晴れて気分が良くなる場」として特徴づけることができる。

The ICM of Disco
1. dance　(Dance forms: Ballroom dancing)
2. to dance music
3. Night
4. Young People
5. Purpose: have fun　(*drink, chat,* etc.)
6. Effect: have a soothing effect

図１　Disco の ICM

(10)-(13) の文をみてみると、(10) の talk （お喋り）, (11) の party （どんちゃん騒ぎ）と drink （飲酒）, (12) の cut, scratch （DJ の即興演奏）, (13) の relax （くつろぎ）は、いずれもディスコの ICM を想定すれば、そこに当てはまるものである。また、dance の種類について詳しく見れば、先述した社交ダンスの種類に繋がっている。

このように、[V night away] でみられる圧倒的大多数の動詞（sup, sip, nosh, eat, dine →「飲食」, sit →「飲食中に付随する動作」, talk, chat, laugh →「談笑」, party, rant, sing, run →「どんちゃん騒ぎ」, gamble →「賭け事」, relax →「効果」）はいずれも、ディスコの ICM を想定すれば、そこに当てはまるものばかりである。

また、それぞれの文の意味特徴も ‘dance the night away’ の意味特徴とぴったり一致している。従って、これらの例はいずれもディスコの ICM を介した ‘dance the night away’ からの拡張と考えられる。

さて、(14) のような一見ディスコの ICM と関連し難い動詞（ *love, smooch, baby, flirt, drift, snuggle*）の例がいくつかみられた（BNC 3/59, COCA 5/160）。

(14) a. So tonight, let's *love, baby, and drift the night away*. (COCA)
b. They went to bed again and *drank and loved two nights away*. (BNC)

これらの文はいずれも「恋人たちが夜、愛し合って過ごす」ことを表す。これらはディスコの ICM と直接的に関係するものではないが、それでも「主語が、夜、自分の意思で好きなことをして楽しむ」という面からみると、‘dance the night away’ の意味特徴と関連づけられる。

ここまでの [V night away] のほとんどの動詞は ‘dance the night away’と関連づけられる。しかし、[V night away] の中には少数ながら、‘dance the night away’ の意味特徴である「自分の意思で楽しむ」という意味から完全にかけ離れているように思われる文がみられた。(15)~(17) がそのような非典型例である (BNC 3/53, COCA 5 /161)。

(15) *Shivering the night away* in the reeking darkness of the tunnels, he had asked himself this question more than once. [...] (BNC)
(16) Given to bouts of insomnia, Lipscomb *paced the nights away*. (COCA)

(17) […] two elk stood on hills to our north and south, *bugling the starspangled night away*. (COCA)

(15) の文は主語の若者は悪友に脅され、ある女性から金を奪うためにトンネルの中で待ち伏せするように命じられ、自分の意思に反してぶるぶる震えながらトンネル内で待ち伏せしている状況を表す。(16) の文はフットボールの有名選手であるリプスコが不眠症のため廊下を夜な夜な歩いて過ごしていることを表す。この２例はいずれも、主語が全く楽しんでいない点で、‘dance the night away’ の主たる特徴とも言える「楽しい状況」とはかなりかけ離れている例だと言える。だが、いずれも小説の文であり、その物語の中で、別のある場面では若者が普段は夜、ディスコに行ったり、友達たちと楽しんで騒いでいる状況描写が見られた。(15) と (16) は一見 ‘dance the night away’ と全く関連性を見出し難い例に思えるが、若者の日常的な夜の活動のある一コマが ‘time’-away 構文を使って状況描写されたと考えると、あくまでも可能性であるが、このような例でさえも ‘dance the night away’ と関連づけることができる。次に、(17) の文はヘラジカが鳴いて、夜が過ぎるという描写であるが、bugle は鹿の求愛活動である鳴き声を表すので、この例は (14) のような love などの例と関連づけられる文であり、このような例でさえも可能性として、‘dance the night away’ と関連づけられる。

このように、[V night away] の文は非典型例に至るまで、何らかの形で、‘dance the night away’ に関連づけられることからも [V night away] の中で ‘dance the night away’ が圧倒的に特別な地位を持ち、‘time’-away 構文のプロトタイプであることが動機づけられる。

本稿では紙面の関係上、night 以外の時間句について詳しく取り上げることはできないが、時間句 night だけを扱っても、どういう背景知識に合わせるかによって、「楽しい」もあれば「楽しくない」という全く正反対の意味になり得て、一つの意味定義で収まりきらない現象であることが明らかとなった。ここまでの考察から先行研究について次のことが考えられる。

3. 先行研究の検証

先行研究で Jackendoff (1997) は、‘time’-away 構文について (18) のように、「その主語の活動は楽しいもの」、あるいは、「主語は何かほかのことをするべきだった」という意味の両方あるいはいずれかを含んでいると特徴づけている。

(18) There is an insinuation that the activity in question was heedless pleasure, or the subject should have been doing something else or both. (Jackendoff 1997: 538)

この特徴づけは本稿で述べた ‘dance the night away’ の意味特徴にぴったり一致するものである。実際に、Jackendoff (1997) の中でみられる night と共起する動詞は、踊りを表す twist や飲酒を表す drink, お喋りを表す talk など、いずれもディスコの ICM から導かれる動詞ばかりであった。従って、Jackendoff の主張はまさに ‘time’-away 構文のプロトタイプをうまく捉えている一般化だと考えられる。

一方、高見 (2007) の意味的機能的制約は ‘dance the night away’ のようなプ

ロトタイプを捉えるには漠然としたものであるが、周辺的な例にはうまく当てはまる一般化だと考えられる。実際に、高見（2007）の中で見られる night と共起する動詞は（19）の例のように、 worry, tremble, moan, weep, cry などいずれも楽しい活動とはかなりかけ離れた意味を持つタイプの動詞が多くみられた。

(19) John came down with a high fever and went to bed early, *moaning the night away*.（高見 2007: 644）

これらの動詞は、コーパスでみられる［V night away］の少数例、すなわち shiver のような非典型例に相当するものである。

以上のことから、Jackendoff と高見の食い違った主張は、それぞれ、‘time’-away 構文の違った例を念頭において一般化されたため生じたと説明できる。

だが、両先行研究は ‘time’-away 構文を説明する上で相補的なものではない。それは次のコーパスでみられた実例から判断できる。（21), (23）は両先行研究の意味制約が問題にはならない例である。

(20) *Celia *sat two hours away*. (Jacekndoff 1997:537, Takami 2007: 645)

(21) a. Summer fairly erupts with opportunities to *sit, sip and nosh the day (or night) away* in the fresh air of a festival, concert or special event of your choosing. (COCA)

b. That night he [...] *sat the evening away* on the footstep of the house. (COCA)

(22) *The light *flashed two hours away*. (Jackendoff 1997: 537, Takami 2007:644)

(23) Crinums bloom like crazy and come back year after year. Tough as a mule, big as imagination, pretty as a summer dress, [...] Milk-and-wine lilies *bloom the summer away* [...]. (COCA)

先行研究では、‘time’-away 構文に生起する動詞は活動を表し、状態であってはならないという制約が設けられているが、(21）は（20）と同じ状態動詞である sit が使用されている。また、先行研究では、‘time’-away 構文の主語は意思を持つものでなければばらないという制約が設けられているが、（23）の主語はユリの花で（22）と同じく意思を持たない主語の例である。このように先行研究の制約が問題ではない実例がコーパスで見られることからも両先行研究は相補的なものではないと判断できる。

では、これらの反例にどのような説明が与えられるだろうか。本稿では、時間句を night に絞って議論を展開しているため、他の時間句を含む（21）や（23）の文に対する十分な説明力は示せないが、たとえば（21a）の文は楽しいイベント活動の一コマとして、食べたり飲酒したりするのと並列する形で sit という状態動詞が ‘time’-away 構文の中で状況描写されたと考えると、たとえ状態であっても問題にならないと説明できる。（21b）の文は、文脈状況から、この主語（夫）は妻が産後の肥立ちが悪くて気分も不安定であることに向き合わずに、呑気に玄関先に座っている状況を描写している。従って、この場合は日中働くべき時間に眠って過ごすタイプ、つまり night 以外の時間句の例である（5）の文と関連づけることができそうだ。次に（23）の時

間句は summer であるが、文脈状況から、前文の主語の花のハマユウは夏のドレスに喩えられている。‘time’ -away 構文の主語のユリも、このドレスを着た少女のように喩えられていると想定すると、外観に基づくメタファーの例として、‘dance the night away’ と関連づけて考えられそうだ。このように、先行研究の意味制約の反例となる実例も、文脈状況さえ整っていれば決して問題にはならないと説明できる。このような例は (15) - (17) でみた非典型例と同様、背景となるフレームが大きく関わっている。

4. まとめ

コーパスを使って時間句ごとに調べてみることで、‘time’-away 構文は決して均質な現象ではないことがわかった。また、時間句 night に限っても一つの意味定義には収まらない現象であることが明らかとなった。

—主な参考文献—

Iwata, Seizi (2011) “He laughed his head off: A lexical-constructional account,” Paper presented at the Fourth International Conference on the Linguistics of Contemporary English. Osnabrück University, Germany.

岩田彩志 (2012) (2012) (2012) (2012) 「Way 構文はどのような移動を表すか？」, 畠山雄二（編）『日英語の構文研究から探る理論言語学の可能性』, 85-97, 開拓社.

Jackendoff, Ray (1997) “Twistin’ the night away,” *Language* 73, 534-559.

Jackendoff, Ray (2002) “English particle constructions, the lexicon, and the autonomy of syntax,” *Verb-Particle Explorations*, eds. by Dehé, Nicole et al. 67-93, Mouton de Gruyter.

Lakoff, George. (1987) *Women, Fire, Dangerous Things: What Categories Reveal about the Mind.* Chicago: University Press.

Lakoff, George and Johnson, Mark. (1980) *Metaphors We Live By*, University of Chicago Press.

Langacker, Ronald, W. (2008) *Cognitive Grammar: A Basic Introduction*, Oxford University Press.

瀬戸賢一 (2007) 『英語多義ネットワーク辞典』, 小学館.

嶋田裕司 (1985) 『句動詞』, 大修館書店.

Sullivan, Karen (2007) “Lexical filledness and metaphor in idioms,” *Collocations and idioms 1: Papers from the First Nordic Conference on Syntactic Freezes,* eds. By M. Nenonen, S. Niemi & J. Niemi. 330-341, Joensuu University Press.

高見健一 (2007) 「形式と意味のミスマッチ—Time away 構文を中心に—」,『英語青年』, 11 月号, 研究社, 642-645.

—コーパス—

British National Corpus (BNC)

The Corpus of Contemporary American English (COCA)

Longman Dictionary of Contemporary English (2004)

Oxford Dictionary of English Second Edition Revised (2005)

Oxford English Dictionary Second Edition on CD-ROM Version 4.0 (2009)

英語における「多重 XP 左方転位」構文の統語的派生について*
(The Syntactic Derivation of Multiple XP Left Dislocation in English)

山内昇 (Noboru Yamauchi)
名古屋大学大学院 (Nagoya University)

キーワード: 多重 XP 左方転位，断片，派生

1. はじめに

生成統語論で伝統的に「左方転位」と呼ばれる構文がある。NP が文頭に生起し，後続する節でその NP と同一指示の代名詞が用いられるというものである。(1) にその例を示す。

(1) Her parents, they seem pretty uncaring. (Huddleston and Pullum (2002: 1408))

(1) では，her parents が文頭に生起しており，後続する節では主語の位置を they が占めている。本稿では，(1) のような「左方転位」構文を指して Single NP Left Dislocation (以下 SLD と略記) と呼ぶことにする。

SLD 構文については，統語論的にはもちろん，意味論的・語用論的にも数多くの論考がある。しかし，その考察の対象は，(1) のように，一個の NP が文頭に生起する文に限られている。次の (2) のように，複数個の NP が文頭に生起し，後続する節に同一指示の照応表現が用いられるという文は扱われていない[1]。

(2) Initiative, self-reliance, maturity — these are the qualities we're looking for. (*ibid.*: 1751)

(2) では，initiative，self-reliance，maturity という 3 つの NP が文頭に生起している。後続する節では，these が照応表現として主語位置を占めている。本稿では，(2) のような「左方転位」構文を Multiple XP Left Dislocation (以下 MLD と略記) と呼ぶことにする[2]。NP ではなく XP とするのは，次節以降で示すように，NP 以外の要素も文頭の位置に生起することがあるためである。

本稿は MLD 構文に対してどのような派生を想定するべきかを考察する。本稿の主張を一言で述べると，次の (3) のようになる。

(3) MLD 構文は，断片 (fragments) が，後続する独立節に統合 (integrate) して派生する。

この分析では，例えば (2) の根底には，次の (4) のような断片と独立節のつながりがあるとする。そして，その断片に対し，統合という操作がかかり (2) が派生する。

(4) Initiative, self-reliance, maturity. These are the qualities we're looking for.

SLD 構文の統語的派生に対しては「変形規則による派生」と「基底生成による派生」という二種類の分析が提案されている。しかし，どちらの分析も MLD 構文には適用することができない。なぜならば，MLD 構文にはどちらの分析でも捉えられない事実が残るからである。その事実は (3) の分析に従うことで，自然に捉えられるようになる。

もしも MLD 構文と SLD 構文が本質的に同じ構文であるとすれば，SLD 構文の派生に対しても (3) のような分析を想定できると考えられる。しかし，MLD 構文と SLD 構文には，いくつかの構文的相違を観察することができるため，SLD 構文の派生に対しても (3) の分析を適用できるかどうかは今後の課題とする。

本稿の構成は次の通りである。第 2 節では，SLD 構文の派生に対する二つの分析を概観し，

そのどちらの分析も MLD の構文には適用できないことを示す。第 3 節では，(3) で示した分析に従うと，SLD 構文の派生に対する分析では捉えられなかった事実を捉えられるようになることを示す。第 4 節では，MLD 構文と SLD 構文との間にみられるいくつかの相違点を示す。第 5 節はまとめとする。

2. 「左方転位」構文の派生

SLD 構文の派生には「変形規則による派生」と「基底生成による派生」という少なくとも二種類の分析が提案されている。もしも MLD 構文が SLD 構文と同じ構文であるとすれば，そのどちらかの分析を MLD 構文に適用できるはずである。本節では，どちらの分析も MLD の構文には適用できないことを示す。

2.1. 変形規則による派生

最初に，MLD 構文の派生には「変形規則による派生」という分析を適用できないことを示す。

Ross (1967) は SLD 構文に対して，随意的な変形規則による派生を提案しており，次の (5) で示す定式化を行っている。

(5)
$$\begin{array}{cccccccc} & X & - & NP & - & Y & & \\ & 1 & & 2 & & 3 & \xRightarrow{\text{OPT}} & \\ 2\#\ [& 1 & & \left[\begin{array}{c}2\\+\text{Pro}\end{array}\right] & & 3 &] & \end{array}$$

(Ross (1967: 422))

(5) は第 2 項の NP が全体の左側に上位付加し，その第 2 項に代名詞を残すという変形規則である。

この分析によると，例えば (1) で示した SLD 構文は，その根底には次の (6) のような文があり，(5) の操作がかかり文中の要素が文頭に移動されて派生する。

(6) Her parents seem pretty uncaring.
(Huddleston and Pullum (2002: 1408))

(6) は文法的な文である。変形規則方式では，派生形の根底には文法的な基底形が想定される。

MLD 構文も (5) のような変形規則により派生するとすれば，次の (7) のような予測を導くことができる。

(7) 文頭に生起する要素を照応詞が占める位置に戻した基底形も文法的となる。

この予測は，(2) で示した MLD 構文のように，NP の連鎖が文頭に生起するような場合には，問題なく成立する。例えば (2) の根底には，次の (8) のような文があるとする。

(8) Initiative, self-reliance, maturity are the qualities we're looking for.

(8) は文法的な文である。従って，NP の連鎖が文頭に生起する場合には，(7) の予測は成立することが分かる。

しかし，次の (9a-c) で示すように，MLD 構文にはこの予測が成立しないタイプのものがある。

(9) a. Smooth, relaxed, and laid-back — all are appropriate ways of describing Scott's new single, which is taken from her latest full-length set, "Avenues Of Love."
(*Billboard*, 4 Apr. 1998, p. 65)

b. If you kill someone because you love them and they didn't love you, if you kill someone because you hate them — these are understandable acts of violence.
(*U.S. News & World Report*, 26 Oct. 1981, p. 70)

c. You blame yourself, you blame other people, you guess at reasons — these are examples of made-up stuff.
(John Tarrant, 2008, *Bring Me the Rhinoceros*, p. 163)

(9a-c) では AP，if 節，S がそれぞれ文頭の位置に生起している。後続する節では，主語位置を照応表現が占めている。変形規則方式によれば，(9a-c) の根底にあるのは次の (10a-c) ということになる。

(10) a. *Smooth, relaxed, and laid-back are appropriate ways of describing Scott's new single, which is taken from her latest full-length set, "Avenues Of Love."
b. *If you kill someone because you love them and they didn't love you, if you kill someone because you hate them are understandable acts of violence.
c. *You blame yourself, you blame other people, you guess at reasons are examples of made-up stuff.

(10a-c) は，(9a-c) で文頭に生起していた AP，if 節，S を照応詞が占めていた主語位置に戻したものである。(10a-c) が非文なのは，AP，if 節，S といった要素は主語の位置には立つことはできないからである。変形規則方式によれば，(9a-c) は (10a-c) という非文を基底とない限り生成できないことになる。そのため，(9a-c) のような事例では，(7) の予測は成立しないことになる。

以上の議論から，MLD 構文の派生に対しては「変形規則による派生」という分析を適用できないと考えられる。

2.2. 基底生成による派生

次に，MLD 構文の派生には「基底生成による派生」という分析も適用できないことを示す。

Rodman (1974) は SLD 構文に対して，基底生成による派生を提案しており，(11) の句構造規則を導入している。

(11) S′ → (X) NP S (Rodman (1974: 446))

(11) の規則は，S′ が (X) NP S に展開されるということを示している。文頭の要素は単一の構成素 NP として生成され，その後ろに S が生成される。(X) には as for や speaking of という表現が生起する。

この分析では，例えば (1) のような SLD 構文は (11) の句構造規則で直接生成される。

もしも MLD 構文が (11) のような規則で，基底生成されるとすれば，次の (12) のような予測を導くことができる。

(12) 文頭に生起する要素は構成素を成す。

MLD 構文における文頭の要素が構成素を成すか否かを考える上で，次の (13) で示す観察が参考になる。

(13) a. They've broken up Penutian, let alone Macro-Penutian.
b. Penutian they've broken up, let alone Macro-Penutian.
c. *Penutian, let alone Macro-Penutian they've broken up.
(Fillmore et al. (1988: 515))

(13a) には Penutian, let alone Macro-Penutian という A let alone B の連鎖がある。Penutian, let alone Macro-Penutian という連鎖の中で，Penutian だけを (13b) のように，話題化することはできる。しかし，(13c) のように Penutian, let alone Macro-Penutian をまとめて話題化することはできない。構成素を成さない連鎖は話題化できないという前提を受け入れるとすれば，A let alone B という連鎖は構成素を成していないことになる。

それでは MLD 構文における文頭の要素が構成素を成すか否かについて考えてみたい。 次の (14) で示すように，MLD 構文では，文頭の要素中に let alone が生じることがある。

(14) To our great regret, it is we pedagogues who must more frequently than anyone

else, express a negative attitude toward the results of children's work. Blame, disapproval, let alone punishment — these are the sharpest tools of our trade, and in order to use them a pedagogue must possess enormous skill and tact and the highest inner standards.
(*The Current Digest of the Soviet Press*, Mar 15 1967, p. 26)

(14) における MLD 構文では，文頭の要素中に let alone が生起している。上の (13) で示した Fillmore et al. (1988) の観察を受け入れるとすれば，MLD 構文における文頭の要素も let alone の前後で構成素を成していないと考えることができる。そのため，(14) のような事例では，(12) の予測は成立しないことになる。

以上の議論から，MLD 構文の派生に対しては「基底生成による派生」という分析を適用できないと考えられる。

3. 断片の統合による派生

第 2 節では，SLD 構文の派生に対する「変形規則による派生」と「基底生成による派生」という分析は，MLD 構文の派生に対しては適用できないということを示した。この節では，そのどちらの分析でも捉えられなかった事実は，(3) で示した分析の下では，自然に捉えられるようになることを示す。

(3) で示した分析を形式化して述べ直すとすれば，(15a) のような断片と独立節の連鎖を基底として，統合という操作がかかり，(15b) のような構造が派生するというようになる。

(15) a. $[_{XPi}\ X_i], [_{XPj}\ X_j], \ldots, [_{XPk}\ X_k].$
$[_S \ldots NP_{i+j+\ldots+k} \ldots].$
b. $[_{XPi}\ X_i], [_{XPj}\ X_j], \ldots, [_{XPk}\ X_k]$ —
$[_S \ldots NP_{i+j+\ldots+k} \ldots].$

本稿の仮説を想定すると，まず (9) のように NP 以外の要素が文頭に生起する MLD 構文の根底には，次の (16) のような断片と独立節の連鎖があると考える。

(16) a. Smooth, relaxed, and laid-back. All are appropriate ways of describing Scott's new single, which is taken from her latest full-length set, "Avenues Of Love."
b. If you kill someone because you love them and they didn't love you, if you kill someone because you hate them. These are understandable acts of violence.
c. You blame yourself, you blame other people, you guess at reasons. These are examples of made-up stuff.

(16a-c) では，(9a-c) で文頭に生起していた AP，if 節，S といった要素が，断片として独立節の前に生起している。これらの断片が後続する独立節と統合して (9a-c) のような MLD 構文が派生するとすれば，(10a-c) にあるような非文を基底として想定せずに済む。

さらに，文頭の要素中に let alone が生起する (14) におけるような MLD 構文の根底には，次の (17) のような断片と独立節の連鎖があると考える。

(17) Blame, disapproval, let alone punishment. These are the sharpest tools of our trade, and in order to use them a pedagogue must possess enormous skill and tact and the highest inner standards.

(17) では let alone を含む連鎖が断片として独立節の前に生起している。このような構造を基底として想定すると，断片は断片で，独立節は独立節で，別々に生成できるようになる。

別々に生成された断片と独立節が，統合したものと考えることには次のような根拠がある。

(18) Gifts, hospitality, help, encouragement on a big project, great service. All of these are special occasions for expressing gratitude to your friends, family, and colleagues at work.

(Dianna Booher, 2012, *How to Write Thank You Letters*)

(18) では，5 つの NP が断片として独立節の前に生起している。このように断片と独立節の連鎖が実際に観察されるという点を踏まえると，断片と独立節は別々に生成され，その後に統合されるという分析も可能だろうと考えられる。

以上，この節では MLD 構文の派生に対して「断片の統合」という分析を提案した。そして，この分析に従うと，SLD 構文の派生に対する分析では捉えられない事実を捉えられるようになるということを示した。

4. SLD 構文と MLD 構文の相違点

前節では MLD 構文の派生に対して「断片の統合」という分析を提案した。もしも MLD 構文と SLD 構文が同じ構文であるとすれば，SLD 構文に対しても「断片の統合」という分析を適用できると考えられる。しかし，本節で指摘するように MLD 構文と SLD 構文の間には少なくとも三つの構文的相違を観察することができるため，SLD 構文に対しても MLD 構文と同じ分析を適用できるかどうかは今後の課題とする。

4.1. NP 以外の要素の生起

第一の相違は文頭に生起する要素の種類にある。SLD 構文では文頭に生起する要素は NP 相当語句である。それに対して，次の (19a-c) で示すように，MLD 構文では NP 以外の要素も文頭に生起することがある。

(19) a. Under roofing, under sidings, under floors ... these are just a few of the places where Scutan gives insurance against moisture, vermin, drafts and rot.

(*Pulp & Paper Magazine of Canada*, Jul. 1936, p. 535)

b. That I feed the beggar, that I forgive an insult, that I love my enemy ... all these are undoubtedly great virtues.

(Carl G. Jung, 1969, *Psychology and Religion*, p. 339)

c. Whether people noticed the publication of opinion polls, whether they noticed local and national politicians, whether they noticed campaign themes — these seem relatively pure perceptions.

(William L. Miller, 1991, Media *and Voters*, p. 146)

(19a-c) では PP，that 節，whether 節がそれぞれ文頭に生起している。このように MLD 構文は SLD 構文とは異なり，NP 以外にも様々な要素が文頭に生起する。

4.2. 照応表現の種類及び文頭の要素と関係

第二の相違は照応表現の種類及び文頭の要素との関係にある。SLD 構文では文頭の要素によって，照応表現は一つに決まる。例えば，(1) のように，her parents という要素が文頭に生起すると，they という代名詞が用いられる。それに対して，次の (20a-d) で示すように，MLD 構文では文頭の要素に従って，どのような照応表現が用いられるかは一つに決まらない。

(20) a. Plates, tiles, carpeting, chairs: everything in Anne and Lachlan Stewart's home is tartan.

(The British National Corpus ARJ: 1437)

b. Kidnapping, spying, imprisonment, not to mention the nuclear explo-

sion plot — these activities are villainous by almost all moral standards.

(David K. Johnson (ed), 2009, *Heros and Philosophy*, p. 42)

c. James Vane, Basil Hallward, Sybil Vane — these deaths were not important to him now.

(Oscar Wilde, 1989, *The Picture of Dorian Gray*, p. 54)

d. Beachfront dining, fresh lobster, and a European clientele: Somalia's restaurant scene is quickly changing for the better.

(*The Daily Yomiuri*, 9 June 2012, p. 12)

まず (20a) では，文頭の要素を everything で受けている。(20a) では all や these といった他の照応表現を用いることも考えられる。次の (20b-c) では，どちらも these N の形式の照応表現が用いられている。しかし，文頭の要素と N の位置に生起する要素の関係性は異なっている。(20b) では文頭の要素から N の位置に activities が用いられることを推測できるが，(20c) では文頭の要素から deaths が用いられることを推測できない。最後の (20d) では文頭の要素をまとめあげる表現として，Somalia's restaurant scene という NP が用いられている。(20d) のような場合は，なおさら文頭の要素だけからどのような NP が用いられるかを決定することができない。このように SLD 構文とは異なり MLD 構文においては，どのような照応表現が用いられるかは一つに決まらない。

4.3. 独自の談話機能

第三の相違は談話機能にある。MLD 構文は SLD 構文が担うことがない独自の談話機能を担うことがある。例えば，次の (21) で示すように，MLD 構文は先行文脈で一度提示された情報を「統括」するために用いられることがある。(21) では，文頭に生起する個々の要素がそれぞれ先行文脈におけるどの表現に対応するのかを示すために，i から k の指標を付与してある。

(21) He takes [an ordinary target]$_i$, puts [four different expressions of a face above it]$_j$, and [a hinged door that can shut out the faces]$_k$. A target$_i$, a face$_j$, a door$_k$: these are what we call "symbols". (*Boys' Life*, Sep. 1985, p. 76)

(21) における MLD 構文では，a target，a face，a door という要素が文頭に生起している。これらの要素はそれぞれ先行文脈にある指標を付与した要素に対応する表現である。この談話では MLD 構文は，先行文脈に提示された表現をまとめあげると何であるかを「統括」するために用いられていることが分かる。このように SLD 構文とは異なり，MLD 構文は「統括」の機能を担うことがある。

5. おわりに

本稿は MLD 構文に対してどのような派生を想定するべきかについて検討した。本稿で示したことをまとめると次のようになる。第一に，SLD 構文の派生に対して提案されている分析では MLD 構文にみられる事実をあますことなく捉えられない。第二に，MLD 構文の派生に対しては「断片の統合」という分析を適用すると，SLD 構文の派生に対する分析では捉えられない事実を捉えられるようになる。第三に，MLD 構文と SLD 構文には構文的相違が観察されるため，「断片の統合」という分析を SLD 構文に対しても適用できるかどうかは今後の課題にしたい。

注

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[1] Rodman (1974) では，次の (i) で示すように，複数個の要素が文頭に生起する例を挙げている。

(i) Bill, Sue and that damn snake, he told her to get it out of their sleeping bag.
(Rodman (1974: 442))

MLD 構文と (i) のような例との間には次のような相違がある。第一に，MLD 構文では後続する独立節の一カ所に照応表現が生起するのに対して，(i) では文中の複数の箇所に代名詞が生起している。第二に，MLD 構文では文頭の要素中に and が生起することは稀であるのに対し，(i) の例は次の (ii) で示すように and を落とすと非文となる。

(ii) *Bill, Sue, that damn snake, he told her to get it out of their sleeping bag.
(*ibid.*)

これら二つの相違点から，本稿では (i) のような例を MLD 構文としては扱わない。

[2] 本稿では，次の (i) の Huddleston and Pullum (2002) の観察に基づき，(2) のような文を「左方転位」構文の一種として扱うことにする。

(i) "[A] special case of the left dislocation construction (Ch. 16, §8.1): the dash follows a coordination in initial position which provides the antecedent for an anaphor in the clause nucleus, typically demonstrative, as here. A colon might be used in this construction, but a dash is the usual punctuation."
(Huddleston and Pullum (2002: 1751))

参考文献

Fillmore, Charles J., Paul Kay and M. Catherine O'Connor (1988) "Regularity and Idiomaticity in Grammatical Construction: The Case of *Let Alone*," *Language* 64, 501-538.

Huddleston, Rodney D. and Geoffrey K. Pullum (2002) *The Cambridge Grammar of the English Language*, Cambridge University Press, Cambridge.

梶田優 (2011) 「文法原論」 東京言語研究所，春期特別講座における講義 (2011 年 4 月 17 日).

Lambrecht, Knud (2001) "Dislocation," *Language Typology and Language Universals* 2, ed. by Martin Haspelmath, Ekkehard König, Wuldf Oesterreicher and Wolfgang Raible, 1050-1078, Walter de Gruyter, Berlin and New York.

中右実 (1983)「文の構造と機能」安井稔他『意味論』(英語学大系第 5 巻)，548-626，大修館書店，東京.

Rodman, Robert D. (1974) "On Left Dislocation," *Papers in Linguistics* 7, 437-466. [Reprinted in *Materials on Left Dislocation*, ed. by Elena Anagnostopoulou, Henk van Riemsdijk and Frans Zwarts, 1997, 31-54, John Benjamins, Amsterdam and Philadelphia]

Ross, John R. (1967) *Constraints on Variables in Syntax*, Doctoral dissertation, Massachusetts Institute of Technology. [Published as *Infinite Syntax!* by Ablex, Norwood, 1986]

フェイズの意味的・概念的特性と進化的妥当性について

(On the semantic and conceptual properties of phases and evolutionary adequacy)

吉田江依子
(Eiko Yoshida)
名古屋工業大学
(Nagoya Institute of Technology)

キーワード：フェイズ、前提、前駆体、FLB、進化的妥当性

1. はじめに

本稿の目的は、ミニマリスト・プログラムにおいて重要な役割を果たしているフェイズ(phase)について、進化の観点からその特性をとらえなおすことである。

Hauser, Chomsky, and Fitch (2002) 以降、言語機能は人間言語に固有の狭義の言語機能(faculty of language in the narrow sense /FLN)と、そうではない部分まで含めた広義の言語機能(faculty of language in the broad sense /FLB)に区別され、回帰（recursion）のみが FLN に属するヒト言語に固有の唯一の特性であるという考え方（以降 HCF 仮説と呼ぶ）が広く行き渡った。生成文法、とりわけミニマリスト・プログラムの研究者たちの間では、「回帰＝回帰的併合(recursive Merge)」としてとらえられ、併合のみが FLN に属するものであると位置づけられている。

この結論は直ちに次の３つの問題を提起する。

(1) a. 回帰は人間言語にしか存在しないのか。
b. 人間言語は必ず回帰を持つのか。
c. 回帰以外には人間言語固有の特性はないのか。

（藤田（2009: 123））

(1a)については、鳥の歌声などに関する議論、(1b)についてはピラハー語に関する議論(Everatt(2005))などを含め、現在、活発に論じられている。

本稿で論じるのは(1c)の問題である。ミニマリスト・プログラムには回帰的併合以外にもいくつかの言語操作、言語機能が仮定されており、これらが FLN に属するのか否かを検証することなしに HCF 仮説を受け入れることはできない。

そこで本稿では(1c)の問題に対する一つの試みとしてフェイズをとりあげる。フェイズは併合によって構築された統語構造をインターフェイスへ出力する際のユニットであり、現在、多くの言語現象がこのフェイズに基づき分析されている。先にも述べたように、ミニマリスト・プログラムを枠組みとする言語研究においては欠くことのできない重要な役割を果たすものである。それにも関わらず進化の観点からフェイズについて論じられた具体的な研究はほとんどなされていない。

本研究では、統語範疇に基づいてフェイズを規定する現在の理論では進化的妥当性を満たすことはできないと指摘し、「前提」という、範疇に寄らない意味概念でとらえなおすことによって、フェイズが FLB に属する言語機能となりうることを主張する。そしてこの提案が進化的妥当性を満たす提案であるということを示す。

2. 進化の観点から

2.1 進化的妥当性

進化的妥当性とは、ヒト進化において発生可能なUGとは何かという問いを満たすことのできる理論をいう(藤田(2009:97))。

では発生可能なUGとは何か。それはその理論が他の生物進化と同様の進化の過程で説明ができる理論のことである。ダーウィンのいう「変化を伴う由来(Decent with modification)」として生物進化を考えるならば、新しい形質は旧機能の変化や拡張、あるいは旧機能の新たな結合により出現する。すなわち新形質は旧形質の新配列・再結合の結果として実現されるのである。この旧機能のことを前適応あるいは前駆体という。

同じプロセスを「言語という新形質」がたどると考えれば、その旧形質、すなわち前駆体は何であるのか、ということが説明できなければならない。つまり現在、言語固有のシステムとして働いている様々な機能について、元々は言語固有でない、別の機能からの変化によるものであると考え、それが何かを明らかにできる場合にのみ、進化的妥当性を満たすことができると言えよう。

2.2 問題点

このような観点から見ると、フェイズに関する現在の規定は進化的妥当性を満たすものとは言い難い。Chomsky (2000)は初期の提案において、統語範疇 CP および *v**P がフェイズであると主張した。これは特定の統語範疇に関わる言語領域固有の規定であり、その前駆体を探ることは極めて難しく、それ故、進化的妥当性を満たすことができないと思われる。

2.3 議論の方向

HCF仮説においては、前駆体を説明できないものは FLN に含まれるという意見もある。もし、フェイズの前駆体を探ることができないのであれば、それは FLN に含まれる特性であると結論付けることも可能であろう。実際、藤田(2007:145)では「これ自体は統語範疇に関わる言語固有の制約である」と述べており、FLNに属することを示唆している。しかし、FLNに含まれる言語機能が増えることは言語進化の説明を難しくすることにもなる。その意味で本稿では、フェイズを FLN に還元することを避け、作業仮説としてフェイズを FLB に属するものとし、その方向で議論を進めていく。

(2)に示したように、Fitch, Hauser, and Chomsky (2005) によると、FLBに属する言語機能とは、他の生物種と共有する特性を持つ、あるいはヒトの言語以外の認知領域と共有する特性をもつものであると仮定されている。

(2) ALL components of FLB are shared either with other species, or other non-linguistic cognitive domains in humans, only their combination and organization are unique to humans and language.
(Fitch, Hauser, and Chomsky (2005 : 182))

本論では、他の生物種と特性を共有することが想定できるようなフェイズについて提案をしていきたい。

3. ミニマリスト・プログラムの観点から

前節で示したように、初期の提案においてフェイズは統語範疇 CP および *v**P であるとされている。この提案については、進化的問題だけではなく、ミニマリスト・プログラムの枠組みの中において

も経験的・概念的問題が存在する。

第一に、この二つの統語範疇 CP / *v**P のみがフェイズであるのか、という経験的問題である。これまでの研究において、(3)で示したように、CP / *v**P 以外にもフェイズの可能性が多く指摘されている。

(3) a. vP / VP (cf. Legate (2003))
b. DP (cf. Chomsky (2005))
c. TP (cf. Richards (2007))
d. PP (cf. Abels (2003))

Bošković (2007), Müller (2010) などに至っては、すべての最大投射がフェイズであるという主張を行っている。それぞれのアプローチの方法は異なるが、これらの研究結果は、フェイズを CP および *v**P に限定することに問題があることを示している。

第二に、なぜ CP および *v**P といった特定の統語範疇がフェイズとして規定されるのか、という概念的問題である。Chomsky (2000)はその概念的根拠として、両者が命題という意味的特性を備えているためであると主張した。なぜ命題がフェイズとなるのか、ということ自体説明を必要とする主張ではあるが、先に指摘したように CP/*v**P 以外もフェイズとなるのであれば、「命題＝フェイズ」という主張はもはや維持することはできず、フェイズを CP / *v**P と仮定した概念的基盤が崩れることになる。

第三のそして最大の問題点は、フェイズを統語範疇によって「縦断的に」規定することはできないということである。すなわち、同じ統語範疇であってもフェイズとして機能する場合もあれば、機能しない場合もある。例えば、(4)で示したように、目的語 CP から *wh* 句の抜き出しは可能であるが、文主語 CP からの *wh* 句の抜き出しはできず、非文となる。

(4) a. What$_i$ do you think [$_{CP}$ that Mary bought t_i]
b. *Who$_i$ did [$_{CP}$ that she knew t_i] bother him? (Goldberg (2006:132))

同じ統語範疇 CP 内でも移動を阻止する場合とそうでない場合があり、これらの言語事実は、統語範疇によってフェイズを規定することには問題があるということを示している。[1] 同様に、DP においても、(5a)で示したように不定冠詞を含む DP から *wh* 句を移動することは可能だが、(5b)で示したように、定冠詞を含む DP からの移動は非文となる。

(5) a. Who$_i$ did you see [$_{DP}$ a picture of t_i]?
b. *Who$_i$ did you see [$_{DP}$ the picture of t_i]?
(Diesing (1992: 103))

仮に DP がフェイズでないとすれば、両者は等しく *wh* 句の抜き出しが可能となり、文法的となるはずだし、また DP がフェイズであれば、両者は等しく *wh* 句の移動ができず非文となるはずであるが、実際は両者には文法性の差がある。これらの事実は、フェイズを統語範疇のみで規定することはもはや不可能であり、統語範疇以外にフェイズを規定する要因があることを示唆していると思われる。[2]

4. 提案と考察

4.1 提案

フェイズを特定の統語範疇に基づいて規定することには進化的のみならず、経験的にも概念的にも問題があることをみてきた。本節では、統語範疇に依存しな

い、そして進化的妥当性を満たす可能性があるフェイズの特性とは何かということについて、提案をする。

具体的には、Diesing (1992), Goldberg (2006)の考察を参考に、「前提」という概念がフェイズの定義に関わっていると提案する。ここでの「前提」とは一般的な定義を念頭にいれており、話者や聞き手にとって、既知の出来事や状況を表すものであると考える。

(6) 提案：フェイズは前提（＝既知の出来事・状況）を表す領域

すなわち、統語範疇に関係なく、それが前提を表す場合にはフェイズとなり、PIC に則り、その補部がインターフェイスへ排出されるという提案である。[3]

4.2 考察

4.2.1 DP

提案(6)が経験的に妥当な提案であるということをみていこう。まず始めに、先に指摘した(5)の DP にみられる文法性の差を分析したい。

(5) a. Who$_i$ did you see [$_{DP}$ a [$_{NP}$ picture of t_i]]?
b. *Who$_i$ did you see [$_{DP}$ the [$_{NP}$ picture of t_i]?

Diesing (1992) が指摘するように、定冠詞を含む DP は内在的な前提を示しているので、(6) に基づき、(5b)の DP はフェイズとなる。よって、その補部はインターフェイスへと排出されるため、*wh* 句の抜出しは不可能となる。一方、(5a)の不定冠詞を含む DP は前提を示すものではなくフェイズ領域とはならない。よって *wh* 句の移動は可能となる

(6)を支持するさらなる証拠として、不定冠詞 DP であっても、(7)で示したように、それが主語位置にある場合は非文となる事例を挙げる。

(7) a. *Who$_i$ did [$_{DP}$ comments about t_i] annoy you?
b. *Who$_i$ did [$_{DP}$ pictures of t_i] cause Mary to cry? (Boeckx (2012: 21))

主語とは節において通常、話題 (topic)を表すものとして考えられている。すなわち、すでに述べられた既知の情報、前提を表すものである(Goldberg (2006: 130))。従って、(7)の DP はフェイズとなり、そこから *wh* 句の移動ができないのである。

また、動詞によってその補部からの抜き出しの文法性に違いがある。(8b)の動詞 *destroy* は、(8a)の *see* と異なり、その写真の存在が前提となっている(Diesing (1992))。

(8) a. Who$_i$ did you see [$_{DP}$ a picture of t_i]?
b. *Who$_i$ did you destroy [$_{DP}$ a picture of t_i]? (Diesing (1992: 103))

ここでの提案に従えば、前提を表す(8b)の DP はフェイズとなるので、*wh* 句の移動が阻止されるのである。

4.2.2 CP

次に(4)の CP について考察をしよう。

(4) a. What$_i$ do you think [$_{CP}$ that Mary bought t_i]
b. *Who$_i$ did [$_{CP}$ that she knew t_i] bother him? (Goldberg (2006:132))

(4a,b)の違いは前者が目的語位置に生じているのに対し、後者が主語位置に生じ

ているという点である。(7)で論じた DP と同様、主語が話題すなわち前提を示すものであると考えれば、(4b)の文主語 CP はフェイズとなる。よってそこからの抜き出しはできず、非文となることが説明できる。

また付加詞においても、(9a)のように前提を表す CP からの抜き出しは非文となるのに対し、(9b)のように前提を表さない CP からの抜き出しが可能であるという事実も、ここでの提案を支持するものとなろう。

(9) a. *What$_i$ did she leave the movie [$_{CP}$ because they were eating t_i]?
b. Who did she travel to Memphis [$_{CP}$ in order to see]?
(Goldberg (2006: 145))

さらに、動詞の種類によって CP からの抜き出しが可能になる場合とならない場合がある。(10a)で示したように、一般的な動詞の補部からの抜き出しは可能であるのに対し、(10b)の *grumble* というような話し方の様態(manner-of-speaking)を表す動詞補部からの抜き出しは非文となる。

(10) a. What$_i$ did you say [$_{CP}$ that they sent t_i]?
b. * What$_i$ did you grumble [$_{CP}$ that they sent t_i]? (ibid.: 144))

Goldberg (2006)によれば、様態を表す動詞では、その話しぶりについてが焦点となり、その補部 CP は前提として解釈される。従って、(10b)の CP はフェイズとなり、*wh* 句の移動が阻止される。

4.2.3. PP

最後に前置詞句についてみてみよう。(11a)に示したように、前置詞句から *wh* 句を抜き出すことは一般的に可能であるが、(11b)で示したように、話題化された前置詞句からの *wh* 句移動は阻止される。

(11) a. Who$_i$ do you think that he will talk [$_{PP}$ to t_i]?
b. *Who$_i$ do you think that [$_{PP}$ to t_i]$_j$ he will talk t$_j$?

この事例は、しばしば凍結効果(Freezing Effect)として論じられるものであるが、この事実も提案(6)によって説明が可能となる。すなわち先にも述べたようにトピックは旧情報を担うものであり、話者や聞き手にとってその内容は既知のこと、前提となる。従って、(11b)の PP はフェイズとなり、*wh* 句の抜き出しが阻止されるのである。

以上、本節では、前提がフェイズをつくるという仮定のもと、統語範疇に依らず、統一的に言語データの説明ができるということを示し、この仮定が経験的に正しいものであることを示した。[4]

5. FLB としてのフェイズ

フェイズは前提（＝既知の出来事・状況）を表す意味領域であると提案した。これは、(12)に示したように、ヒトが既知の出来事・状況を表す意味領域を一つの単位として認識し、音声や意味のインターフェイスへ排出する処理を行っていることを意味する。

(12)
[$_{phase}$ 既知の出来事・状況] → 音声
[$_{phase}$ 既知の出来事・状況] → 意味

この提案は、フェイズが FLB に属する

ものである可能性を持つ。なぜなら、これに類似した処理をヒト以外の生物が行っていると考えられる事例があるからだ。

例えば、ベルベットモンキーが外敵の種類に応じて異なった警戒音を発するという Seyfarth, Cheney, and Marler (1980)の有名な観察である。彼らの観察によれば､ベルベットモンキーはヒョウ、ワシ、ヘビといった捕食者の種類に応じて 3 種類の異なった警戒音を上げ、それを聞いた別のサルは、それぞれの警戒音に応じた対応をする。例えば、ヒョウに対する警戒音が発せられた場合には、木の上に駆け上り、ワシに対する警戒音が発せられた場合には、空を見上げてから茂みに駆け込むといった具合だ。ところがこれらの警戒音はそれぞれの捕食者に対応したものではない。例えば、ワシが空ではなく地表にいるときは、ヒョウに対するのと同じ警戒音を発し、それを聞いた仲間は、ヒョウのときと同様、木の上に駆け上がるという行動を示す。このことは、鳴き声がそれぞれの捕食者に対応したものではなく、出来事・状況の種類に対応しているものであるということを示している。

また別の観察でダイアナモンキーの鳴き声に関するものがある(cf. Arnold and Zuberbühler (2006, 2008))。ダイアナモンキーは、pyow と hack という 2 種類の音を持ち、単音ではそれぞれヒョウとワシが周辺にいることを知らせている。しかし、この 2 音を組み合わせた警戒音は外敵の種類に関わらず用いられ、危険度が高い状況を伝えており、その警戒音が発せられると、サル達は縄張りから離れて遠くまで逃げるという行動をとる。この事例も先のベルベットモンキーと同様、一つ一つの音が具体的な何かを指しているというわけではなく、一つの出来事・状況を一つのまとまりとしてとらえ音声や意味に変換していることを示している。

これを図示してみよう。警戒音を発声するサルは、目の前にある出来事を、既知の出来事や状況と照らし合わせ、心的表示を音声に変換させる((13)の下矢印)。聞き手であるサルは、その音声表示を既知の出来事・状況として彼らが有する心的表示に変換し意味を理解、そこから適切な行動へ移るということになる((13)の上矢印)。

(13) 実際の出来事や状況　　状況理解
　　↓　　↗ (意味)
　[既知の出来事・状況]
　　↓↑
　　警戒音(音声)

これは、人が行っている処理と非常に類似したものである。このように、既知の出来事・状況を一つのユニットとして認識し、インターフェイスと結びつける能力が他の生物種にも見られる認知能力であるとすれば､それは FLB に属するものであると言えよう。進化の観点から見た場合、フェイズの前駆体はこのような認知機能、心的活動であることが想定できるのではないだろうか。そしてこのように前駆体を想定できる言語機能は進化的妥当性を満たすといえよう。

6. おわりに

本論では、フェイズを「前提」という意味概念によって規定することによって進化的妥当性を満たす可能性が高いことを論じた。

今回の議論は、フェイズそのものが何かということに焦点を当てているため、その周辺に存在する問題点などは残されたままであり、今後の課題となるであろ

う。しかし、フェイズを意味概念に基づき規定することが進化的妥当性を満たす理論につながるものであることを示唆しているという点で、本研究はフェイズ研究の一助になるのではないかと考える。

注

1. (4a)の *wh* 句がフェイズエッジに移動したためにPICにより抜出可能であるとするならば、なぜ(4b)に同じ移動が起こらないのかということになり、いずれにせよ両者を区別する何らかの説明が必要である。

2. Müller (2010)では移動の可否をフェイズ領域ではなく移動する要素そのものに課しているが、なぜある要素は移動するのにあるものはしないかという根本的な問題に戻るため、ここでは移動の可否はフェイズに起因させる。

3. PIC (Phase-Impenetrability Condition)
In phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge are accessible to such operations.
(Chomsky (2000: 108))

4. 全ての抜き出しに関わる文法性がフェイズによって説明されると考えている訳ではない。例えばwh島制約(e.g. *What$_i$ do you wonder [$_{CP}$ who saw t_i]?) などは、CPがフェイズであるか否かが問題ではなく、近年FLBに還元されているMLCといった別の制約が働いていると考えている。

参考文献（抜粋）

Arnold, Kate and Klaus Zuberbühler (2006) "Semantic Combinations in Primate Calls," *Nature* 441, 303.

Bošković, Željko (2007) "On the Locality and Motivation of Move and Agree: An Even More Minimal Theory," *Linguistic Inquiry* 38, 589-644.

Chomsky, Noam (2000) "Minimalist Inquiries: The Framework," *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Martin et al., 89-155, MIT Press, Cambridge, MA.

Chomsky, Noam (2005) "Three Factors in Language Design," *Linguistic Inquiry* 36, 1-22.

Diesing, Molly (1992) *Indefinites*, MIT Press, Cambridge, MA.

Fitch, Tecumseh W., Marc D. Hauser, and Noam Chomsky (2005) "The Evolution of the Language Faculty: Clarifications and Implications," *Cognition* 97, 179-210.

藤田耕司 (2007) 「変化を伴う由来：生成文法における言語の普遍と多様の解読」*Viva Origino* 35, 136-147.

藤田耕司 (2009) 「言語の起源と進化III」, 池内正幸(編)『言語と進化・変化』95-133, 朝倉書店, 東京.

Goldberg, Adele E. (2006) *Constructions at Work: The Nature of Generalization in Language*, Oxford University Press, Oxford.

Haucer, Mark D., Tecumseh Fitch, and Noam, Chomsky (2002) "The Faculty of Language: What Is It, Who Has It, and How Did It Evolve?," *Science* 298, 1569-1579.

Legate, Julie Anne (2003) "Some Interface Properties of the Phase," *LI* 34, 506-516.

Müller, Gereon (2010) "On Deriving CED Effects from the PIC," *Linguistic Inquiry* 41, 35-82.

Seyfarth, Robert M., Dorothy L. Cheney and Peter Marler (1980) "Monkey Responses to Three Different Alarm Calls: Evidence of Predator Classification and Semantic Communication," *Science* 210, 801-803.

<Workshop Report>

空項の諸問題をめぐって
(Issues on Null Arguments)

阿部潤 (Jun Abe)
東北学院大学 (Tohoku Gakuin University)
奥聡 (Satoshi Oku)
北海道大学 (Hokkaido University)
山下秀哲 (Hideaki Yamashita)
横浜市立大学 (Yokohama City University)

キーワード：空項、pro、項削除分析、動詞句削除分析

０.はじめに

いわゆる「pro 落とし現象」(pro-drop phenomenon) は、従来、発音されない代名詞 pro を措定することによって分析されてきた。しかしながら、Huang (1982, 1984) は、すべての言語の pro 落とし現象を一律に扱えるのかという問題提起をし、中国語や日本語のような一致現象の見られないような言語では、pro 落とし現象のあるものは、空トピック (zero topic) によって束縛される変項であるという分析を提案した。更に、Huang (1987) では、pro 落とし現象のあるものは、sloppy 読みが可能であることなどを理由に削除構文と同じ分析が施されるべきであることが主張された。具体的には、中国語の目的語欠落 (object drop) に対して V を T に繰り上げたうえで動詞句を削除するという動詞句削除分析が提案された。Otani and Whitman (1991) では、この動詞句削除分析が日本語に適用されている。その後、Oku (1998) や Kim (1999) では、動詞句内にはないと考えられる空主語にも削除構文と同様の特性が見られることなどから、空項そのものだけを削除する項削除分析が提案された。この項削除分析は、現在、日本語や韓国語などの空項の分析において、中心的な役割を担っている。

このような状況下で、本ワークショップでは、日本語を主たるターゲットとして、以下のような問題を扱った。

（１）日本語の空項の分布を正しく捉えるのに、項削除分析がどの程度有効か？

（２）もし項削除分析で扱えないケースがあった場合、他にどのような分析が有効か？

阿部の発表では、項削除分析と共に動詞句削除分析が必要であることが論じられ、とりわけ、Takahashi (1996) の「日本語には Antecedent Contained Deletion (ACD)が存在する」という主張を支持するデータが提示された。それに対して、奥の発表では、一見すると動詞句削除分析を示唆するように思われるデータを(非)焦点効果を考慮にいれ、独立して動機づけられた条件を立てることによって、項削除分析で再分析可能なことが論じられた。山下の発表では、空項とかき混ぜとの関わり方に関して検討し、空項には pro 分析と項削除分析の両方が必要なことが論じられた。以下に、各発表の要旨を掲げる。

１.Null Arguments and String Vacuous Phonetically Inaudible Scrambling in Japanese （山下秀哲）

本発表では、日本語の空項とかき混ぜとの関わり方に関して検討し、(A) 日本語の空項には、少なくとも pro 分析と項削除分析によってもたらされる２種類のものがある、(B) Takahashi (2008) によって発見された「音声的に具現化されないかき混ぜ」(Phonetically Inaudible Scrambling (PIS))（(1)）と同等の条件で生起する新たなタイプの PIS（(2)）が日本語には存在すると主張した。

（１） a. OBJ SUB V
　　b. SUB V　＝　b.’ ~~OBJ~~ SUB V

（２） a. OBJ SUB V
　　b. OBJ V　＝　b.’ OBJ ~~SUB~~ V

PIS は、(1)・(2)に描かれているように、a 文に続いて、b 文が後続した場合において、(1b)では、OBJ がかき混ぜした後、OBJ が空項となり（(1b')）、(2b)では、OBJ がかき混ぜした後、SUB が空項となる（(2b')）。

ここでは、新たに可能であると提示した(2)のような状況下で生起できる PIS が、Hoji (1985) によって議論された Ban on String Vacuous Scrambling (BSVS) に新たな知見を与えるという観察を示した。BSVS は、Hoji が議論したように空項が pro 分析でもたらされた際には、その効力を示す一方、項削除分析でもたらされた際には、効力を示さない。この差は、後者が派生される際には、項削除によって空項になる前にかき混ぜが起こっていて、派生的には String Vacuous Scrambling ではないことから説明される。

２. Japanese Ellipsis Revisited: Defocusing, Remnants, and Adjuncts （奥聡）

本発表では、一見日本語に項削除がないことを示すと思われる現象も、空項に関わる「(非)焦点効果」を正しくコントロールすることにより、日本語の項削除の不在を示す論拠にはならないということを論じた。たとえば、(1)で空項が不可能であるのは、「だけ」句が「遊べる」内の可能の「え」よりも高いスコープを取るため、動詞句から抜け出し焦点句指定部へ移動しており、動詞句削除をかけても項を消すことができないからであり、項だけを消す操作が日本語にはないことを示すと Funakoshi (2012) は論じている。

（１） a. ジョンはメアリーとだけ遊べる。
b.*ビルも [e] 遊べる。

しかし、「メアリーとだけ」は焦点指定部へ移動しており、非焦点化を前提とする削除とは両立しない。また、Shimamura (2013) は(2)の構造で埋込み節の空主語に束縛変項読みがないことから日本語での主語項削除操作の不在を論じている。

（２） 1 組の男子が三人以上 [そいつの友達が 英語を話せると] 思っている。
2 組の男子も三人以上 [[e] 英語を話せると] 思っている

しかし、ここで主語・目的語ともに非焦点化されているにも関わらず、一方のみを空項とし他方を発音しているという inconsistency が不自然さの原因であると考えられる。なお、二つ目の目的語の「英語を」を「仏語を」に代えると束縛変項読みが可能となる。

３. Why Not VP-Ellipsis Analysis for Japanese Null Arguments? （阿部潤）

本発表では、日本語の空項の諸特性を捉えるためには、項削除分析と共に動詞句削除分析が必要であることを論じた。まず、はじめに、Oku (1998) の以下のような文に対して、

（１） a. ジョンは 車を 丁寧に 洗った。
b. ビルは [e] 洗わなかった。

(1b)の省略された部分が目的語のみならず副詞をも含む読みが不可能であるとする観察に対して、必ずしもすべての日本語話者が同意している訳ではないことを指摘し、少なくともこの読みが可能である話者にとっては、動詞句削除分析が有効であることを論じた。その上で、この分析がもたらす帰結として、Takahashi (1996) の「日本語には ACD が存在する」という主張を支持する以下のようなデータを含む新たな証拠を提示した。

（２） a. 太郎は すばやく（自分の犬に）[花子が [e] 付けてあげなかった首輪]を 付けてあげた。
b. 太郎が すばやく（自分の犬に）付けてあげたのは [花子が [e] 付けてあげなかった首輪]をだ。

(2b)では、(2a)と異なり、省略された部分を「すばやく（自分の犬に）」と解釈可能である。このことは、Takahashi (1996) の「少なくとも日本語の ACD の infinite regress resolution は顕在的な移動によって回避されなければならない」とする主張によって、明快な説明を与えることが可能となる。

<Workshop Report>

Simplest Merge and Label Identification by Minimal Search

Hisatsugu Kitahara (Keio University)
Hiroki Narita (Waseda Univeristy)
Mamoru Saito (Nanzan University)

Keywords: minimalist syntax, bare phrase structure, Merge, labeling algorithm, efficient computation

1. Introduction

Under the simplest conception of unified Merge, Chomsky (2013) argues that Merge(α, β) yields {α, β} with no label projection or linear order, and independently of the character of α and β. Given this simplest formulation of Merge, a syntactic object SO constructed from α and β by Merge is just {α, β} (contra Chomsky 1995a,b). Merge puts the two objects α and β into a relation, and the output of this operation is a two-membered set {α, β}. Nothing more. But, for an SO to be interpreted, it is necessary to know what kind of object it is (e.g., nominal, verbal, and so on). Chomsky (2013) takes labeling to be the process of finding the relevant information of {α, β}, generated by Merge. He proposes that such labeling is "just minimal search, presumably appropriating a third factor principle, as in Agree and other operations."

In this workshop, we explore and identify immediate consequences of these two proposals: Simplest Merge and Label Identification by Minimal Search. Drawing data from English, Japanese, and Korean, the workshop aims at gathering and discussing various issues related to these two proposals, hoping to gain new insights on the nature of the computational system for human language.

2. Labeling by Minimal Search: Implications for Movement (Hisatsugu Kitahara)

Kitahara begins with a mini tutorial on recent development in minimalist syntax (Chomsky 2007, 2008, 2013), which makes this workshop accessible to students and researchers from all levels. He then demonstrates that Chomsky's (2013) labeling analysis of "obligatory exit" from intermediate position in successive cyclic A'-movement can be naturally extended to successive cyclic A-movement (Epstein, Kitahara, and Seely 2013a). He also argues that there is no "criterial freezing" – rather movement is allowed to apply, but if it does, an independently motivated CI requirement is violated. That is, "obligatory halt" from criterial position is in fact an illusion. There is no prohibition against movement from criterial position; rather, free (and simplest) Merge can execute movement from a criterial position, but such movement necessarily leads to a violation of the independently needed CI requirement (Epstein, Kitahara, and Seely 2013b).

3. Labeling, Chains, and Full Interpretation (Hiroki Narita)

Narita puts forward a constraint that bans syntactic objects of the form {*t*, *t*}, where the two *t*'s are both traces/copies created by Internal Merge. He first argues that this constraint, referred to as *{*t*, *t*}, can be straightforwardly deduced from the interplay of Chomsky's (2013) labeling algorithm and the principle of Full Interpretation. He then shows that the effect of *{*t*, *t*} can be observed in a variety of phenomena, including copular sentences, *kind*-constructions, predicate-fronting, head-movement and criterial freezing (Rizzi 2006).

4. Labeling and Parametric Syntax: Some Preliminary Ideas (Mamoru Saito)

Saito presents some preliminary ideas on how labeling takes place in Japanese. In Chomsky's (2013) algorithm, feature-sharing plays a crucial role in the labeling of {αP, βP}. Further, an important instance of feature-sharing results from ϕ-feature agreement. On the premise that Japanese lacks ϕ-feature agreement, Saito explores the possibility that Case makes a phrase "invisible" for labeling and hence makes the labeling of {αP, βP} possible in the language. Among the consequences of this proposal are explanations for argument ellipsis and multiple nominative subjects observed in Japanese/Korean. Then, he generalizes the idea to verbal inflections, adopting the view of Sells (1995) and An (2009) that grammatical Cases in Japanese/Korean are nothing but inflections on DPs and PPs. He demonstrates that this extension leads to an explanation for why semantically-vacuous scrambling is possible in these languages as opposed to, say, English. He points out further that it accounts for the properties of what Kageyama (1993) calls lexical V-V compounds. Overall, the presentation outlined an approach to parametric syntax in terms of Simplest Merge and the labeling algorithm.

5. Summary

If the labeling analyses presented in this workshop are on track, then they will allow us to reduce the number of postulates in the narrow syntax, while producing arguably interesting conceptual shifts along with some empirically welcome results.

References

An, Duk-Ho (2009) "A Note on Genitive Drop in Korean," *Nanzan Linguistics* 5, 1-16.

Chomsky, Noam (1995a) "Bare Phrase Structure," *Government and Binding Theory and the Minimalist Program: Principles and Parameters in Syntactic Theory*, ed. by Gert Webelhuth, 385-439, Blackwell, Oxford.

Chomsky, Noam (1995b) *The Minimalist Program*, MIT Press, Cambridge, MA.

Chomsky, Noam (2007) "Approaching UG from Below," *Interfaces + Recursion = Language?*, ed. by Uli Sauerland and Hans-Martin Gärtner, 1-29, Mouton de Gruyter, Berlin.

Chomsky, Noam (2008) "On Phases," *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, Carlos P. Otero and Maria Luisa Zubizarreta, 133-166, MIT Press, Cambridge, MA.

Chomsky, Noam (2013) "Problems of Projection," *Lingua* 130, 33-49.

Epstein, Samuel D., Hisatsugu Kitahara, and T. Daniel Seely (2013a) "Labeling by minimal search: Implications for successive cyclic A-movement and the elimination of the postulate phase." Unpublished manuscript, University of Michigan, Keio University, and Eastern Michigan Univeristy.

Epstein, Samuel D., Hisatsugu Kitahara, and T. Daniel Seely (2013b) "Criterial freezing: transformational cessation vs. CI interpretation." Unpublished manuscript, University of Michigan, Keio University, and Eastern Michigan Univeristy.

Kageyama, Taro (1993) *Bunpoo to Gokeisei [Grammar and Word Formation]*, Hituzi Syobo, Tokyo.

Rizzi, Luigi (2006) "On the form of chains: Criterial positions and ECP effects," *Wh-movement: Moving on*, ed. by Lisa Lai-Shen Cheng and Norbert Corver, 97-133, MIT Press, Cambridge, MA.

Sells, Peter (1995) "Korean and Japanese Morphology from a Lexical Perspective," *Linguistic Inquiry* 26, 277-325.

＜Workshop Report＞

公的自己・私的自己中心性と日英語の文法現象：「言語使用の三層モデル」からの視点

Public/Private-Self Centeredness and Grammatical Phenomena in Japanese and English: The Perspective of the Three-Tier Model of Language Use

廣瀬幸生 (Yukio Hirose)
筑波大学 (University of Tsukuba)
今野弘章 (Hiroaki Konno)
奈良女子大学 (Nara Women's University)
五十嵐啓太 (Keita Ikarashi)
筑波大学大学院 (University of Tsukuba)
志澤 剛 (Takashi Shizawa)
目白大学 (Mejiro University)

キーワード：公的・私的自己、公的・私的表現、三層モデル、情報の優位性

1. はじめに

本ワークショップは、廣瀬の一連の研究（Hirose (1995, 2000), 廣瀬 (1997) 他）で論じられている「公的自己・私的自己」という観点を発展させた、文法と語用論を扱う理論的枠組みである「言語使用の三層モデル」（Hirose（2013)）の視点から、日本語と英語の様々な構文・文法現象を考察対象として、その枠組みの有用性と発展性を探った。

2. 言語使用の三層モデル：概要と応用（廣瀬幸生）

本発表では、文法と語用論の関係にかかわる日英語の違いを記述・説明するための理論的枠組みとなる「言語使用の三層モデル」について、前半はその概要を示し、後半はその応用について論じた。三層モデルとは、一連の拙論で論じてきた「公的自己」（伝達の主体としての話し手）と「私的自己」（思考・意識の主体としての話し手）という観点を発展させた考え方で、言語使用は、「状況把握」（私的自己による思いの形成）、「状況報告」（公的自己による思いの伝達）、「対人関係」（公的自己による聞き手への配慮）という三つの層からなり、言語のもつ自己中心性が英語のように公的自己にあるか、日本語のように私的自己にあるかによって、三つの層の組み合わせが異なるとする理論である（Hirose (2013)）。文法と語用論の関係にかかわる日英語の差は、この三層の組み合わせの違いから生じることを具体的に論じるとともに、その発展的応用として、「主観の客体化」（他者の思いを話し手がどのように受け止め、表現するか）という現象が説明できることを示した。

3. 私的表現の文法的意義（今野弘章）

「言語使用の三層モデル」は話し手の聞き手に対する伝達意図の有無に応じた「公的表現」／「私的表現」という廣瀬 (1997) による言語表現の二分類を前提とする。本発表では、この語用論的区分に反応する日英語の文法現象を観察し、特に、私的表現という公的表現からは独立した区分の設定が文法的に有意義であることを確認した。当該区分の有効性を示す証拠として、公的表現か私的表現かに偏りを示す現象（日本語形容詞「やばい」の副詞的成分化（「やばいうまい。」）、英語の空主語構文（Wish was dead. (廣瀬 (2006))）と私的表現に特化した現象（日本語のイ落ち構文（「ださっ。」）、英語の mad magazine 構文（Him wear a tuxedo!? (Akmajian (1984))）があることを指摘した。さらに、私的表現の有効性が、言

語の一般的機能に関し、言語をコミュニケーションの道具とする機能主義的視点だけでなく、言語を思考・感情表出の手段とみなす形式主義的視点の重要性を示唆することを主張した。

4. 遂行節 I tell you と情報の優位性

（五十嵐啓太）

本発表では、「言語使用の三層モデル」の枠組みのもと、遂行節 I tell you が対人関係調整用の形式であることを論じた。英語は伝達性の強い言語であり、例えば It's raining と発話するだけで、あたかも非明示的な I TELL YOU が存在しているかのような解釈を受ける(cf. Ross (1970))。そのため、遂行節 I tell you を用いることは余剰であり、通常使用されない（* I tell you, it's raining.）。英語において情報伝達上余剰な要素が用いられる場合、対人関係調節の機能を担うことが三層モデルで指摘されている。そのため、I tell you は対人関係調節用の形式と言える。具体的には、聞き手に対する話し手の情報的優位性（聞き手よりも当該情報をよく把握していること）を表すと主張した。実際、聞き手に対する情報の優位性を表すことでコミュニケーション上の目的達成が見込まれる場面（例えば聞き手が当該情報の受け入れを拒否する場面）で、I tell you が用いられる実例が多数観察される。

5. 場所句倒置構文の修辞効果：言語使用の三層モデルの視点から　（志澤 剛）

英語の場所句倒置構文（e.g. Into the room came John.）は、対応する非倒置文（e.g. John came into the room.）よりも「臨場感」のある表現であることが先行研究において指摘されている（福地 (1985) など）。本発表は、「言語使用の三層モデル」の枠組みから、当該構文がそのような修辞効果を生み出す仕組みを提案した。具体的には、以下の通りとなる。当該構文は、原則的に語り手（話し手・登場人物等の「観察者」）の「状況の直接把握」を表すことに特化された表現形式であり、語り手の「情報の優位性」を表す。それは、通常「状況報告」に自己を置く（つまり、客体的視点をとる）英語が、「状況把握」で状況内の関与者の視点をとり、自己を優位におく（つまり、主体的視点をとる）ことを意味する。その「状況内の関与者の視点」をとることを聞き手／読み手にも課すことで聞き手／読み手を心理的に近づけることが「臨場感」を生む、ということになる。

参考文献

Akmajian, Adrian (1984) "Sentence Types and the Form-Function Fit," *NLLT* 2, 1-23.

福地肇 (1985)『談話の構造』大修館書店, 東京.

Hirose, Yukio (1995) "Direct and Indirect Speech as Quotations of Public and Private Expression," *Lingua* 95, 223-238.

廣瀬幸生 (1997)「人を表すことばと照応」中右実（編）『指示と照応と否定』1-89, 研究社, 東京.

Hirose, Yukio (2000) "Public and Private Self as Two Aspects of the Speaker: A Contrastive Study of Japanese and English," *Journal of Pragmatics* 32, 1623-56.

廣瀬幸生 (2006)「日記英語における空主語と主体化」卯城祐司他（編）『言葉の絆』270-283, 開拓社, 東京.

Hirose, Yukio (2013) "Deconstruction of the Speaker and the Three-Tier Model of Language Use," *Tsukuba English Studies* 32, 1-28.

Ross, John Robert (1970) "On Declarative Sentences," *Readings in English Transformational Grammar*, ed. by Roderick A. Jacobs and Peter S. Rosenbaum, 222-272, Ginn, Waltham.

<Workshop Report>

Foundational Issues in Phase Theory

Masahiko Takahashi (Mie University),
Kensuke Takita (Mie University),
Masako Maeda (Kyushu Institute of Technology),
Nobu Goto (Mie University)

Keywords: Case, phase edge, labeling, deletion

1. Introduction

Since Chomsky (2000), the notion of phase has played a significant role in the study of language, but the nature of it remains unclear. For example, there has been much controversy what is a phase, and what constitutes a phase (Takahashi (2011)); and it is also unclear when and how a phase gets into the layered CP system (Maeda (2013)); and, moreover, it is still mysterious what happens when a phase is transferred to the interfaces (see Takita (2010) and Goto (2011)). Thus, the four articles are brought together in the name of "Foundational Issues in Phase Theory" with an aim to bring new insight into the nature of phases.

2. Case-valuation and Phase Edges (Masahiko Takahashi)

This article investigates the syntax of what I call pseudo-small clause construction discussed by Tada (1992) and considers an interaction of Case-valuation and phase edges. The pseudo-small clause construction forces accusative Case on embedded major subjects despite the availability of nominative Case in the complement clause. To account for this constraint, it is argued (i) that pseudo-small clause complements are (phasal) CPs, (ii) that major subjects that originate in pseudo-small clause complements must undergo movement into a matrix theta position, which takes place across a CP phase, and (iii) that the movement into the theta-position forces accusative Case on the moved major subjects due to the Inverse Case Filter (Taguchi (2009)). Once the embedded major subjects move to the matrix clause, the matrix *v* must assign accusative Case to the moved major subjects, which explains the obligatory accusative Case marking under consideration.

3. Twin Peaks at the Phase Edge (Kensuke Takita)

EKS (Epstein, Kitahara, & Seely (2012, 2013)) argue that if Merge is formulated in the simplest form, just forming a set from two syntactic objects, it may generate what they call a "two-peaked" structure. They further argue that the two-peaked structure triggers Transfer for the derivation to proceed, and hence cyclicity of Transfer is deduced. This article first shows that if more than one constituent is moved to the phase edge, EKS's theory yields what I call "twin" peaks, a special case of the two-peaked structure. Then, it is argued that the computational system should be able to proceed from the twin-peaked situation, clarifying what is required for such a derivation to converge. One of the significant consequences is that it is not the case that a two-peaked structure *immediately* triggers Transfer, contrary to what EKS have suggested.

4. Labeling and Criterial Head Movement (Masako Maeda)

This article develops a novel account for the composition of the layered CP system proposed by Rizzi (1997), among others. Rizzi argues that the CP system may split when necessary, and is amalgamated otherwise. Then a question arises as to how multiple phasal heads (Force, Top, Foc, etc.) are derived from one phase head C. Building on Chomsky's (2013) Labeling Algorithm (LA), I

argue that when XP (say, a topic) undergoes internal merge with CP, the label of SO={XP, CP} is the most prominent feature shared (TopP). At this time, if C has an unsatisfied feature α, then Criterial Head Movement (CHM) occurs (Maeda (2013)). After C_α undergoes head movement, the label of SO={C_α, TopP} is C_αP. By repeating such IM and CHM, the layered CP system is created derivationally. This analysis gains empirical support in several languages including English, Japanese and Bulgarian.

5. Some Consequences of Deletion by Phase (Nobu Goto)

This article discusses some consequences of Goto's (2013) Deletion by Phase Hypothesis (hereon DPH) that deletion sites are determined by Spell-Out in a cyclic fashion. One striking consequence of the DPH is that non-constituent deletion can be regarded as an illusion, and movement feeding constituent deletion is unnecessary. Thus I argue that Object Shift in Pseudogapping, an instance of movement under consideration (see Takahashi (2004) among others), is unnecessary, providing a straightforward explanation of word-order problems and contraction problems which have resisted a satisfactory explanation under any of the existing theories. The investigation of Pseudogapping in terms of the DPH results in supporting Sato's (2012) cyclic contraction theory and the claim that the notion of focus plays a significant role in licensing a deletion site.

References

Chomsky, Noam (2000) "Minimalist Inquiries: The Framework," *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89-155, MIT press, Cambridge, MA.

Chomsky, Noam (2013) "Problems of Projection," *Lingua* 130, 33-49.

Epstein, Samuel, Hisatsugu Kitahara, and Daniel Seely (2012) "Structure Building That Can't Be!," *Ways of Structure Building*, ed. by Myriam Uribe-Extebarria and Vidal Valmala, 253-270, Oxford University Press, Oxford.

Epstein, Samuel, Hisatsugu Kitahara, and Daniel Seely (2013) "Simplest Merge Generates Set Intersection: Implications for Complementizer 'Trace' Explanation," *The Proceedings of GLOW in Asia IX 2012*, 77-92.

Goto, Nobu (2011) *Feature-Inheritance: Its Effects on Agree, Move, and Delete*, Doctoral dissertation, Tohoku Gakuin University.

Goto, Nobu (2013) "Deletion by Phase and Its Contribution to Non-Constituent Deletion," *English Linguistics* 30:2, 699-717.

Maeda, Masako (2013) *Derivational Feature-based Relativized Minimality*, Doctoral dissertation, Kyushu University.

Rizzi, Luigi (1997) "The Fine Structure of the Left Periphery," *Elements of Grammar: Handbook of Generative Syntax*, ed. by Liliane Haegeman, 281-337, Kluwer, Dordrecht.

Sato, Yosuke (2012) "Multiple Spell-Out and Contraction at the Syntax-Phonology Interface," *Syntax* 15, 287-314.

Taguchi, Shigeki (2009) "Japanese ECM as Embedded Bare Topicalization," *NELS* 38, 415-426.

Tada, Hiroaki (1992) "Nominative Objects in Japanese," *Journal of Japanese Linguistics* 14, 91-108.

Takahashi, Masahiko (2011) *Some Theoretical Consequences of Case-marking in Japanese*, Doctoral dissertation, University of Connecticut, Storrs.

Takahashi, Shoichi (2004) "Pseudogapping and Cyclic Linearization," *NELS* 34, 571–585.

Takita, Kensuke (2010) *Cyclic Linearization and Constraints on Movement and Ellipsis*, Doctoral dissertation, Nanzan University.

<Workshop Report>

状態性述語の形態・統語・意味をめぐって (On Morphology, Syntax and Semantics of Stative Predicates)

企画・司会　漆原　朗子
(Saeko Urushibara)
北九州市立大学
(University of Kitakyushu)

状態性述語は通言語的にも動詞とは異なる興味深い属性を有する。本ワークショップでは日本語状態性述語の形態的実現・統語構造・意味解釈に関する分析を提示した。

節および DP 内部における日本語形容詞類の形態的実現

(Morphological Realization of Japanese Adjectivals in Clauses and DPs)

漆原　朗子（Saeko Urushibara）

北九州市立大学（University of Kitakyushu）

キーワード：直接修飾、間接修飾、順序制約、統語地図

形容詞類をめぐっては次のような研究課題がある。まず、通言語的には、直接修飾(direct modification(dm)) と間接修飾 (indirect modification(im)) の二種類があると指摘されている(Sproat and Shih 1990, Cinque 2010, etc.)。そして、それらの形態、範疇、統語的振舞との対応について、多くの観察と提案がなされている。また、日本語においては、国語学/日本語学においても長らく議論されている「形容詞」と「形容動詞」の異同や、繋辞の同定と形態的実現といった課題がある。

本発表では、日本語も英語・ロマンス語などと同様 dm と im を有するが、それらの諸語においては両者が統語的位置によって弁別されるのに対し、日本語の完全な主要部終端言語という特性から、形態的実現によって区別されると主張した。具体的には、im は「な」を伴う修飾表現（「静かな」（形容詞）、「小さな」（連体詞）、「ばらばらな」（オノマトペ））、dm は「の」を伴う修飾表現「ばらばらの」（オノマトペ）、「鉄の」（名詞））である。前者は機能範疇 F1、後者は F2 の形態的実現であり、F1 は F2 より統語的に高い位置にあるため、F1 と F2 の間では順序の制約があるが、同じ im の間には順序制約はないことを示した。また、「い」で終わる「形容詞」は縮約関係節(im)であり、F1 の指定部に現れるため、順序制約が弱い。

状態述語と感嘆表現

(Stative Predicates and Exclamative Expressions)

岸本秀樹（Hideki Kishimoto）
神戸大学（Kobe University）

キーワード：連体形、終止形、準体法、感嘆表現

現代日本語においては，古い日本語とは異なり，動詞と形容詞の終止形と連体形の形態的な区別がなくなっている。これに対して，形容動詞では，現代日本語でも連体形と終止形の形態的な区別が維持されている。一般に，日本語において，連体形を名詞相当表現として用いる用法（準体法）は，連体形と終止形の区別が消失するにともなってなくなったとされている。この考え方に従えば、終止形と連体形の区別が残っている形容動詞では

連体形を名詞に相当する表現として使用できてもよいということが予測される。本発表では,「なんという」という感嘆詞から作られる断片的な感嘆表現を用いて，実際に，形容動詞にこの用法が残っていることを示した。さらに，形容動詞の連体形に見られる名詞相当の用法は, 極めて限られた環境にしか起こり得ないが，これは，連体形形容動詞の名詞化の機能が退化しており, 現在では句を構築できなくなっていることによるということを論じた。

状態性と測定可能性
(Stativity and Measurability)

多田　浩章（Hiroaki Tada）
福岡大学（Fukuoka University）

キーワード：状態性、叙述、測定、単調性

「ある場所に物が集積する様態」をあらわす日本語の状態性述語の中には叙述機能以外に、測定機能をはたすことができるもの（タイプ 1: りんごが籠に山盛りである／りんごが籠に山盛りある）と、できないもの（タイプ 2： CD が机に重ね置きである／*CD が机に重ね置きある）がある。

このようなタイプ 1 の遊離用法（数量詞的状態記述（Quantificational State Description (QSD)）は、数量詞（Numeral Quantifier（NQ））や測定句（Measure Phrase (MP)）の遊離用法と共通する分布特性として、(i) ターゲットの NP と構成素 (constituent) をなし、(ii) NP 移動後の残留 (stranding) が可能で、(iii) 狭い作用域 (narrow scope) をとる。

なぜタイプ 1 のみが QSD になれるのかは、QSD が NQ／MP とともに単調性条件 (Monotonicity Condition)（「測定される表現があらわす対象の部分構造に対して、その順序関係を順守するような測定値が与えられなければならない。」）(cf. Schwarzschild(2006), Nakanishi(2007))に従うと仮定することにより説明される。

QSD は NQ／MP と異なり、さらに最大値条件（Maximal Value Condition)（「QSD による測定は最大値をとる。」）に従う。

この最大値条件は、空間における物の広がりを項にとる測定用の述語ではなく、空間状態を項にとる叙述用の QSD を測定に採用することから発生する問題を解決するための条件であると考えられる。

参考文献

青木博文（2005)「複文における名詞節の歴史」『日本語の研究』 1, 47-60.

此島正利（1962）「中古語における用言連体形の用法」『国語学』48, 102-107.

信太知子（1970）「断定の助動詞の活用継承について—連体形準体法の消失を背景として—」『国語学』82, 29-41.

Cinque, Guglielmo (2010) *The Syntax of Adjectives,* Cambridge, MA, MIT Press.

Nakanishi, Kumiko (2007) *Formal Properties of Measurement Constructions*, Berlin, Mouton de Gruyter.

Schwarzschild, Roger (2006) “The role of dimensions in the syntax of noun phrases,” *Syntax* 9:1, 67–110.

Sproat, Richard and Chilin Shih (1990) The cross-linguistic distribution of adjective ordering restrictions, *Interdisciplinary Approaches to Language: Essays in Honor of S.-Y. Kuroda*, ed. by Carol Georgopoulos and Roberta Ishihara, 565-593, Dordrecht, Kluwer Academic Publishers.

<Workshop Report>

構文的意味の諸相: その境界線を越えて
(Aspects of Constructional Meaning: Beyond Its Boundary)

浜田啓志 (Takashi Hamada)
慶應義塾大学大学院 (Keio University)
野中大輔 (Daisuke Nonaka)
東京大学大学院 (University of Tokyo)
小笠原清香 (Sayaka Ogasawara)
立教大学大学院 (Rikkyo University)
穐元美咲 (Misaki Akimoto)
慶應義塾大学大学院 (Keio University)

キーワード: 構文、用法基盤モデル、場所格交替、文法化、話者交替

1. 構文的意味の射程: その可能性をめぐって (浜田啓志)

構文とは、形式と意味が慣習的に結び付いた統合体である。構文に根ざした言語観は、構成要素が表す意味の単純な合成では適切に説明されない現象にうまく対応する。(1) *The windows were broken by the mobs.* や (2) *The more you learn how to pronounce her name, the more likely is she to go out with you.* といった例において、 (1) の「被動者への顕著な影響」、(2) の「条件」という意味にはどの構成要素も貢献していない。これらの意味を担っているのは、それぞれ「*be* V-*ed*」「*the* X-*er, the* Y-*er*」という特定の構造であると考えるのが妥当である。構文は無秩序に存在するものではなく、体系的な言語知識の中に位置づけられる(Langacker 1987)。言語知識は有機的なものであり、構文は相互に動機付けられている。この「構文」を言語の基本単位と考えることで、意味と形式の関係をより包括的に論じることが可能となる。本ワークショップでは、Langacker の用法基盤モデルや山梨 (2009) のオンライン文法に則り、言語の動的な側面の解明にこそ構文研究は発展の余地があると考える。実際の言語使用に根差した汎用性の高い構文理論の確立に寄与していく。

2. 構文の複合形: 場所格交替を例として (野中大輔)

英語の *scatter* や *load* といった動詞は、ほぼ同一の内容を二通りの構文で表現することができる（e.g. *The farmer scattered seeds across the field* / *The farmer scattered the field with seeds*）。この現象は場所格交替と呼ばれている。場所格交替の二つの構文が形容詞的受身で用いられる場合、通常の行為の結果を表す用法と違い、先行する行為が想定できない状態や属性を表すことがある（e.g. *The stars were scattered across the sky* / *The sky was scattered with stars*）。本発表は、構文文法のアプローチを採用し、場所格交替の構文と形容詞的受身構文の複合形は、それぞれの構文の特性を継承しつつも、構成的には説明することのできない側面をもつ独自の構文として認められることを主張した。そして、この構文が Matsumoto (1996) の言う主体変化表現であること、通常の形容詞的受身と今回扱う主体変化用法の受身の多義性は、Langacker (1998) のいう主体化の段階性の中に位置づけることができることを示した。構文文法は、構成要素の語彙と一般的な統語規則からは全体の意味が導き出せないような現象を扱うことが多かったが、構文と構文を組み合わせたときにさらなる構文が創発するという、本発表で扱ったような現象を考察対象に含めることで、言語知識のさらなる解明に寄与することができるはずである。

3. 共起関係から見る強意副詞の意味変化 (小笠原清香)

本発表では、強意副詞 *fast* とその共起動詞が表す構文的意味の通時的変化を考察した。強意副詞は形容詞修飾の用法をもつものは文法化の研究対象として取り上げられてきたが、動詞修飾のものは中心的に扱われてこなかった。文法化は単独の語彙ではなく特定の構造が経験するという観点 (Himmelmann 2004) から V *fast* を構文とみなし、その意味変化を検証した。A＋N 構文においては形容詞との関連性において名詞が活性化させるドメインがあることが議論されているが (Langacker 2008)、V *fast* という動詞と副詞からなるパターンにおいても *fast* によって際立つ動詞の潜在的なスケールがあると考えられる。大規模コーパスや文学作品を用いた調査の結果、ME では多様な動詞が V のスロットに参与可能であり、*fast* はあくまで動詞が持つスケールやドメインを際立たせる役割を担っていたことがわかった。しかし、EModE 以降は、動詞の分布に偏りが見られ、一部のイディオム的な表現を除いて、*fast* は動詞の意味に関係なく‘rapidly’の語義に固定されたことが分かる。V *fast* 構文は ME ではスキーマ性が高く、現代英語にでは特定性が高い表現となったことが明らかとなった。

4. 構文的意味からみるリスト表現 (穐元美咲)

近年、複数の節にまたがる構文の研究に注目が集まるなか、自然発話における構文の動的な側面が指摘されている。山梨(2009)は会話における個々の構文の語用論的機能や複数の構文から成る隣接対の発話機能といった、構文の語用論的機能に関する意味の分析を含む構文研究の必要性を示し、「グローバル構文」を提唱している。日常を営む当たり前の「やり方」（例えば、なぜ話の途中で電話を切らないのか）を詳細に記述・考察しようとする会話分析においても、話者交替を分析する際に構文的単位を導入することの有用性が指摘されている(Fried and Östman 2005)。本発表では、会話における列挙行為とそこに付与されるプロソディーの特徴を考察した。プロソディーの一特徴である Elongation が、リスト表現のどの箇所に付与されるかによって、話者交替におけるターン移行をシグナルする効果の差異を観察した。本発表は「リスト表現＋プロソディー」という形式が持つ「構文的」意味が、話者交替において有意味な効果を付与することを指摘した。

参考文献

Fried, M. and Östman, J. (2005) "Construction Grammar and Spoken Language: The Case of Pragmatic Particles," *Journal of Pragmatics* 37, 1752-1778.

Himmelmann, N. P. (2004) "Lexicalization and Grammaticalization: Opposite or Orthogonal?," *What Makes Grammaticalization? A Look from its Fringes and its Components,* eds. by Walter B., Himmelmann, N. P. and Wiemer, B. 21-42, Mouton de Gruyter, Berlin and New York.

Langacker, R. W. (1987) *Foundation of Cognitive Grammar* Vol. 1: *Theoretical Prerequisites*, Stanford University Press, Stanford, CA.

—. (1998) "On Subjectification and Grammaticization," *Discourse and Cognition*: *Bridging the Gap*, ed. by Koenig, J. 71-89. CSLI Publications, Stanford.

—. (2008) *Cognitive Grammar: A Basic Introduction*, Oxford University Press, Oxford.

Matsumoto, Y. (1996) "Subjective-change Expressions in Japanese and Their Cognitive and Linguistic Bases", *Spaces, Worlds, and Grammar*, eds. by Fauconnier, G. and Sweetser, E., 124-156, University of Chicago Press, Chicago.

山梨正明 (2009) 『認知構文論』 大修館書店, 東京.

[II]

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Japanese-Speaking Children's Absolute Interpretation of Differential Comparatives and Differential Verbal Expressions

Tomoe Arii
University of Tokyo/ JSPS Research Fellow

Keywords: differential phrase, comparative, verbal expression, children's non-adult interpretation

1. Introduction

In the field of mathematics education, comparison problems are notoriously difficult for children, which require them to determine a differential between two sets, e.g., "A boy has three apples and a girl has two apples. How many more apples does the boy have than the girl?" Even young school children wrongly answer the number of the boy's apples, three, instead of answering the differential between the two sets of apples, namely, one. We will call this non-adult response (and non-adult interpretation) *absolute response* (*absolute interpretation*) because children take the differential phrase not as comparative but as absolute.

In the field of linguistics, Arii (2012a, b) has reported that Japanese 5- and 6-year-olds assign an absolute interpretation to differential comparatives like (1).

(1) a. Kono biru-wa 20-meetoru takai.
this building-Top20-meter higher
'This building is 20 meters higher.'
b. John-no ringo-wa ni-ko ooi.
John-Gen apple-Top two-Cl more
'John has two more apples.'

The numeral phrases in the above sentences denote a differential. However, children do not interpret them as a differential. Instead, they interpret them as the amount of degrees of a certain property which the subject has. For instance, they interpret (1a) as 'This building is 20 meters high' and interpret (1b) as 'John has two apples.'[1, 2]

Concerning the non-adult interpretation, two kinds of hypotheses have been proposed: a Linguistic Hypothesis (Hudson 1983) and a Cognitive Hypothesis (Nunes and Bryant 1996). The Linguistic Hypothesis holds that their absolute interpretation is due to their non-adult grammatical representation of comparatives. On the other hand, the Cognitive Hypothesis holds that their absolute interpretation is due to their limited cognitive resources for doing subtraction.

This paper examines Nunes and Bryant's (1996) cognitive hypothesis that children cannot solve comparison problems because they cannot connect an action on objects with the situation where the question refers to a static relation. We will examine it by investigating Japanese-Speaking children's interpretation of another differential construction like (2).

(2) Otokonoko-no-ringo-wa ni-ko fue-ta.
boy-Gen-apple-Top two-Cl increase-Past
'The number of apples the boy has has increased by two.'

This differential expression has a similar surface structure to differential comparatives in Japanese. We will call the expression as *a differential verbal expression*. We will show that Japanese-Speaking children also assign an absolute interpretation to this expression and that the

hypothesis proposed by Nunes and Bryant (1996) does not stand.

2. Background

Here, we will review Hudson (1983)'s linguistic hypothesis and Nunes and Bryant (1996)'s cognitive hypothesis regarding children's absolute interpretation of differential comparatives.

Hudson (1983) shows that when problems that involve comparison sets are expressed without using a differential comparative, children can solve them. In his experiment, a child participant was shown a picture where five children and three balloons were depicted. When he was asked "How many more children than balloons?" (*More* task), the child wrongly answered the number of the children, five. In contrast, when he was asked "How many children won't get balloons?" (*Won't Get* task), the child correctly answered the differential, two. Based on these findings, Hudson (1983) argues that since children display an ability to establish correspondences between two sets in the *Won't Get* task, their failure in the *More* task involves their difficulty in understanding the meaning of comparatives.

On the other hand, Nenus and Bryant (1996) present a different explanation for children's difficulty in solving a comparison problem. First, they cast doubt on Hudson's (1983) linguistic hypothesis on the basis of the fact that 6- and 7-year-olds are successful in answering the question "Who has more/less?" Second, they argue that in order to quantify the difference between the sets, it is necessary to connect an action on objects (the notions of addition and subtraction and a one-to-one correspondence strategy) with the situation where the question refers to a static relation. In Hudson (1983), in the *Won't Get* task there is a clear indication of what children need to do with the objects to answer the question, "How many children won't get balloons?" They need to make two matching sets and count out the remaining objects in the larger set. This one-to-one correspondence strategy is cued by the *Won't Get* task. In contrast, there are not such cues in the comparison problems. Moreover, the notions of addition and subtraction are not cued in the static comparison because children's initial conceptions of addition and subtraction are based on increasing or decreasing a quantity. So, neither the one-to-one correspondence strategy nor the notions of addition and subtraction is cued in the comparison problems. Nunes and Bryant (1996) argue that this is why children have difficulty in solving comparison problems and support the Cognitive Hypothesis.

So far, the controversy over the source of children's difficulty in solving comparison problems and their absolute interpretation has not been settled. However, Nunes and Bryant's (1996) first argument is too strong: Hudson's (1983) linguistic hypothesis does not stand because 6- and 7-year-olds are successful in answering the question "Who has more/less?" Differential comparatives do not only express the comparison of degrees of some property that objects have but also specify the difference between the degrees. So, differential comparatives like "This building is 20 meters higher" have a more complex underlying structure than simple comparatives like "This building is higher," and it is possible that children's difficulty is restricted to interpreting differential comparatives. Thus, we should not easily abandon the Linguistic Hypothesis just because children can appropriately interpret such simple comparatives.

Moreover, we can examine whether Nunes and

Bryant's (1996) second argument stands by investigating children's interpretation of differential verbal expressions like (2): children have difficulty in solving comparison problems because they cannot connect an action on objects with static comparison. A situation expressed with differential verbal expressions involves comparing sets and it also involves a change unlike the one expressed with a differential comparative: it compares the number of objects before and after an increasing event. Nunes and Bryant (1996) argue that the reason why children cannot connect an action on objects with static comparison is that nothing is added or taken away and the situation does not cue the notions of addition and subtraction. Moreover, unlike the *Won't Get* task in Hudson (1983), the one-to-one correspondence strategy is not cued there, either. If the argument of Nunes and Bryant (1996) is right, children should be able to interpret (2) appropriately because the situation expressed with it is not static comparison. In the situation, objects (e.g. apple) are added and the notions of addition and subtraction are obviously cued. Given the argument of Nunes and Bryant (1996), children should be able to interpret (2) more easily than differential comparatives.

Next section introduces an experiment on Japanese-Speaking children's interpretation of differential verbal expressions and differential comparatives, and compares children's interpretation of them.

3. Experiment

3.1. Participants and Design

15 Japanese-Speaking children (5;4-6;3, mean age: 6;0) who were able to do simple arithmetic participated in this experiment. They were individually investigated. Two kinds of experiments were conducted: Experiment I examined children's interpretation of differential verbal expressions and Experiment II examined that of differential comparatives. A within-subject design was adopted and the same children's interpretation of these constructions was investigated at intervals of more than a week.

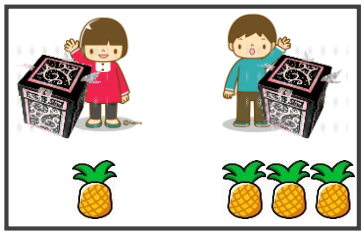
The experiment employed a TVJT in 'prediction mode' (cf. Chierchia et al. (1998)). The story is as follows. First, a girl and a boy each have an object, say, an apple. Then, they put it into their magic box. An experimenter says "Let's see what has happened to the girl's (or the boy's) apples" and confirms that nothing has changed. Then, she asks a puppet to make a prediction about the boy's (or the girl's) apples. The puppet makes a prediction, which corresponds to a stimulus sentence like (2). Finally, the experimenter shows the child the boy's (or the girl's) apples and asks him whether the puppet's prediction was right. On the basis of his judgment, we can know what interpretation he assigns to a differential verbal expression and a differential comparative.

Three kinds of conditions were used: a comparative condition, an absolute condition and a neutral condition, as shown below.

(3) Comparative Condition

Situation: First the girl and the boy each have a pineapple, and finally the girl gets a pineapple, and the boy gets three pineapples.

The final situation:



Prediction:

- Experiment I: 'I think the number of pineapples the boy has has increased by two. (in Japanese)'

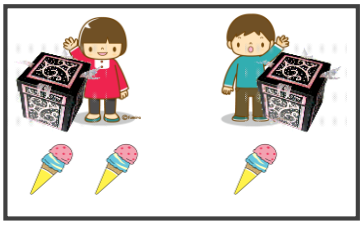
(*true*)

- Experiment II: ‘I think the number of pineapples the boy has is two more. (in Japanese)’ (*true*)

(4) Absolute Condition

Situation: First, the girl and the boy each have an ice cream, and finally the boy gets an ice cream and the girl gets two ice creams.

The final situation:



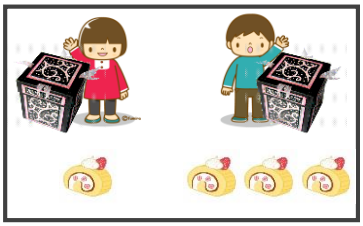
Prediction:

- Experiment I: ‘I think the number of ice creams the girl has has increased by two. (in Japanese)’ (*false*)
- Experiment II: ‘I think the number of ice creams the girl has is two more. (in Japanese)’ (*false*)

(5) Neutral Condition

Situation: First, the girl and the boy each have a cake, and finally the girl gets a cake and the boy gets three cakes.

The final situation:



Prediction:

- Experiment I: ‘I think the number of cakes the boy has has increased by one. (in Japanese)’ (*false*)
- Experiment II: ‘I think the number of cakes the boy has is one more. (in Japanese)’ (*false*)

In the comparative condition, Japanese-Speaking adults judge the puppet’s prediction right both in Experiments I and II because the number of the boy’s pineapples changes from one to three and it has increased by two. On the other hand, if children give an absolute interpretation to a stimulus sentence, they would judge the puppet’s prediction false. In the absolute condition, adults judge it false both in Experiments I and II because the number of the girl’s ice creams has increased not by two but by one. On the other hand, children who give an absolute interpretation to a stimulus sentence would judge the puppet’s prediction right. Lastly, in the neutral condition, adults judge the prediction false both in Experiments I and II because the number of the boy’s cakes has increased not by one but by two. When they judged it false, children were invited to supply justification for their judgment. If they refer to the difference between the two sets of cakes, we can know that their interpretation of the differential phrase is comparative. On the other hand, if they refer to the number of cakes the boy finally has, we can know that their interpretation is absolute.

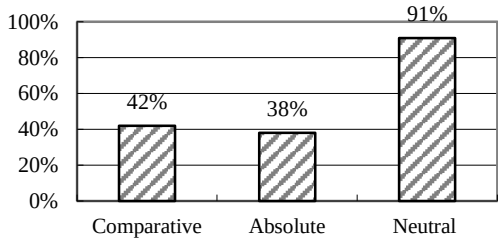
3.2. Results

Both in Experiment I and II, all of the children correctly responded to filler tasks 100 % of the time. On the other hand, they responded correctly 57% (77/135) of the time in the target conditions in Experiment I and 47% (64/135) in Experiment II.

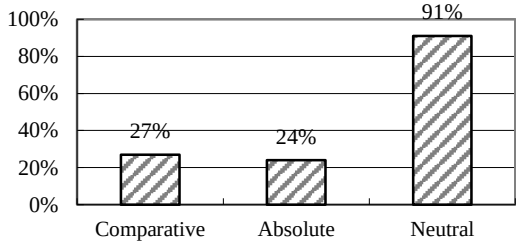
The rates of their correct responses in each condition are presented in (6).

(6) The rates of correct answers

a. Experiment I (verbal)



b. Experiment II (comparative)

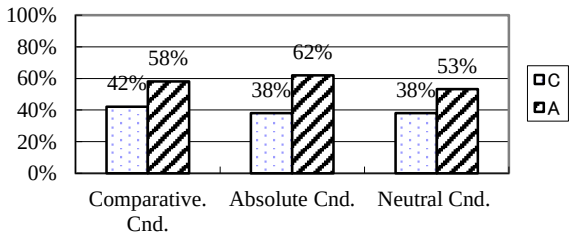


In Experiment I, they correctly responded 42% (19/45) of the time in the comparative condition, 38% (17/45) of the time in the absolute condition, 91% (41/45) of the time in the neutral condition. In Experiment II, they correctly responded 27% (12/45) of the time in the comparative condition, 24% (11/45) of the time in the absolute condition and 91% (41/45) of the time in the neutral condition.

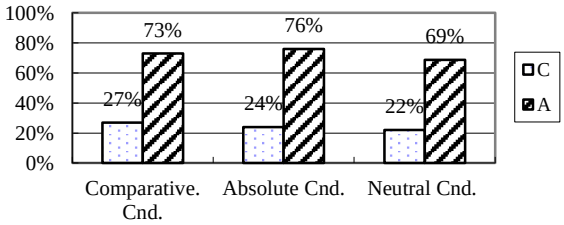
Based on their responses and justification, their interpretation of a differential phrase is scored as comparative (C) or absolute (A). The rates of their absolute and comparative readings in each condition are represented in (7).

(7) The rates of absolute and comparative readings

a. Experiment I (verbal)



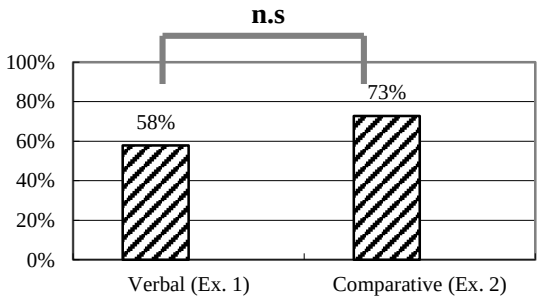
b. Experiment II (comparative)



In experiment I, they interpreted the stimulus sentence as comparative 42% (19/45) of the time in the comparative condition, 38% (17/45) of the time in the absolute condition and 38% (17/45) of the time in the neutral condition. In Experiment II, they interpreted the stimulus sentence as comparative 27% (12/45) of the time in the comparative condition, 24% (11/45) of the time in the absolute condition, and 22% (10/45) of the time in the neutral condition.

The rates of absolute responses in the three conditions altogether are as shown in (8).

(8) The rates of absolute responses in the three conditions altogether



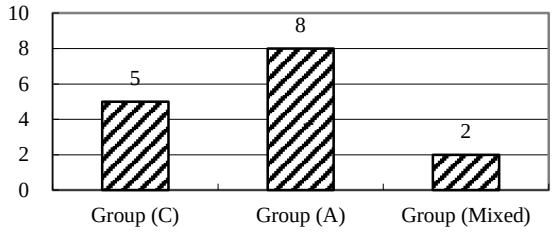
Children interpreted differential verbal expressions as absolute 57.8% (78/135) of the time and interpreted differential comparatives as absolute 72.5% (98/135) of the time. Analyzing the data with a Wilcoxon Signed Rank test, we find that there is no significant difference between the rate of children's absolute responses to them ($p = .156 > .05$).

Moreover, children are classified into three groups based on their interpretation of stimulus sentences. When their responses and

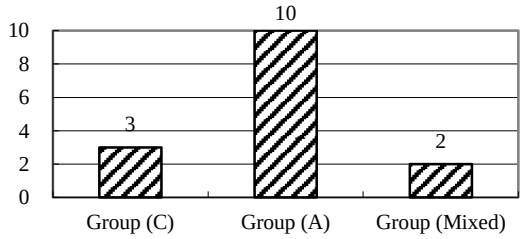
justification in all conditions are scored as C, such children are classified into Group (C). On the other hand, when their responses and justification in all conditions are scored as A, such children are classified into Group (A). Lastly, when their scores include both C and A, such children are classified into Group (Mixed). As shown in (9), in Experiment I, 5 children (mean age: 6;1) are classified into Group (C), 8 children (mean age: 5;7) are classified into Group (A) and 2 children (mean age: 6;1) are classified into Group (Mixed). In Experiment II, 3 children (mean age: 6;0) are classified into Group (C), 10 children (mean age: 5;10) are classified into Group (A) and 2 children (mean age: 6;0) are classified into Group (Mixed). Given that only a few children are classified into Group (Mixed), most of children's interpretation of the stimulus sentence is consistent.

(9) Classification of children based on their interpretation of the stimulus sentence

a. Experiment I (verbal)



b. Experiment (comparative)



The number of absolute responses of an individual child is analyzed with Spearman's rank correlation. Children's absolute responses to the two constructions are correlated (r= .739). That is, children who interpret a differential verbal expression as absolute always interpret a differential comparative as absolute.

4. Discussion

The experiments have revealed that children interpret differential verbal expressions as absolute on the same degree as differential comparatives.[3] The expectation that children should be able to interpret differential verbal expressions more easily than differential comparatives has been disconfirmed. Contra Nunes and Bryant (1996), this shows that the reason why children cannot solve comparison problems is not because they cannot connect an action on objects with static comparison.

Moreover, children's absolute interpretation of the two constructions is correlated. So, it is reasonable to consider that the source of their difficulty in interpreting the differential verbal and comparative constructions is the same. Therefore, whatever properties of the two constructions cause their absolute interpretation, we can conclude that their absolute interpretation is not specific to static comparison expressed with a differential comparative and that children's difficulty in solving comparison problems is related to constructions which include a differential phrase like differential comparatives and differential verbal expressions.

Although we have shown that Nunes and Bryant (1996)'s cognitive hypothesis does not stand, we cannot have settled the controversy over the source of children's absolute interpretation only with this finding. In order to determine whether the source is linguistic or cognitive, we have to further examine children's cognitive abilities required in solving a comparison problem.

5. Conclusion

This short paper has examined Japanese-Speaking children's interpretation of differential verbal

expressions and has shown that they also assign an absolute interpretation to them. This finding does not support Nunes and Bryant's argument that children cannot solve comparison problems because they cannot connect an action on objects with static comparison. In order to determine the source of children's absolute interpretation (a Linguistic or a Cognitive Hypothesis), further research is required.

Notes

* I am grateful to Akira Watanabe, Noriko Imanishi, Takuya Goro, Kristen Syrett, TPL members and audience at ELSJ International Spring Forum 2013 for insightful comments and suggestions. I am also grateful to teachers and children in the two nursery schools: Hagizono Aijien and Shonan Nadeshiko Hoikuen in Chigasaki.

1. In Arii (2012b), Japanese-Speaking children's interpretation of differential comparatives like "This building is 20 meters higher" was investigated by using a novel unit of length, instead of by using actual units of length like *meter, centimeter*, etc.

2. My own going research shows that many children who assign an absolute interpretation to differential comparatives can appropriately interpret simple comparatives without a differential phrase like "This building is higher."

3. Some audience pointed out that children's absolute interpretation of differential verbal expressions might be caused by the final situation in the experiment, which corresponds to static comparison. Here, we used two characters, and children had to compare the number of objects the two characters have. Thus, it is still possible that static comparison in the final situation makes it difficult for children to do subtraction. Regarding this possible experiment deficit, Arii (to appear) conducts the same experiment as the one introduced here except the number of characters: only one character is introduced. In this case, the final situation is that the character has a certain amount of objects, and children have to compare the amount of objects the character has before and after a change event. Even in the revised experiment, children assigned an absolute interpretation to the differential phrase in differential verbal expressions.

References

Arii, Tomoe (2012a) "Children's Absolute Interpretation of Japanese Numeral Classifier Phrase Comparatives," *The Online Proceedings of the 9th GLOW in Asia*, Nanzan University.

Arii, Tomoe (2012b) "Japanese-Speaking Children's Interpretation of Measure Phrase Comparatives," *The Proceedings of the 13th Tokyo Conference on Psycholinguistics*, 27-39, Hituzi Syobo.

Arii, Tomoe (to appear) "A Note on Japanese Children's Absolute Interpretation of Differential Verbal Expression," *Linguistic Research* 29, The University of Tokyo English Linguistics Association.

Chierchia, Gennaro, Stephen Crain, Maria Guasti, and Rosalind Thornton (1998) "'Some' and 'Or': A Study on the Emergence of Logical Form," *The Proceedings of the 22nd BUCLD*, 97-108, Cascadilla Press, Somerville, MA.

Hudson, Tom (1983) "Correspondences and Numerical Differences between Disjoint Sets," *Child Development*, 54, 84-90.

Nunes, Terezinha and Peter Bryant (1996) *Children Doing Mathematics*, Blackwell, Oxford, UK.

allie522@gmail.com

The Negation Markers in Modern Inner Mongolian

Lina Bao, Megumi Hasebe, and Hideki Maki
Osaka University, Yokohama National University, and Gifu University

Keywords: Japanese, Mongolian, partial negation, scope, total negation

1. INTRODUCTION

This paper investigates the properties of the negation markers in the Khorchin dialect of modern Mongolian spoken in Inner Mongolia (Mongolian, hereafter), and points out that there are two types of languages in the world in marking the scope of negation: (i) in languages like Mongolian, the type of the negation marker determines the scope relationship between negation and a quantifier, not the LF position of the quantifier or the negation marker, and (ii) in languages like Japanese, the LF position of the quantifier seems to determine the scope relationship between negation and a quantifier, not the type of the negation marker, as there seems to exist only one negation marker in Japanese, for example. If this is correct, LF movement of quantifiers is totally irrelevant to quantifier interactions in Mongolian.

The organization of this paper is as follows. Section 2 provides the data with negation in Mongolian and Japanese, showing that Mongolian, not Japanese, has two types of negation markers which enter into the interpretations of the sentences. Section 3 discusses what the observed data may suggest for the theory of (Mongolian) grammar. Finally, Section 4 concludes this paper.

2. DATA

In this section, we first review Japanese data with negation in 2.1, and then examine Mongolian data with negation in 2.2.

2.1. JAPANESE

The negation marker in Japanese is *nai* 'NEG.' It shows scope interactions with quantifiers such as *zen'in* 'all.' Miyagawa (2001) shows scope interaction data with *zen'in* 'all' and negation. Consider first example (1).

(1) Taroo-ga zen'in-o home-nakat-ta.
Taro-Nom all-Acc praise-NEG-PAST
'Taro did not praise all.'
not > all, (*)all > not
(Miyagawa (2001: 298), ex. (7) with slight editing)

In (1), the universal quantifier *zen'in* 'all' is in the object position and is c-commanded by negation. He states that example (1) has the interpretation in which the quantifier is within the scope of negation, and thus, has a partial negation interpretation. In footnote 10, he states that the asterisk in parentheses for the 'all > not' reading is intended to indicate that some native speakers of Japanese allow this reading, which he assumes is due to interpreting 'all' collectively (group reading). In this paper, we will not go into this issue, and assume with Miyagawa (2001) that (1) has a partial negation interpretation, not a total negation interpretation.

Let us turn to example (2).

(2) Zen'in-ga sono tesuto-o uke-nakat-ta.
all-Nom that test-Acc take-NEG-PAST
'All did not take the test.'
*not > all, all > not
(Miyagawa (2001: 298), ex. (8) with slight editing)

In (2), the universal quantifier *zen'in* 'all' is in the

subject position and c-commands negation. Therefore, example (2) has the interpretation in which the quantifier takes scope over negation, and thus, has a total negation interpretation.

Interestingly enough, example (2) can have a partial negation reading, when the object is scrambled to the sentence-initial position across the universal quantifier in the subject position, as shown in (3).

(3) Sono tesuto-o$_i$ zen'in-ga t_i uke-nakat-ta.
that test-Acc all-Nom take-NEG-PAST
'That test, all did not take.'
not > all, all > not
(Miyagawa (2001: 299), ex. (11b) with slight editing)

The above data with *zen'in* 'all' show that the universal quantifier does not raise at LF, and the possible reading of the sentence with NEG and it is only determined by the c-command relationship between them.

To summarize, this subsection showed (i) that Japanese has only one negation marker *nai* 'NEG,' (ii) that quantifiers such as *zen'in* 'all' do not undergo LF raising, and (iii) scope relationships between quantifiers and negation are determined by their c-command relationships at LF.

2.2. MONGOLIAN

Let us now examine Mongolian data. There is a crucial difference between Mongolian and Japanese in terms of negation: Mongolian has two distinct elements for negation *ügei* 'NEG' and *biši* 'NEG,' while Japanese has only one *nai* 'NEG.' As shown below, *ügei* 'NEG' is used for total negation, and *bisi* 'NEG' for partial negation. Let us first examine examples with the universal quantifier *bükü kümün* 'all people,' the counterpart of *zen'in* 'all' in Japanese. Consider first example (4).[1]

(4) Baɣatur-ø bükü kümün-i
Bagatur-Nom all people-Acc
maɣta-ɣsan ügei.
praise-PAST.ADN NEG
'Bagatur did not praise all.'
*not > all, all > not

In (4), the universal quantifier is in the object position, and the negation marker is *ügei* 'NEG.' The primary reading of (4) is that the quantifier takes scope over negation. Thus, (4) has a total negation reading. Let us then consider example (5).

(5) Baɣatur-ø bükü kümün-i
Bagatur-Nom all people-Acc
maɣta-ɣsan biši.
praise-PAST.ADN NEG
'Bagatur did not praise all.'
not > all, *all > not

Just like (4), the universal quantifier is in the object position, but this time, the negation marker is *biši* 'NEG.' (5) only has the interpretation where the quantifier is in the scope of negation, and thus, has a partial negation reading.

Let us then turn to example (6), where the universal quantifier is in the subject position, and c-commands negation.

(6) Bükü kümün-ø tere šlɣalta-du
all people-Nom that test-in
orulča-ɣsan ügei.
take-PAST.ADN NEG
'All did not take the test.'
*not > all, all > not

(6) only has the interpretation in which the quantifier takes scope over negation. Let us then consider (7).

(7) Bükü kümün-ø tere šlɣalta-du
all people-Nom that test-in
orulča-ɣsan biši.
take-PAST.ADN NEG
'All did not take the test.'
not > all, *all > not

Just like (6), the universal quantifier is in the subject position, but this time, the negation marker is *biši* 'NEG.' (7) only has the interpretation where the

quantifier is in the scope of negation, and thus, has a partial negation reading.

Let us then consider the examples where the quantifier is in the subject position, and the object is moved across it by scrambling. Observer the example in (8), which is derived from (6).

(8) Tere šlγalta-du$_i$ bükü kümün-ø t_i
that test-in all people-Nom
orulča-γsan ügei.
take-PAST.ADN NEG
'The test, all did not take.'
*not > all, all > not

(8) only has the interpretation in which the quantifier takes scope over negation, just like (6).

Note here that the negation marker follows Tense in Mongolian, while it precedes it in Japanese, so that the exact position for the scrambled object is not clear in Mongolian. In this paper, we tentatively assume with Miyagawa (2001) that scrambling targets TP SPEC in Mongolian, just like Japanese, as this hypothesis does not have any effect on the following discussion. Then, in (8), the scrambled object is in TP SPEC, and the quantifier is in *v*P SPEC. Consequently, the quantifier is in the scope of negation at the surface level, yet (8) has a total negation reading, just like (6).

Let us then turn to the example in (9), which is derived from (7).

(9) Tere šlγalta-du$_i$ bükü kümün-ø t_i
that test-in all people-Nom
orulča-γsan biši.
take-PAST.ADN NEG
'The test, all did not take.'
not > all, *all > not

(9) only has the interpretation in which the quantifier is in the scope of negation, just like (7). In (9), the scrambled object is in TP SPEC, and the quantifier is in *v*P SPEC, just like (8). Consequently, the quantifier is in the scope of negation at the surface level, and (9) has a partial negation reading.

Therefore, the above data indicate that scrambling does not change the scope relationships between the quantifier and negation in Mongolian. What is relevant to scope determination is only the type of the negation marker in this language.[2]

To summarize, this subsection showed (i) that Mongolian has two negation markers *ügei* 'NEG' and *biši* 'NEG,' and (ii) scope relationships between quantifiers and negation are solely determined by the given negation markers, and the c-command relationship between the quantifiers is irrelevant to the scope determination in Mongolian.

3. DISCUSSION

Let us now consider what the Mongolian and Japanese data we examined in this paper may suggest for the theory of grammar. First, the data in the two languages suggest a factor in language typology. Mongolian has two different types of negation markers, namely, *ügei* 'NEG' for total negation, and *bisi* 'NEG' for partial negation. Due to the different properties of the two particles, scope interactions between the negation markers and the quantifiers that co-occur with them are solely determined at the surface level, and the quantifiers do not need to, or to be more precise, cannot undergo LF raising to take scope. On the other hand, other Altaic languages such as Japanese, Korean, and Turkish, only possess one type of negation marker, namely, total negation marker, as shown in (10).

(10) Negation Markers in Japanese, Korean, and Turkish
a. Japanese: *nai* 'NEG'
b. Korean: *an* 'NEG' (Sohn (1999))
c. Turkish: *ma* 'NEG,' *değil* 'NEG.COP,' *yok* 'NEG.Exist' (Kornfilt (1997))

Therefore, scope interactions between the negation marker and the quantifiers that co-occur with it are determined by the c-command relationship between

the quantifiers at LF.

These facts indicate that even within the same language family, there are at least two different ways of scope determination, and the crucial factor is the absence/existence of overt syntactic entities such as negation markers in the language. Therefore, the present study showed that one of the crucial factors for language typology is the absence/existence of the overt syntactic entities in the language relevant to the phenomena under comparison.

Second, putting the clauses headed by the negation markers into relative clauses suggest the mechanism of genitive subject licensing in Mongolian. To see this, let us consider the examples with *bükü kümün* 'all people' and negation markers in the examples in (11)-(14).

(11) öcügedür Baɣatur-ø/-un bükü
yesterday Bagatur-Nom/-Gen all
kümün-i maɣta-ɣsan ügei učir
people-Acc praise-PAST.ADN NEG fact
'the fact that Bagatur did not praise all yesterday'
*not > all, all > not

(12) öcügedür Baɣatur-ø/-un bükü
yesterday Bagatur-Nom/-Gen all
kümün-i maɣta-ɣsan biši učir
people-Acc praise-PAST.ADN NEG fact
'the fact that Bagatur did not praise all yesterday'

(13) öcügedür bükü kümün-ø/-ü tere
yesterday all people-Nom/-Gen that
šlɣalta-du orulča-ɣsan ügei učir
test-in take-PAST.ADN NEG fact
'the fact that all did not take the test yesterday'

(14) öcügedür bükü kümün-ø/*-ü tere
yesterday all people-Nom/-Gen that
šlɣalta-du orulča-ɣsan biši učir
test-in pass-PAST.ADN NEG fact
'the fact that all did not take the test yesterday'
not > all, *all > not

Out of (11)-(14), only (14) is ungrammatical with genitive subject, irrespective to the interpretation of the sentence.[3]

Note here that the two negation markers can co-occur with genitive subject, as shown in (15) and (16).

(15) öcügedür Baɣatur-ø/-un Ulaɣan-i
yesterday Bagatur-Nom/-Gen Ulagan-Acc
maɣta-ɣsan ügei učir
praise-PAST.ADN NEG fact
'the fact that Bagatur did not praise Ulagan yesterday'

(16) öcügedür Baɣatur-ø/-un Ulaɣan-i
yesterday Bagatur-Nom/-Gen Ulagan-Acc
maɣta-ɣsan biši učir
praise-PAST.ADN NEG fact
'the fact that it is not the case that Bagatur praised Ulagan yesterday'

Furthermore, the universal quantifier *bükü kümün* 'all people' may be followed by either one of the two case markers (nominative and genitive), when it appears in the subject position, as shown in (17).

(17) öcügedür bükü kümün-ø/-ü
yesterday all people-Nom/-Gen
tere šlɣalta-du orulča-ɣsan učir
that test-in pass-PAST.ADN fact
'the fact that all took the test yesterday'

This indicates that genitive subject is disallowed in a relative clause only when it co-occurs with the partial negation marker *biši* 'NEG' and a quantifier expression with it.

Let us now consider what prediction the two major approaches that have been proposed in terms of what licenses genitive subject will make for the example in (14) with genitive subject shown in (18).

(18) * öcügedür bükü kümün-ü tere šlɣalta-du
yesterday all people-Gen that test-in
orulča-ɣsan biši učir

pass-PAST.ADN NEG fact
'the fact that all did not take the test yesterday'
not > all, *all > not

The two major approaches are (i) the D-Licensing Approach by Miyagawa (1993) and Maki and Uchibori (2008), among others, and (ii) the Adnominal Form-Licensing Approach by Watanabe (1996) and Hiraiwa (2001), among others. In this paper, for expository purposes only, we take Maki and Uchibori (2008) as a representative case of the D-Licensing Approach, and Hiraiwa (2001) as a representative case of the Adnominal Form-Licensing Approach.

Maki and Uchibori (2008), following the essential claim by Miyagawa (1993), propose that D licenses genitive subject in relative clauses such as (19).

(19) öcügedür Ulaɣan-ø/-u
yesterday Ulagan-Nom/-Gen
qudaldun-abu-ɣsan nom
buy-take-past.ADN book
'the book which Ulagan bought yesterday'

In (19), the genitive subject is preceded by an adverb, which guarantees that it is within the relative clause in overt syntax. Maki and Uchibori (2008) claim that D that subcategories NP (*nom* 'book' in this case) licenses the genitive subject via Agree (Chomsky (2000)), so that it does not undergo LF movement to DP SPEC at LF, unlike Miyagawa (1993).

Hiraiwa (2001) proposes the Adnominal Form-Licensing Approach to genitive subject licensing, essentially following another important previous study by Watanabe (1996). Hiraiwa argues that genitive subject licensing depends on the adnominal form of the predicate, not D, by showing that there is a set of clauses allowing genitive subject that does not involve a noun, such as (20). Note that *boltala* 'until' in (20) is not a noun.

(20) Batu-ø boruɣan-ø/-u joɣsu-qu
Batu-Nom rain-Nom/-Gen stop-pres.ADN
boltala alban ger-tü baila.
until office-at was
'Batu was at his office until it stopped raining.'

Based on Chomsky's (2000) theory of Agree, Hiraiwa (2001) proposes that while the inflection with the conclusive form of the verb corresponds to the V-(*v*-)T amalgamate created via Agree in syntax, the inflection with the adnominal form of the verb results from an Agree relation of V, (*v*), T, and a special type of C (C_{affix} in Hiraiwa's terms). He then proposes that genitive subject is licensed by the V-(*v*-)T-C amalgamate, not D, while nominative subject is licensed by the V-(*v*-)T amalgamate.

The two approaches actually make wrong predictions for (18). Under the D-Licensing Approach, the D will be able to agree with, and thus, license the genitive subject. Also, under the Adnominal Form-Licensing Approach, the V-(*v*-)T-NEG(-C) amalgamate will be able to agree with, and thus, license the genitive subject. Thus, (18) will be incorrectly predicted to be grammatical under either of the two major approaches.

Note, however, that the Adnominal Form-Licensing Approach correctly predicts (13) with genitive subject, shown in (21), to be grammatical, because the V-(*v*-)T-NEG(-C) amalgamate can properly license the genitive subject.

(21) öcügedür bükü kümün-ü tere šlɣalta-du
yesterday all people-Gen that test-in
orulča-ɣsan ügei učir
pass-PAST.ADN NEG fact
'the fact that all did not take the test yesterday'
*not > all, all > not

The only difference between (18) and (21) is then the type of the negation marker: (18) has the partial negation marker, while (21) has the total negation

marker. Therefore, this indicates that under the Adnominal Form-Licensing Approach, which we assume for the sake of discussion here, the complex predicate with the adnominal form of the verb is not always able to license genitive subject, but there is a condition imposed on the combination of the features on the heads containing the adnominal form of the predicate. In (18), the quantifier is in TP SPEC, which should agree with T. Suppose then that T shares a [Quantification] feature with the quantifier. The head NEG in (18) has the feature [$NEG_{partial}$], not [NEG_{total}]. Then, the amalgamate has the features [Adnominal], [Quantification], and [$NEG_{partial}$], among others, at the same time. It is this set of features that cannot properly license genitive subject in Mongolian, in spite of the fact that the amalgamate has the [Adnominal] feature. Note that when the amalgamate has the features [Adnominal], [Quantification], and [NEG_{total}], it can properly license genitive subject in Mongolian. Therefore, a particular combination of the features on the V-(*v*-)T-NEG(-C) amalgamate makes genitive subject licensing in Mongolian impossible. Thus, the Mongolian data suggest a restriction on the Adnominal Form-Licensing Approach (and the D-Licensing Approach) to genitives subject. Of course, the question still remains as to why this particular combination of the features blocks genitive subject licensing in Mongolian, which we will leave for future research.

4. CONCLUSION

This paper investigated scope interactions in Mongolian, and showed that there are two types of languages in the world with respect to marking the scope of negation and with respect to scope determination between the two quantifiers in the sentence. The crucial factor is the absence/existence of overt syntactic entities such as negation markers in the language. Therefore, one of the crucial factors for language typology is the absence/existence of the overt syntactic entities in the language relevant to the phenomena under comparison. This paper also showed a condition on genitive subject licensing in Mongolian. That is, there is a condition imposed on the combination of the features on the heads containing the adnominal form of the predicate, so that the complex predicate with the adnominal form of the verb is not always able to license genitive subject.

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FOOTNOTES

[1] Note that the primary reading of (4) is the total negation reading (all > not), but the partial negation reading (not > all) is somehow possible. This fact is not expected under the analysis to be proposed later. We will leave this important issue for future research.

[2] Note that examples with *jübken* 'only' and negation markers exhibit the same behaviors. First, when the NP with *jübken* 'only' is in the object position and the negation marker is *ügei* 'NEG,' the quantifier takes scope over negation, as shown in (i).

(i) Ulaɣan-ø jübken miqa-ø
Ulagan-Nom only meat-Acc
ide-gsen ügei.
eat-PAST.ADN NEG
'Ulagan did not eat only meat.'
only > not, *not > only

On the other hand, when the negation marker is *biši* 'NEG,' the quantifier is in the scope of negation, as

shown in (ii).

(ii) Ulaɣan-ø jübken miqa-ø
Ulagan-Nom only meat-Acc
ide-gsen biši.
eat-PAST.ADN NEG
'Ulagan did not eat only meat.'
*only > not, not > only

Second, when the NP with *jübken* 'only' is in the subject position and the negation marker is *ügei* 'NEG,' the quantifier takes scope over negation, the quantifier takes scope over negation, as shown in (iii).

(iii) Jübken Ulaɣan-ø miqa-ø
only Ulagan-Nom meat-Acc
ide-gsen ügei.
eat-PAST.ADN NEG
'Only Ulagan did not eat meat.'
only > not, *not > only

On the other hand, when the negation marker is *biši* 'NEG,' the quantifier is in the scope of negation, as shown in (iv).

(iv) Jübken Ulaɣan-ø miqa-ø
only Ulagan-Nom meat-Acc
ide-gsen biši.
eat-PAST.ADN NEG
'Only Ulagan did not eat meat.'
*only > not, not > only

[3] Note that genitive subject may co-occur with *biši* 'NEG' and *ügei* 'NEG,' when the universal quantifier appears as an adjunct phrase, as shown in (i) and (ii).

(i) öcügedür Baɣatur-ø/-un bükü
yesterday Bagatur-Nom/-Gen all
naija-tai-ban naɣadu-ɣsan ügei učir
friend-with-RP play-PAST.ADN NEG fact
'the fact that Bagatur did not play with all the friends yesterday'
*not > all, all > not

(ii) öcügedür Baɣatur-ø/-un bükü
yesterday Bagatur-Nom/-Gen all
naija-tai-ban naɣadu-ɣsan biši učir
friend-with-RP play-PAST.ADN NEG fact
'the fact that Bagatur did not play with all the friends yesterday'
not > all, *all > not

REFERENCES

Chomsky, Noam (2000) "Minimalist Inquiries: The Framework," *Step by Step*, ed. by Roger Martin, David Michaels and Juan Uriagereka, 89–155, MIT Press, Cambridge, MA.

Hiraiwa, Ken (2001) "On Nominative-Genitive Conversion," *MIT Working Papers in Linguistics 39: A Few from Building E39*, ed. by Elena Guerzoni and Ora Matushansky, 66–125.

Kornfilt, Jaklin (1997) *Turkish*, Routledge, Oxon.

Lasnik, Howard and Mamoru Saito (1992) *Move α: Conditions on Its Application and Output*, MIT Press, Cambridge, MA.

Maki, Hideki and Asako Uchibori (2008) "*Ga*/*No* Conversion," *Handbook of Japanese Linguistics*, ed. by Shigeru Miyagawa and Mamoru Saito, 192–216, Oxford University Press, Oxford.

Miyagawa, Shigeru (1993) "Case-Checking and Minimal Link Condition," *MIT Working Papers in Linguistics 19: Papers on Case and agreement II*, ed. by Colin Phillips, 213–254.

Miyagawa, Shigeru (2001) "The EPP, Scrambling, and Wh-In-Situ," *Ken Hale: A Life in Language*, ed. by Michael Kenstowicz, 293–338, Cambridge, MA, MIT Press.

Sohn, Ho-Min (1999) *The Korean Language*, Cambridge University Press, Cambridge.

Watanabe, Akira (1996) "Nominative-Genitive Conversion and Agreement in Japanese: A Cross-Linguistic Perspective," *Journal of East Asian Linguistics* 5, 373–410.

Scrambling in Double Complement Constructions in Chinese

Wenwen Ding
University of Tsukuba

Keywords: Double Complement Constructions in Chinese, scrambling, Surprising Constituents

1. Introduction

The aim of this paper is to discuss the possibility of analyzing Double Complement Constructions in Chinese as involving scrambling,[1] and the discussion is based on the phenomenon of Surprising Constituents found in Japanese (cf. Takano (2002)).

Double Complement Constructions refer to the following example:

(1) John song gei Mary yi-ben shu.[2]
send to one-CL book
'John sends/sent Mary a book.'

I assume the corresponding data in Japanese to be the one in (2).

(2) John-ga Mary-ni hon-o ageru.
-Nom -Dat book-Acc give
'John sends Mary a book.'

It is well known that in Japanese there is a typical syntactic operation called scrambling. That is, if we scramble the direct object *hon-o* to the adjunction site of VP, we can obtain the word order in (3).

(3) John-ga hon-o Mary-ni ageru.
-Nom book-Acc -Dat give
'John sends Mary a book.'

Now let us turn to Chinese data. The details will be shown in later sections. For now, it will suffice to note that a relatively ample word order can also be observed in Chinese.

(4) a. John song gei Mary yi-ben shu. (=(1))
send to one-CLbook
b. John gei Mary song yi-ben shu.
to send one-CL book
c. John song yi-ben shu gei Mary
send one-CL book to
d. John ba yi-ben shu song gei Mary.[3]
BA one-CL book send to
e. ? gei Mary John song yi-ben shu.[4]
to send one-CL book
f. ba yi-ben shu John song gei Mary.
BA one-CL book send to
g.* ba yi-ben shu gei Mary John song.
BA one-CL book to send
h.* gei Mary ba yi-ben shu John song.
to BA one-CL book send
'John sends/sent Mary a book.'

To capture the similarity in the two languages, I make the following proposals:

(5) a. In Chinese unmarked word order (SVO), the accusative case is assigned by the verb to the following object without morphological realization. If the object is preposed, *ba* is obligatorily introduced to assign the accusative case instead and forms a constituent with the preposed object. The newly formed constituent can then undergo scrambling. (cf. Stowell (1981))
b. Double complement constructions in Chinese can be analyzed as involving scrambling, with *ba* and *gei* 'to' as case assigners. (cf. Huang (1982b))

	Nom	Acc	Dat
Japanese	*ga*	*o*	*ni*
Chinese		*ba*	*gei*

The paper is organized as follows: Section 2 reviews Takano's (2002) work on Surprising Constituents, and provides Chinese data regarding this phenomenon. Section 3 lays out the detailed proposals listed in (5). Section 4 is devoted to answer a possible question regarding the preposition status of *gei* 'to'. Then section 5 makes a discussion as to why scrambling can be partly observed in Chinese while it is not available in English although both of the two are SOV languages. Finally section 6 makes a conclusion.

2. Surprising Constituents (cf. Takano (2002))

As is shown in (6), in English the direct and indirect objects in a double complement construction cannot appear as a whole in the focus position of a cleft sentence.

(6) * It is [a book to Mary] that John gave. (Modified)

This is because the two objects do not form a constituent. On the other hand, the corresponding data in Japanese are grammatical. Observe the examples in (7).

(7) a. John-ga ageta no wa [hon-o
-Nom gave NM Top book-Acc
Mary-ni] da.[5]
-Dat is
*'It is a book to Mary that John gave.'

b. John-ga ageta no wa [Mary-ni
-Nom gave NM Top -Dat
hon-o] da.
book-Acc is
*'It is to Mary a book that John gave.'

c. hon-o ageta no wa [John-ga
book-Acc gave NM Top -Nom
Mary-ni] da.
-Dat is
*'It is John to Mary that gave a book.'

d. Mary-ni ageta no wa [John-ga
-Dat gave NM Top -Nom
hon-o] da.
book-Acc is
*'It is John a book that gave to Mary.'

e. ageta no wa [John-ga hon-o
gave NM Top -Nom book -Acc
Mary-ni] da.
-Dat is
*'It is John a book to Mary that gave.'

Suppose that the elements in the focus of a cleft construction form a constituent, the constituency in (7a-e) should be attributed to some syntactic process.

Regarding this phenomenon I checked whether the corresponding sentences in Chinese are available or not to the Japanese data in (7). The result is listed in (8).

(8) a. John song de shi [ba shu gei Mary].
send NM is BA book to
* 'It is a book to Mary that John sends/sent.'

b. John song de shi [gei Mary ba shu].
send NM is to BA book
* 'It is to Mary a book that John sends/sent.'

c.?* ba shu song de shi [John
BA book send NM is
gei Mary].
to
* 'It is John to Mary that sends/sent a book.'

d.?* gei Mary song de shi [John ba shu].
to send NM is BA book
* 'It is John a book that sends/sent to Mary.'

e.?* song de shi [John ba shu
send NM is BA book
gei Mary].
to
* 'It is John a book to Mary that

sends/sent.'

Note that (8a-e) all include the *ba* construction. In the next step, I change (8a-e) to the versions without the *ba* construction. Specifically, let (9) be the base sentence.

(9) John song shu gei Mary.
send book to
'John sends/sent Mary a book/books.'

Then change this sentence to get the corresponding sentences to those in (8).

(10) a.* John song de shi [shu gei Mary].
send NM is book to
* 'It is a book to Mary that John sends/sent.'

b. John song de shi [gei Mary shu].
send NM is to book
* 'It is to Mary a book that John sends/sent.'

c.* song shu de shi [John gei Mary].
send book NM is to
* 'It is John to Mary that sends/sent a book.'

d.* gei Mary song de shi [John shu].
to send NM is book
* 'It is John a book that sends/sent to Mary.'

e.* song de shi [John shu gei Mary].
send NM is book to
* 'It is John a book to Mary that sends/sent.'

As the grammatical judgments show, when *ba* is not used, only (10b) seems to remain grammatical.

However, this result is deceiving. In order to check whether the sentence in (10b) is truly grammatical or not, I try another verb in (11).

(11) John jieshao yi-ge pengyou
introduce one-CL friend
gei Mary.
to
'John introduces/introduced a friend to Mary.

Then change (11) to the identical pattern with (10b), we get (12).

(12) * John jieshao de shi [gei Mary
introduce NM is to
one-CL friend
yi-ge pengyou].
* 'It is to Mary a friend that John introduces/introduced.'

The result of grammaticality may indicate that there is some other reason to make us judge (10b) to be grammatical. Specifically, in Chinese as the word *gei* can also function as a verb in addition without any morphological change. This may have led speakers to judge it grammatical as the string *gei Mary shu* can be a true verb phrase.

Therefore a summary of the observation on the Chinese double complement construction can be made: In Chinese double complement constructions part of the phenomenon of Surprising Constituents can also be observed with the same grammatical judgments as those in Japanese when *ba* and *gei* 'to' are used.

3. Proposal

3.1. On *ba*

In this subsection I show that *ba* and the post-*ba* NP form a constituent. Observe (13).

(13) a. ni xian ba zhe-kuai rou
you first BA this-CL meat
qie-qie ba![6]
cut-cut SFP

b. [ba zhe-kuai rou], ni xian
BA this-CL meat you first
qie-qie ba!
cut-cut SFP
'Cut the meat first!'

(Huang, Li & Li (2009): 167)

This pair of sentences indicates that *ba* and the post-*ba* NP form a constituent. Similarly, the pair in (14) also shows the same point.

(14) a. wo zao jiu ba na-dui wenzhang
I early then BA that-CL article
gai-hao-le.
correct-finish-LE

b. [ba na-dui wenzhang], wo zao jiu
Ba that-CL article I early then
gai-hao-le.
correct-finish-LE
'I corrected that pile of articles long ago.'

(Huang, Li & Li (2009): 167)

However, there seems to be data showing that the post-*ba* NP forms a constituent with the subsequent VP. Consider (15).

(15) ta ba [men xi-hao], [chuanghu
he BA door wash-finish window
ca-ganjing]-le.
wipe-clean-LE
'He washed the door and wiped the windows clean.'

(Huang, Li & Li (2009): 166)

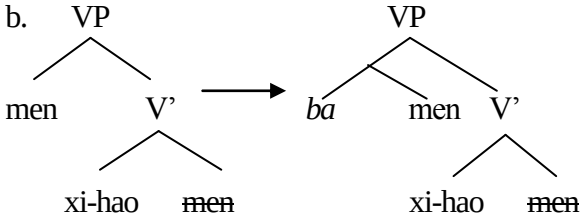
(15) seems to show that the post-*ba* NP and the VP following it form a constituent, as illustrated by the coordination test. However, we know that it is acceptable if *ba* also occurs in the second conjunct. Observe (16).

(16) ta [[ba men_i] xi-hao t_i], [[ba $chuanghu_j$]
ca-ganjing t_j]-le.

With this data, I would like to claim that in (15) *ba* and the post-*ba* NP also form a constituent. Then this constituent merges further with the following VP. The tree diagram in (17) is the first part of the coordination structure of (16). And in (18) the second *ba* is elided under identity with the first *ba*.

(17) a. ta [[ba men_i] xi-hao t_i]
he BA door wash-finish
'He washed the door.'

b.

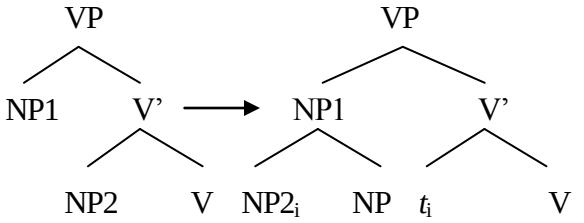


(18) ta [[ba men_i] xi-hao t_i], [[~~ba~~ $chuanghu_j$]
ca-ganjing t_j]-le.

3.2. The derivation of Surprising Constituents

In this subsection, I exploit the possibility of applying Takano's (2002) theory to the relevant Chinese data. Takano's analysis is illustrated in (19).

(19) The Oblique Movement Analysis
John-ga ageta no wa [hon-o
-Nom gave NM Top book-Acc
Mary-ni] da. (=(7a))
-Dat is
* 'It is a book to Mary that John gave.'



NP1=Mary-ni, NP2=hon-o, V=ageta
(cf. Hoji (1985), Kayne (1994))

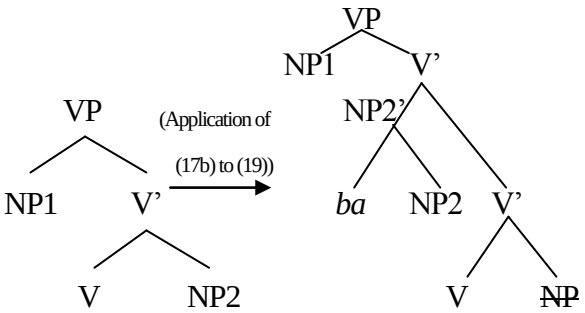
Specifically, assuming that the indirect object *Mary-ni* is higher than the direct object *hon-o* and that only leftward adjunction is possible, the direct object undergoes oblique movement and adjoins to the indirect object, forming a new constituent. To derive the cleft sentence in (19), this newly formed constituent undergoes movement within the embedded clause and gets deleted at PF under identity with the focus element. Thus, before PF deletion, the example has the structure in (20).

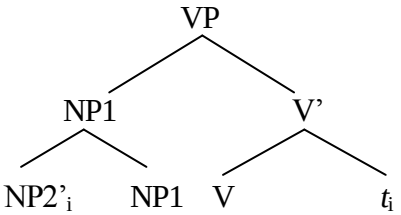
(20) [~~hon-o~~$_i$ [~~Mary-ni~~]]$_j$ John-ga t_j t_i ageta no

wa [hon-o [Mary-ni]] da

One may try to apply the analysis of the Japanese data directly to the Chinese data. However, there is a difference. Remember the tree diagram in (17b) that is based on the coordination test. Further, as the particle *ba* is introduced to the structure later during the derivation, it should not be treated the same as the Japanese *o*. With these factors in mind, I would like to propose the following structure for the Chinese data (8a).

(21) John song de shi [ba shu gei Mary].
send NM is BA book to
* 'It is a book to Mary that John sends/sent.'





NP1=gei Mary, NP2= shu, V=song, NP2'=ba shu

Crucially, I would like to claim that the constituent that undergoes oblique movement is not NP2 *shu* 'book', but NP2' *ba shu* 'ba book', which is derived in the way shown in (17b). With this derivation in place, the cleft construction in (22) can be derived in exactly the same way as (20).

(22) [[~~ba shu~~$_i$] ~~gei Mary~~]$_j$ John t_j song t_i de shi [[ba shu] gei Mary]

4. A Possible Question: *gei* 'to' can also be a verb *gei* 'give'

As mentioned earlier, the word *gei* can function as both a preposition and a true verb. By now I have assumed *gei* as a preposition that assigns dative case to the indirect object. If *gei* alternatively acts as a verb, as the sentence in (23) shows, then it can form a complex verb phrase *song-gei* 'send-give' with *song* 'send'.

(23) John song-gei Mary (yi-ben) shu.
send-give one-CL book
'John gives/gave Mary a book.'

Then let us derive the sentences corresponding to those in (8a-e).

(24) a.* John song-gei de shi [ba shu Mary].
send-give NM is BA book
* 'It is a book to Mary that John sends/sent.'

b.* John song-gei de shi [Mary
send-give NM is
ba shu].
BA book
* 'It is to Mary a book that John sends/sent.'

c.* ba shu song-gei de shi
BA book send-give NM is
[John Mary].
* 'It is John to Mary that sends/sent a book.'

d.* song-gei Mary de shi [John ba shu].
send-give NM is BA book
* 'It is John a book that sends/sent to Mary.'

e.* song-gei de shi [John ba shu
send-give NM is BA book
Mary].
* 'It is John a book to Mary that gives/gave.'

Different from (8a, b), (24a, b) are ungrammatical. This indicates that to derive the corresponding

Surprising Constituent sentences in Chinese, it is necessary to assume *gei* to be a preposition.

To establish this assumption explicitly, I would like to show further evidence.

First, verb-*gei* 'verb-give' cannot serve as a simple answer to a question. Consider the contrast in (25a) and (25b).

(25) a. (mei/bu) xie.
(not) write
'(Someone) doesn't/didn't write (anything).'

b.* (mei/bu) song-gei.
(not) send-give
* '(Someone) doesn't/didn't send-give.'

A verb like *xie* 'write' should be able to answer a question. But when we apply this verb-hood test to *song-gei* 'send-give', ungrammatical judgment results. This suggests that *song-gei* is not a true verb.

Next, I would like to point out that in addition to *song-gei*, where *song* 'give' is a monosyllabic verb, there are in fact a number of disyllabic verb-*gei* complex. Some examples are shown in (26).

(26) "disyllabic verbs-*gei*"
chuandi-gei, jieshao-gei
pass-give, introduce-give

Although "verb-*gei*" 'verb-give' is a relatively productive operation, it is unlikely to treat them as true verbs. Therefore they are not constituents. Note also that none of the data in (26) behave like verbs according to the verbhood test in (25). For example, observe (27).

(27) a.* John jieshao-gei Mary yi-ben shu
introduce-give one-CL book
le ma?
LE SFP
* 'Did John introduce-give Mary a piece of book?'

b.* (mei) jiaoshao-gei.
(not) introduce-give
* 'No, (he) didn't introduce-give.'

The ungrammaticality of the answer indicates again that *verb-gei* 'verb-give' is not a verb.

In this section I gave 2 pieces of evidence that show *verb-gei* 'verb-give' cannot be a true verb.

5. Discussion: Why scrambling can be partly observed in Chinese while it is not available in English although both of the two are SOV languages?

I would like to answer this question in the following way. The difference between English and Chinese in terms of Surprising Constituents phenomenon lies in the fact that in Chinese there is the crucial *ba* construction, through which the grammatical function of the direct object can be made explicitly together with the preposition *gei* 'to' indicating the indirect object. If the current proposal is correct, then scrambling can be observed. The difference of scrambling between Japanese and Chinese is that because there is not a particle to make the nominative case explicit, there is always difficulty in deciding the grammatical function of the subject.

6. Conclusion

In this paper, I focused on the phenomenon of Surprising Constituents in Chinese and argued that scrambling is involved to yield this phenomenon. Specifically, I proposed that *ba* in *ba* construction and the preposition *gei* 'to' serve to invoke scrambling.

Notes

[1] Scrambling refers to the free order phenomena found in diverse languages.

[2] CL: classifier

[3] This is an example of the *ba* construction. The NP after *ba* is generally the object of the verb of the sentence. Semantically, the NP after it is affected in the way described by the event.

[4] This sentence is marginal because it can be ambiguous between (i) and (ii):

(i) 'John sends/sent Mary a book.' (the favored interpretation)

(ii) '(Someone) sends/sent Mary and John a book.' (possible in informal conversation with the conjunction word *he* 'and' omitted)

The interpretation in (ii) is possible because in Chinese a phonetically empty pronoun *pro* can be generated in the subject position. Another reason may lie in the fact that in Chinese, unlike in Japanese, there is no nominative case marker corresponding to *ga*, and thus the exact grammatical function of *John* cannot be decided.

[5] NM: nominalizer

[6] SFP: sentence-final particle

References

Hoji, Hajime (1985) Logical Form Constraints Configurational Structures in Japanese, PhD Dissertation, University of Washington.

Huang, C.-T. James (1982b) Logical Relations in Chinese and the Theory of Grammar, PhD Dissertation, MIT.

Huang, C.-T. James, Y.-H. Audrey Li and Yafei Li (2009) *The Syntax of Chinese*, Cambridge University Press.

Kayne, Richard (1994) *The Antisymmetry of Syntax*, MIT Press, Cambridge, Massachusetts.

Stowell, Tim (1981) Origins of Phrase Structure, PhD Dissertation, MIT.

Takano, Yuji (2002) "Surprising Constituents," *Journal of East Asian Linguistics* 11: 243-301.

A Phrasal Analysis of English, Japanese and Chinese Comparative Constructions

Ryosuke Hattori
The University of Tokyo

Keywords: clausal comparatives, phrasal analysis, left branch condition, quantifier floating

1. Introduction

In the previous studies on the syntax of comparatives, languages have been classified into two types based on whether they allow clausal type comparatives with a *than*-CP complement (as in English) or not (as in Japanese or Chinese), assuming comparative-specific parameters. (Beck et al. 2004; Kennedy 2005; Bhatt and Takahashi 2007; Lin 2009)

However, there are empirical and conceptual problems with this claim. First, some phenomena cannot be simply explained by this distinction alone. For example, Japanese comparatives ban only the Degree-compared Clausal Comparatives (DCCs) but not Quantity-compared Clausal Comparatives (QCCs), as shown in (2) (cf. English counterparts in (1)), while languages like Chinese do not seem to allow clausal comparatives at all as in (3).

(1) a. He bought a <u>longer</u> umbrella than [$_{CP}$ she did]
b. He bought <u>more</u> umbrellas than [$_{CP}$ she did]

(2) a. ?*Kare-wa kanojo-ga katta yori
He-Top she-Nom bought than
<u>nagai</u> kasa-wo katta
long umbrella-Acc bought
b. Kare-wa kanojo-ga katta yori
He-Top she-Nom bought than
<u>takusan</u> kasa-wo katta
many umbrella-Acc bought

(3) a. *Tā mǎi yǔsǎn bǐ [$_{CP}$ tā
He buy umbrella than she
mǎi] <u>cháng</u>.
buy long
b. *Tā mǎi yǔsǎn bǐ [$_{CP}$ tā
He buy umbrella than she
mǎi] <u>duō</u>.
buy many

Secondly, construction-specific parameters are conceptually undesirable, since other commonly-recognized parameters are all general and not construction-specific.

This paper tries to explain the contrast in (1-3) by proposing that the *than*-complement of every language has a phrasal (not CP) structure and that there are two general parameters involved in the contrast.

2. Analysis

2.1. English Clausal Comparatives

Through analyzing the syntactic derivations of comparative constructions in English and Japanese, the difference in their grammaticality seems to come from how they react to the Left Branch Condition by Ross (1967/1986).

(4) *Left Branch Condition/LBC*

In languages like English, the leftmost constituent of a nominal, adjectival, or adverbial expression cannot be

extracted out of the expression containing it.

In English, the moved operator in comparative clause is a zero adverb instead of a left-branch modifier, as shown in (5b) which is based on the semantics by Izvorski (1995). This explains the grammaticality of sentences in which the LBC is apparently violated in the previous analyses (e.g. *wh*-movement account (5a) by Chomsky 1977).

(5) a. The desk is as high as [*wh*$_i$ it is [$_{AP}$ [e]$_i$ wide]]

b. The table is longer than [ø to what extent/degree]$_i$ it is wide t$_i$.

There is no extraction of the leftmost element in (5b), and this explains the apparent lack of sensitivity to the LBC.

2.2. Japanese Clausal Comparatives

The grammaticality of QCCs in Japanese is explained by the possibility of quantifier floating in this language. The floated quantifier (FQ) like *takusan* can be scrambled to the beginning of a sentence while the base-generated leftmost quantifier *takusan-no* cannot.

(6) *[takusan-no]$_i$ watasi-wa
many-Gen I-Top
[[~~takusan-no~~]$_i$ [hon-o]] katta
books-Acc bought
'I bought many books'

(7) [takusan]$_i$ watasi-wa hon-wo
many-FQ I-Top books-Acc
~~[takusan]~~$_i$ katta
bought

Thus, assuming the null operator in QCCs as a floating quantifier explains their grammaticality since there is no LBC violation.

(8) a. John-wa kinoo hon-o
John-Top yesterday book-Acc
[FQ x-satu] katta yori(-mo) kyoo
x-CL bought than today
takusan-no zassi-o katta
many magazine-Acc bought
'John bought more magazines today than he bought books yesterday'

b. John-wa kinoo hon-o [~~FQ x-satu~~]
katta [FQ x-satu] yori(-mo) kyoo
takusan-no zassi-o katta

In fact, there is a piece of evidence by Ishii (1991) that suggests the moving operator involved in Japanese QCCs is a floating quantifier. Floating quantifiers do not appear with individual-level predicates while they do with stage-level predicates.

(9) a. ?*Gakusei-ga san-nin <u>eigo-ga</u>
Student-Nom 3-CL English-Nom
<u>umai</u> (Individual-level predicate)
good
'Three students are good at English'

b. Gakusei-ga san-nin <u>eigo-o</u>
Student-Nom 3-CL English-Acc
<u>hanasita</u> (Stage-level predicate)
spoke
'Three students spoke English'

Crucially, the moving null operator in Japanese clausal comparatives shows the same characteristics.

(10) a. ?*kono kurasu-de-wa
this class-in-Top
[$_{ø}$ gakusei-ga] *t*$_i$ <u>eigo-ga umai</u>
student-Nom English-Nom good
[x-many]$_i$ yorimo takusan-no
than many-Gen

gakusei-ga huransugo-ga umai
student-Nom French-Nom good
'More students are good at
French than are good at English'

b. kinoo-no kaigi-de-wa
Yesterday-Gen meeting-in-Top
[$_{ø}$ shussekisha-ga] t_i eigo-o
attendee-Nom English-Acc
hanasita [x-many]$_i$ yorimo
spoke than
takusan-no hito-ga
many-Gen people-Nom
huransugo-o hanasita
French-Acc spoke
'More people spoke French than
spoke English in yesterday's
meeting'

(Ishii 1991, pp. 103-104)

The impossibility of floating of a degree expression in Japanese, then, explains the ungrammaticality of DCCs in Japanese. Also, the type of movement seen in English as in (5b) is prohibited because Japanese has no such degree expression as *to what extent* to avoid the extraction of left branch elements.

(11) *kono teeburu-wa [ano tukue-ga
this table-Top that desk-Nom
[t_i habahiroi] x-much$_i$] yori nagai
wide than long
'This table is longer than that desk
is wide'

3. Hypothesis

3.1. Phrasal Analysis

Based on the analysis so far, Japanese clausal comparatives may have the following structure in the *than*- complement.

(12) John-wa [$_{NP}$ kinoo hon-o katta
John-Top yesterday books-Acc bought
[$_{N}$ ø quantity]] yori(-mo) kyoo
than today
takusan-no zassi-o katta
Many-Gen magazines-Acc bought

We notice here that Japanese has the same nominal phrase, and not CP, structure as Chinese comparatives below.

(13) Tā mǎi shū bǐ [$_{NP}$ tā mǎi
He bought books than she bought
de [$_{N}$ ø quantity]$_i$] duō
DE many

An important question which arises here is why then only English seems to have clausal structure in its comparative construction. In fact, we can analyze English clausal comparatives in the same way as Japanese counterparts with an adverbial phrase, instead of CP, structure.

(14) John bought more books today than
[$_{AdvP}$ [$_{Adv}$ ø in what quantity] [he
bought books [e]$_i$ yesterday]]

Thus, my hypothesis is that every language has only phrasal comparatives. Based on this, English, Japanese and Chinese “clausal” comparatives uniformly have, in their complements of *than/yori/bǐ*, a phrase with relative clause modifying the phrasal head, i.e. even the ones previously analyzed as "clausal comparatives" have phrasal structures.

Then why is the head Adv only in English? The direct translation of the CSD in (15a) to Japanese is ungrammatical as we saw in (11), but if we change the degree+adjective string to a noun *habahiro-sa* 'width' (as in 15b), the sentence become grammatical.

(15) a. This table is longer than [[$_{ø}$ to

what extent]$_i$ that desk is wide e_i]

b. Kono teeburu-wa [$_{NP}$ ano tukue-no
This table-Top that desk-Gen
[$_N$ habahiro-sa]] yori nagai
width than long

Here I assume that degree expression, which cannot move out because of the LBC, changes its form to a suffix *-sa*[i] and transforms the adjective into a noun, avoiding the extraction of the degree in this sentence, (i.e. habahiroi 'wide' + *-sa* 'x-much (suffix)' = *habahiro-sa* 'width'). Since this is a morphological operation, there is no LBC involved. Likewise, in Chinese, 'x-much+adjective' string becomes a noun in the derivation of its degree comparatives. Only there is no morphological difference between adverbials and nouns in Chinese.

(16) a. *Zhuōzi bǐ [mén kuān] cháng
desk than door wide long
'The desk is longer than the door is wide'

b. *Zhuōzi bǐ [mén [~~x-much~~$_i$ kuān]
x-much$_i$] cháng

c. Zhuōzi de cháng bǐ [$_{NP}$ mén
desk DE length than door
de [$_N$ kuān] cháng
DE width long
(Xiang 2003, p. 5)

3.2. Parameters

Along the line of my analysis, the only differences among English, Japanese and Chinese "clausal" comparatives are the position (first or last) and the status (N or Adv) of the phrasal head of *than*-complement. These differences are explained by the following parameters.

(i) degree modifier of an adjective can be extracted out of the phrase or not

(ii) a sentence modifies a head from left or right

Japanese or Chinese set (i) as "negative" and (ii) as "from left" while English has the opposite values. What is important here is that these parameters can be observed in non-comparative contexts too, and thus are general.

The first parameter can be seen in the interrogatives like the following (without stress on *wh* for the Japanese counterpart).

(17) a. [To what extent]$_i$ was the New
deal effective [e]$_i$?

b. ?*[dono-kurai]$_i$ New deal
to what extent
seisaku-wa [[e]$_i$ yukou] desitaka?
policy-Top effective was

c. * [rú hé]$_i$ luó-sī-fú-xīn-zhčng
how New deal
[[e]$_i$ yǒu xiào] ?
effective

The second parameter can be seen in the relative clauses like the following.

(18) a. I have [[the book] which John
bought yesterday]

b. Watashi-wa [kinoo John-ga
I-Top yesterday John-Nom
katta [hon]] -wo motteiru
bought book -Acc have

c. Wǒ yǒu [zuǒtiān John mǎi de
I have yesterday buy DE
[shū]]
book

Thus, we do not have to assume parameters which are prepared solely for analyzing clausal comparatives, and this is the biggest advantage of my analysis.

4. Evidence for Phrasal Analysis of English Clausal Comparatives

There is some evidence for the phrasal analysis of English "clausal" comparatives, which supports my hypothesis.

4.1. Evidence 1: Italian Free Relatives and Comparative Clauses

The first evidence comes from the similarity of English comparatives and their Italian counterparts, which have an overt adverbial head *quanto*.

(19) Maria ha mangiato più biscotti
Mary has eaten more cookies
di quanti$_i$ ne ha
than WH-PLUR of-them has
mangiati t_i Giulia.
eaten Julia
'Mary ate more cookies than Julia ate.' (Donati 1997, p. 149)

Italian Comparatives show very similar behavior to the English counterpart. For example, they are sensitive to island effects. (Donati 1997, p. 147) (e.g. Complex NP Constraint)

(20) a. *Ho mangiato più biscotti
have-1SG eaten more cookies
di quanti$_i$ ho incontrato
than WH-PL have-1SG met
un uomo che ne ha
a man who of-them has
mangiati t_i.
eaten
'I ate more cookies than I met a man who ate.'
b. *I ate more biscuits than I met a man who ate [e]

Furthermore, Donati (1997) observes that both comparatives and free relatives obey the anti pied-piping condition. This suggests that free relatives and comparatives have something in common regarding their structures.

(21) a. *Mario ascolta [di quanto]$_i$ sta
Mario listens about what is
parlando Maria [e]$_i$.
talking Mary
b. *Mario ha già incontrato
Mario has already met
[quanti uomini]$_i$ stanno
what men are
parlando [e]$_i$ con Maria.
talking with Mary
(Donati 1997, pp. 153-154)

Donati then concludes that comparative clauses and free relatives have the same relative clause structure.

(19') Maria ha mangiato più [$_{XP}$ [$_{QP}$ [$_Q$ e] biscotti] [$_{X'}$ di [$_{QP}$ [$_Q$ quanti$_i$ [ne ha mangiati t_i Giulia]]]]

Interestingly, the head used in comparatives *quanto* in Italian is used as an adverb which is equivalent to "how much/how many" in interrogatives, as in the following.

(22) a. [Quanti biscotti]$_i$ hai
how-many cookies have-2SG
mangiao [e]$_i$?
eaten
'How many cookies did you eat?'
b. [A quante persone]$_i$ hai
to how-many persons have-2SG
parlato [e]$_i$?
talked
'How many people did you talk to?'

This suggests that in Italian, the comparative

expression following *di* 'than' is a phrase headed by an adverb. Considering the similarity between the two languages, it is not implausible to suppose that English counterparts have the similar underlying structure.

4.2. Evidence 2: Locality Effect with Comparative Clauses

Another argument comes from the similar behavior to negative polarity item (NPI) licensing between English comparative "clauses" and relative clauses headed by a noun, where they are shown to have the same type of head movement and thus similar structures.

Bhatt (2002, p. 57) observes that the sentence below has the high and low readings.

(23) The first book that John said that Tolstoy had written

'High' reading:

In 1990, John said that Tolstoy had written *Anna Kurenia*; in 1991, John said that Tolstoy had written *War and Peace*. Hence the NP is *Anna Karenia*. (i.e. order of saying matters, order of writing is irrelevant)

'Low' reading: John said that the first book that Tolstoy had written was *War and Peace*. Hence the NP is *War and Peace*. (i.e. order of writing matters, order of saying is irrelevant.)

Bhatt argues that these readings are generated because the external head *first book* moves from inside the relative clause through two different positions.

(24) the [first book]$_i$ [$_{CP}$ *first book*$_i$ that [John said [$_{CP}$ *first book*$_i$ that [Tolstoy had written *first book*$_i$]]]]

Furthermore, a low reading is forced when an NPI is positioned inside the embedded clause, and high reading when it is put in the matrix clause.

(25) a. The first book that John said that Tolstoy had *ever* written

b. The first book that John *ever* said that Tolstoy wrote

Crucially, I found the same locality effect can be seen in the comparative "clauses".

(26) a. Bill bought a more interesting book than John said *e* that she had written *e*.

b. Bill bought a more interesting book than John said *e* that she had *ever* written *e*.
(***Low reading*** is forced)
'the degree of interestingness of the books she wrote, and John said that'

c. Bill bought a more interesting book than John *ever* said *e* that she had written *e*.
(***High reading*** is forced)
'the degree of interestingness of the book John mentioned among many books she had written'

This suggests that there is a movement which is similar to the one involved in relative clause, and a comparative clause has its moved null head as in the structure below.

(27) Bill bought more interesting book than [[e]$_i$ [John said e_i that she had written e_i]].

This ultimately suggests that there is a

phrase (headed by this empty adverbial head) and not a clause following *than* in English comparatives.

5. Conclusion

In this paper, I pointed out that construction-specific phrasal / clausal parameter of comparatives cannot explain why Japanese comparatives ban only DCCs but not QCCs. It was shown that the difference in their grammaticality comes from how they react to the Left Branch Condition by Ross (1967/1986) and existence of quantifier floating in Japanese. I further proposed that every language has only phrasal comparatives, and under this analysis, the only differences, the position (first or last) and the status (N or Adv) of the head, are explained by two general non construction-specific parameters. Finally, cross-linguistic and interpretive pieces of evidence were presented to support my hypothesis.

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[i] Japanese nominal suffixed with *–sa* has a meaning of degree.
e.g. *nagai* 'long' ⇒ *naga-sa* 'length'
takai 'high' ⇒ *taka-sa* 'height'

REFERENCES

Beck, Sigrid, Toshiko Oda and Koji Sugisaki (2004) "Parametric Variation in the Semantics of Comparison: Japanese vs. English," *Journal of East Asian Linguistics* 13, 289-344.

Bhatt Rajesh (2002) "The Raising Analysis of Relative Clauses: Evidence from Adjectival Modification," *Natural Language Semantics* 10, 43-90.

Bhatt, Rajesh and Shoichi Takahashi (2007) "Direct Comparisons: Resurrecting the Direct Analysis of Phrasal Comparatives," *Proceedings of Semantics and Linguistic Theory* 17, ed. by Masayuki Gibson and Tova Friedman, 19-36, CLC Publications, Ithaca, New York.

Chomsky, Noam (1977) "On Wh-Movement," *Formal Syntax*, ed. by Peter Culicover, Thomas Wasow and Adrian Akmajian, 71-132, Academic Press, New York.

Donati, Caterina (1997) "Comparative Clauses as Free Relatives: a Raising Analisis," *Probus* 9, 145-166.

Izvorski, Roumyana (1995) "A Solution to the Subcomparative Paradox," *Proceedings of the Fourteenth West Coast Conference on Formal Linguistics,* ed. by José Camacho, Lina Choueiri and Maki Watanabe, 203-219, CSLI Publications, Stanford.

Ishii, Yasuo (1991) *Operators and Empty Categories in Japanese*, Doctoral dissertation, University of Connecticut.

Kennedy, Chris (2005) "Parameters of Comparison," ms., University of Chicago.

Lin, Jo-wang (2009) "Chinese Comparatives and Their Implicational Parameters," *Natural Language Semantics* 17, 1-27.

Ross, John Robert (1967) *Constraints on Variables in Syntax*. Doctoral Dissertation, MIT. [Published in 1986 as *Infinite Syntax!*, Ablex Publishing Corportaiton, Norwood, New Jersey.]

Xiang, Ming (2003) "Some Topics in Comparative Constructions," *CLS* 39, 739-754.

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Subject as a Probe

Akiko Kobayashi
Shimane University

Keywords: probe, Relativized Agree, Transfer, agreement asymmetry, subject island

1. RELATIVIZED AGREE

In this paper I propose what I call Relativized Agree theory, and show how well various syntactic facts are accounted for by the proposed theory. An idea of Relativized Agree is not a new one. Suppose that the derivation has reached the stage (1a), with the expletive *there* merging with T'.

(1) a. [$_{TP}$ **there** [$_{T'}$ T is a man there]]
b. [$_{TP}$ T seems [$_{TP}$ **there** [$_{T'}$ to be a man there]]]

There and T have matching features (Match), but T cannot serve as a probe for *there* since it is not in T's c-command domain. In this structure it is *there*, D^0, that functions as a probe for T (cf. Chomsky (2004: 114)). On the other hand, when *there* is generated in an infinitival clause as in (1b), it is a goal since it is in the domain of T. The same item can thus be either a probe or a goal, depending on a structural relation with its match. This I call *Relativized Agree (RA)*.

RA is not a special case for expletive constructions, but a necessary consequence of recent minimalist assumptions. To illustrate this, let us consider how Agree (feature valuation) takes place in the sentence (2a).

(2) a. **The boy** will buy a book.
b. [$_{TP}$ **T** [$_{v*P}$ **the boy** buy a book]]
c. [$_{CP}$ C [$_{TP}$ **the boy T** [$_{v*P}$ $\boldsymbol{t_{DP}}$ buy a book]]

Suppose that the derivation has reached the stage (2b). Match holds between T and *the boy*, but Agree does not take place immediately since "[t]hey [uninterpretable features] must … be valued at the stage in computation where they are transferred" (Chomsky (2008: 154)). Suppose then that the CP phase has been completed as in (2c). At this stage T searches for a goal again. But the search fails since *the boy* has been displaced and traces are invisible (cf. Chomsky (2008: 150)).

Therefore T must have its features valued *as a goal*. There is a candidate for the probe, i.e. *the boy* in SPEC-T. However, if "[a]pparent Spec-H relations are in reality head-head relations involving minimal search (local c-command)" (Chomsky (2004: 113)), Agree cannot be established between *the boy* and T since neither *the* (D) nor *boy* (N) c-commands T.

Thus we seem to get caught in a double bind: The subject must be the probe but no heads in the subject c-command T. But there is a way out of this dilemma:

(3) Transfer applies to DP when it moves to SPEC-T.[1]

By the application of Transfer, the internal structure of the DP is made invisible, but the label D must remain visible. It is necessary to conform to the No-Tampering Condition: "[O]perations do not tamper with the basic relations involving the label that projects: the relations provided by Merge and composition" (Chomsky (2000: 136)). If the whole subject were made invisible, the SPEC-Head relation established between the subject and T would be tampered with. Consequently, the remaining label D, which is identical with the head D (cf. Chomsky (2004: 109)), can work as a probe for T, as represented in (4). (To avoid confusion between a head and a label that works as a head after Transfer, I add a shadow to the latter.)

(4) [$_{CP}$ C [$_{TP}$ **D T** [$_{v*P}$ t_{DP} buy a book]]

If this is correct, T and subject DP agree in the following way.

(5) a. Agree (D, T) if DP moves to SPEC-T.
b. Agree (T, D) if DP remains in v(*)P.

I will show how this accounts for a variety of syntactic facts.

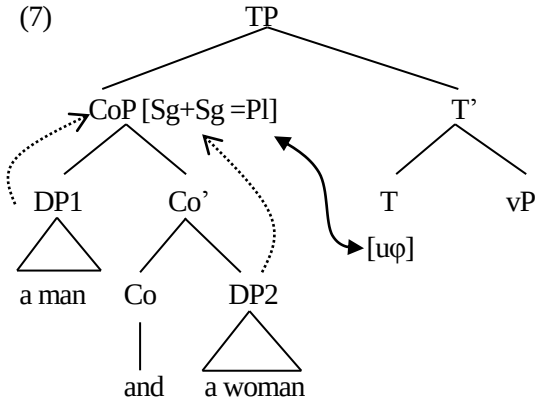
2. NUMBER AGREEMENT ASYMMETRY

In many languages the verb exhibits whole conjunct agreement (WCA) when the conjoined subject precedes the verb, while the verb shows first conjunct agreement (FCA) with the postverbal conjoined subject. English is one of such languages:

(6) a. [A man and a woman] {**are**/*is} in the house.
b. There {**is**/*are} [a man and a woman] in the house. (Bošković (1997: 87))

FCA as in (6b) has been explained in terms of government (e.g. Munn (1999)) or feature lowering (Bošković (1997)). This may be restated in minimalist terms as follows: The probe T agrees only with the first conjunct (*a man*) since it is the closest goal. WCA in (6a), on the other hand, has been attributed to SPEC-Head agreement (e.g. Munn (1999), Harbert and Bahloul (2002)). To achieve WCA, we need to assume that number features of conjuncts are percolated up to the dominating label (CoP) and somehow added up (number feature percolation). Then CoP, bearing a Pl(ural)-feature, triggers WCA on T in a SPEC-Head relation, as illustrated in (7).

(7)



(According to Lieber (1989), feature percolation from a non-head is allowed when the head of the phrase is not specified for that feature.)

The above explanation, however, raises a question. The absence of WCA in (6b) indicates either (i) that number feature percolation does not occur when CoP is postverbal, or (ii) that T cannot see the percolated plural feature when CoP is postverbal. Why is it that a postverbal CoP cannot make use of number feature percolation? Munn (1999: 664) claims that "specifier-head agreement is looser than governed agreement and thus may be affected by other factors," but it remains unclear why the "looser" version of agreement is unavailable for a postverbal CoP.

The RA theory provides a simple account for the number agreement asymmetry. Let us first consider how FCA is obtained in (6b). A partial structure of (6b) is given in (8).

(8) $[_{TP}$ T $[_{vP}$ be $[_{CoP[Pl]}$ DP1 and DP2] …]]
[uφ] [Sg] [Sg]

Co has no φ-features of its own, but the label of its projection, CoP, bears [Pl] as a result of number feature percolation. But the probe T cannot see CoP since probe-goal is a relation between *heads*. The closest goal for T is, therefore, D (*a*) of the first conjunct. FCA in (6b) is thus obtained.

Let us then consider WCA in (6a), a partial structure of which is given in (9).

(9) $[_{TP}$ Co T $[_{vP}$ be t_{CoP} …]]
[Pl] [uφ]

CoP undergoes Transfer when it moves to SPEC-T. The label Co remains visible in syntax, and accordingly, so does [Pl] which is added to the label. In this structure Co, as a probe, assigns its [Pl]-value to T. WCA in (6a) is thus obtained.

To summarize, the RA theory provides a simple account for the number agreement asymmetry in sentences involving a conjoined subject phrase (CoP). CoP bears [Pl] as a result of number feature percolation. The feature is available for Agree if CoP moves to subject position and transferred. The verb thus exhibits WCA with the preverbal CoP. If CoP

remains in vP, on the other hand, the probe T agrees with the head of the first conjunct. [Pl] of CoP is invisible to T since the goal must be a head. FCA is thus obligatory when CoP is postverbal.

3. PERSON AGREEMENT ASYMMETRY

Let us then consider a different kind of agreement asymmetry:

(10) a. I {**am**/*is} here.
b. We **are** here.

(11) a. There {**is**/*am} only me.
b. There **are** only us.

(adapted from Chomsky (2000: 149, note 90))

According to Chomsky (2000), sentences as in (11a, b) are acceptable with a list reading, in response to a question like "Who's still here to do the work?" The verb forms in (11a, b) indicate that the verb agrees with a postverbal pronominal subject in number, but not in person.

Before an account of this asymmetry, two properties of pronouns should be articulated. First, "3rd person" is a non-person (cf. Benveniste (1966), Harbert and Bahloul (2002)). Namely, 3rd person pronouns are pronouns lacking a person feature, and so-called 3rd person inflection on a head is a default form when its [uφ] is not specified for person.

Second, pronouns have a complex structure (cf. Cardinaletti (1994), Chomsky (2013)). I posit the following three-layer structure for 1st and 2nd person pronouns in English, following Déchaine and Wiltschko (2002, D&W henceforth).[2]

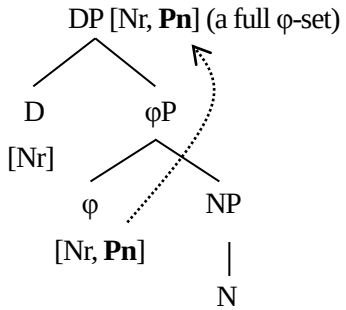
(12) $[_{DP}$ D $[_{\varphi P}$ φ $[_{NP}$ N]]] (D&W, p. 410)

N may have a gender feature since it is inherent and invariant in a language (cf. Ritter (1995)). φ is a head mediating the DP's φ-information, i.e. gender (Gr), number (Nr), and person (Pn). D is a determiner that exhibits definiteness.

Although D&W do not argue what φ-feature(s) D may have, I suggest that Ds may have [Nr] and [Gr] but not [Pn]. A piece of evidence comes from the paradigm of independent (emphatic) pronouns in Halkomelem (a Central Coast Salish language), which is extensively discussed in D&W. Each pronoun is composed of a determiner and a person-number morpheme. The determiner for the 1st and 2nd person pronouns is invariant, which suggests that D does not carry a [Pn]-feature. Another piece of evidence comes from the paradigm of determiners in European languages like German and Spanish. Ds may inflect for gender and number (and/or case), but not for person. This is not at all surprising given that common nouns are uniformly 3rd person, i.e. non-person: Ds that occur with common nouns should not carry [Pn]. If Ds involving pronouns are the same in nature, they should not have [Pn] either.

Based on these observations, I suggest that Ds in English carry [Nr], but not [Pn]. (I do not consider the distribution of [Gr] since it has no morphological reflection in English.) The distribution of φ-features in 1st/2nd person pronouns will therefore be like (13).

(13)



φP bears a full set of φ-features. D carries [Nr], but not [Pn]. The projected label DP bears a full φ-set as a result of [Pn]-feature percolation from φ.

With this in mind, let us return to (10) and (11). Partial structures of (10) and (11) are shown in (14) and (15), respectively.

(14) $[_{TP}$ D T $[_{vP}$ be t_{DP} here]]
[Nr, Pn] [uφ]

(15) $[_{TP}$ T $[_{vP}$ be $[_{DP}$ D $[_{\varphi P}$ φ NP]]]]
[uφ] [Nr]

Transfer applies to the subject (*I/we*) in (10)/(14),

making only its label D visible in syntax. Since the label D bears a full φ-set, it assigns its full φ-values to T. Preverbal pronouns thus triggers full agreement. In (11)/(15), on the other hand, Transfer does not apply to the in-situ subject (*me/us*). T serves as a probe and finds the head D as its closest goal. Since D bears [Nr] but not [Pn], T is not assigned a person value. Therefore the verb agrees with the postverbal pronominal subject only in number.

Summarizing, person agreement requires a SPEC-Head relation between a pronoun and T because (i) the person feature of a pronoun is made visible by Transfer, and (ii) Transfer applies to a pronoun when it moves to SPEC-T.

4. SUBJECT ISLAND EFFECTS

4.1. English

Generally, PP-extraction from a subject DP is not allowed in English. But it is acceptable (i) when the subject is an internal argument ((16)) or (ii) when it undergoes successive-cyclic A-movement ((17)).

(16) It was the CAR (not the TRUCK) **of which**$_j$ [the driver t_j]$_i$ was found t_i.

(17) **Of which car**$_j$ is [the driver t_j]$_i$ likely [t_i to [t_i cause a scandal]]?
(adapted from Chomsky (2008: 147, 153))

Below I show how the presence/absence of subject island effects is accounted for under the RA theory.

Let us first consider how subject island effects are derived. Consider the following example:

(18) ***Of which car** did [the driver *t*] cause a scandal? (Chomsky (2008: 147))

I assume that derivation proceeds in a bottom-up fashion, in conformance with Chomsky's (1995) Extension Condition. When C is introduced, C cannot see into the subject DP since it has been transferred when it moves to SPEC-T. Subjects thus constitute islands.

Let us now turn to legitimate PP-extraction in (16). Given the above discussion, the PP must be extracted before the DP moves to SPEC-T. The extraction must be adjunction since there is no phase head that triggers movement to the edge before C is introduced. What is the adjunction site, then? The answer can be found from the following examples involving rightward PP-extraposition out of DP:

(19) a. John drove [a car t_i] in Boston **with a sunroof**$_i$. (Takami (1995: 154))
b. They desired that [pictures t_i] be painted **of each other**$_i$. (Chomsky (1986: 41))

(20) a. *[A man t_i] hit Mary **with hostility toward her**$_i$.
b. *[A new book t_i] has attracted people **about the origin of human language**$_i$.
(Nakajima (1995: 21))

PP-extraposition is legitimate from an internal argument DP, but not from an external argument DP. The contrast can be explained by assuming that PPs can adjoin to VP, but not to v*P. If this is correct, the PP-extraction in (16) is explained as follows. The subject DP is generated within VP, and the PP inside is extraposed to a VP-adjoined position. Then the DP is moved to SPEC-T and transferred. When C is introduced, it can see and attract the PP in the VP-adjoined position. PP-extraction is therefore allowed when the subject is an internal argument.

Let us then consider the derivation of (17). The subject DP is generated in SPEC-v*. The PP inside cannot be extraposed in the v*P phase since there is not a legitimate adjunction site. Suppose that the derivation proceeds to the next higher phase and infinitival T is merged with the v*P. The DP moves to its SPEC to satisfy the T's EPP. The DP need not be transferred until it moves to SPEC of the matrix T, i.e. its final landing site. If Transfer does not apply, the following structure will be obtained when matrix V is introduced:

(21) [$_{VP}$ be likely [$_{TP}$ [$_{DP}$ the driver [$_{PP}$ of which car]] to [$_{v*P}$ t_{DP} …]]

At this stage, the PP can be extraposed and adjoined

to the VP. Later in the derivation, T is merged and the DP involving the PP-trace is raised to SPEC-T. When C is introduced, it can access and attract the extraposed PP to its SPEC. Subject island effects are therefore absent when the subject undergoes successive cyclic A-movement.

Summarizing, subject island effects emerge when the subject moves directly from SPEC-v* to SPEC-T: C cannot search into the DP since it has been transferred. On the other hand, subject island effects do not arise if there is a stage in the derivation where the subject DP is dominated by VP locally. The PP inside can be extraposed to a VP-adjoined position and then raised to SPEC-C.

4.2. Spanish

In the previous section we have seen that subject island effects are absent (i) when the subject is an internal argument and (ii) when the subject undergoes successive cyclic A-movement. Spanish data tell us that there is another way to avoid island violations; (iii) when the subject is postverbal. Compare the ill-formed (22) involving PP-extraction from the preverbal subject with the well-formed (23) involving PP-extraction from the postverbal subject.

(22) * Esta es la autora **de la que**$_i$ [varias
this is the author by the whom several
traducciones t_i] han ganado premios
translations have won awards
internacionales.
international
(Lit.) 'This is the author by whom several translations have won international awards.' (Chomsky (1986: 26))

(23) **De qué equipo**$_i$ dices que han bailado
of what team say that have danced
[cuatro participantes t_i]?
four participants
(Lit.) 'Which team do you say that four members of have danced?'
(Jiménez-Fernández (2009: 101))

The acceptability of (23) is accounted for under the RA theory as follows. It is well known that Spanish is a pro-drop language: EPP of T may be satisfied by a null pronoun (pro). Hence an overt subject argument need not move to SPEC-T. There is an independent requirement, however, that something must evacuate v*P (cf. Alexiadou and Anagnostopoulou (2001), Chomsky (2008)). Let us suppose, then, that the subject in (23) has been extraposed to satisfy this requirement, yielding the following structure:

(24) C [$_{TP}$ pro T [$_{v*P}$ t_i v*-dance [V(P)]]
[$_{DP}$ four participants [$_{PP}$ **of what team**]]$_i$

Transfer need not apply to the extraposed subject since T's φ-features will be valued by *pro*. C can therefore search into the DP and attract the PP inside. PP is thus extractable from the postverbal subject.

The ill-formedness of (22) is accounted for in the same manner as the English example (18). The preverbal subject DP has been transferred when C is merged with TP. Therefore C cannot search into the DP and extract the PP inside.

The analysis can be extended to the case mentioned by Chomsky (1986): The subject ceases to be an island when it undergoes wh-movement. Compare the ill-formed (22) with the example below:

(25) **De que autora**$_i$ no sabes [qué traducciones
by what author Neg know what translations
t_i] han ganado permios internacionales?
have won awards international
(Lit.) 'By what author don't you know what translations have won international awards?'
(Chomsky (1986: 26))

The acceptability is explained under the present analysis as follows. Suppose that the subject wh-phrase has been extraposed to a postverbal position when the embedded C is introduced:

(26) C [$_{TP}$ pro T [$_{v*P}$ t_i v*-V [V(P)]] [$_{DP}$ what

translations [$_{PP}$ **of what author**]]$_i$

Transfer need not apply to the subject at this stage. C can search into the DP and attract the PP inside to its edge position. C then induces wh-movement of the remnant DP *[what translations of* t_{PP}*]*. Multiple attraction of this kind is possible since the edge feature (EF) is "undeletable" (Chomsky (2007: 11)). The resulting structure will then be like (27).

(27) [$_{CP}$ [$_{DP}$ what translations t_j]$_i$ [$_{PP}$ **of what author**]$_j$ C [$_{TP}$ pro T [$_{v*P}$ t_i v*-V [V(P)] t_i]

Later in the derivation the PP undergoes further movement to SPEC of matrix C, yielding (25). In sum, PP-extraction from the subject wh-phrase is allowed since the subject can move to SPEC-C via an extraposed position, from which C can attract the PP inside.

To recapitulate, extraposition from the postverbal subject is legitimate since C can search into the extraposed DP. The analysis can be extended to sentences with wh-subjects. Since the subject can move to SPEC-C via an extraposed position, EF of intermediate C can search into the extraposed subject and extract the PP inside. Extraction is thus possible when the subject is a wh-phrase.

5. CONCLUSION

Probe-goal is a c-command relation between heads. DP in SPEC-T must be transferred so that the label D can serve as a probe for T. If a DP remains in v(*)P, T serves as a probe for the head D. I have shown that various syntactic facts follow naturally from this Relativized Agree (RA) theory.

Among them is the number agreement asymmetry. When the subject remains in vP, T serves as a probe, and agrees with the closest head D. This accounts for first conjunct agreement in sentences involving postverbal conjoined subjects (section 2). Although the label of a conjoined subject phrase carries a plural feature, it is invisible unless the phrase is raised to SPEC-T and transferred. Plural agreement is therefore observed when the conjoined subject phrase appears preverbally.

The other agreement asymmetry has been discussed in section 3. When a pronoun subject appears postverbally, the verb agrees with the subject in number, but not in person. Partial agreement of this type is obtained because T agrees with the head D, which bears only [Number]. [Person] is held by a lower head φ and percolated up to the label D. Since [Person] in the label D is made visible by Transfer, person agreement is observed only when the pronoun occupies SPEC-T.

In section 4 I have accounted for the presence and absence of subject island effects. Since DP is transferred when it moves to SPEC-T, nothing can be extracted from subject position. Subjects thus constitute islands. On the other hand, subject island effects are obviated either (i) when it is generated as an internal argument, (ii) when it undergoes successive cyclic A-movement, or (iii) when it is extraposed. In each case there is a stage in the derivation in which a phase head can access PP generated within the subject.

NOTES

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[1] Transfer can apply to DPs since they can constitute strong phases (cf. Heck et al. (2009)). Transfer of a whole phase is a legitimate option since otherwise "root clauses would never be spelled out" (Chomsky (2004: 108)). I take it that a whole phase is transferred when necessary.

[2] I do not discuss the internal structure of 3rd person

pronouns since it has no relevance to the present discussion.

REFERENCES

Alexiadou, Artemis and Elena Anagnostopoulou (2001) "The Subject-in-Situ Generalization and the Role of Case in Driving Computations," *Linguistic Inquiry* 32, 193-231.

Benveniste, Émile (1966) *Problèmes de Linguistique Générale I*, Gallimard, Paris.

Bošković, Željko (1997) *The Syntax of Nonfinite Complementation: An Economy Approach*, MIT Press, Cambridge, MA.

Cardinaletti, Anna (1994) "On the Internal Structure of Pronominal DPs," *The Linguistic Review* 11, 195-219.

Chomsky, Noam (1986) *Barriers*, MIT Press, Cambridge, MA.

Chomsky, Noam (1995) *The Minimalist Program*, MIT Press, Cambridge, MA.

Chomsky, Noam (2000) "Minimalist Inquiries," *Step by Step*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89-155, MIT Press, Cambridge, MA.

Chomsky, Noam (2004) "Beyond Explanatory Adequacy," *Structures and Beyond*, ed. by Adriana Belletti, 104-131, Oxford University Press, Oxford.

Chomsky, Noam (2007) "Approaching UG from Below," *Interfaces + Recursion = Language?*, ed. by Uli Sauerland and Hans-Martin Gärtner, 1-29, Mouton de Gruyter, Berlin.

Chomsky, Noam (2008) "On Phases," *Foundational Issues in Linguistic Theory*, ed. by Robert Freidin, Carlos P. Otero and Maria Luisa Zubizarreta, 133-166, MIT Press, Cambridge, MA.

Chomsky, Noam (2013) "Problems of Projection," *Lingua* 130, 33-49.

Déchaine, Rose-Marie and Martina Wiltschko (2002) "Decomposing Pronouns," *Linguistic Inquiry* 33, 409-442.

Harbert, Wayne and Maher Bahloul (2002) "Postverbal Subjects in Arabic and the Theory of Agreement," *Themes in Arabic and Hebrew Syntax*, ed. by Jamal Ouhalla and Ur Shlonsky, 45-70, Kluwer, Dordrecht.

Heck, Fabian, Gereon Müller and Jochen Trommer (2009) "A Phase-Based Approach to Scandinavian Definiteness Marking," *STUF—Language Typology and Universals* 62, 258-268.

Jiménez-Fernández, Ángel (2009) "On the Composite Nature of Subject Islands: A Phase-Based Approach," *SKY Journal of Linguistics* 22, 91-138.

Lieber, Rochelle (1989) "On Percolation," *Yearbook of Morphology* 2, 95-138.

Munn, Alan (1999) "First Conjunct Agreement: Against a Clausal Analysis," *Linguistic Inquiry* 30, 643-668.

Nakajima, Heizo (1995) "Shugo Kara-no Gaichi (Extraposition from Subject)," in Ken-ichi Takami (ed.), 17-35.

Ritter, Elizabeth (1995) "On the Syntactic Category of Pronouns and Agreement," *Natural Language and Linguistic Theory* 13, 405-443.

Takami, Ken-ichi (1995) "Nichi Eigo-no Kochibun-to Joho Kozo (Right-dislocation sentences and information structure in English and Japanese)," in Ken-ichi Takami (ed.), 149-165.

Takami, Ken-ichi (ed.) (1995) *Nichi Eigo no Uho Ido Kobun* (Rightward Movement Constructions in English and Japanese), Hituzi Syobo, Tokyo.

Schwa Epenthesis and R-Sound Lengthening for Emphasis within Optimal Theory

Hideo Kobayashi
Kwansei Gakuin University

keywords: *epenthesis*, *r-sound lengthening*, *emphasis*, *Optimal Theory*

1. INTRODUCTION

This paper examines constraint rankings for schwa epenthesis in WBO (word-initial biconsonantal onsets) and r-sound lengthening according to OT (Optimal Theory). Wolfram and Johnson (1982: 98) indicate that "schwa epenthesis applies before a lateral approximant, as in athletic [æɵ.əlɛ.tɪk] and blow [bə.ləu]." Cassidy (1983) also shows that schwa epenthesis occurs for emphasis in a WBO whose second onset is liquid in American English, such as c*a*rash! and c*a*runch! (where italicized *a* is an epenthesized schwa). Orgun (2001: 747) states that "in the English case, we need r to be present in order to trigger schwa epenthesis."

To make emphasis, an r-sound can be lengthened, as in "*crrrash!*" and "*crrrunch!*" (Cassidy 1983: 291). Although much research has been done into epenthesis in onsets in many languages (e.g., Itô 1989, Kager 1999, Rose and Demuth 2006), little has been documented about schwa epenthesis for emphasis in American English. This study takes up where past studies have left off, and addresses two research questions about OT:

(1) What is the ranking of constraints?
(2) What constraint ranking causes stress to be assigned in epenthesized words?

The organization of this paper runs as follows: Section 2 reviews the literature about the issues at hand, Section 3 proposes constraint rankings for the target phenomena, and Section 4 is the conclusion.

2. PAST STUDIES

Before approaching the research questions, this section covers the definition of epenthesis and past analyses of epenthesis in onsets within the framework of OT.

2.1 WHAT IS EPENTHESIS

Epenthesis is defined as the insertion of a vowel or consonant to break up a consonantal cluster or vowel sequence for phonotactic considerations (Kager 1999). Therefore, epenthetic elements do not have input correspondents in OT (Kager 1999). Thus, markedness constraints influence the phonological properties of an epenthetic element with no input preserved (de Lacy 2002). Epenthetic elements tend to be either minimally marked or contextually rich (Selkirk 1981, Itô 1989).

Past studies show that minimally marked segments that are context-free are vowels such as /ɪ/, /ɨ/, and /ə/ in most world languages (Kager 1999).

Schwa is the well-known epenthetic vowel, as for example, the word *film* is pronounced disyllabic [fɪ.ləm] in casual speech (van Donselaar, Kuijpers, and Cutler 1999). Schwa is unstressed cross-linguistically, including English, since the constraint *STRESSED-SCHWA bans stressing schwa in OT (Urbanczyk 1999).

It may be that epenthesizing a schwa for emphasis in the WBO of the target words requires extra-articulatory effort, since schwa is the most likely vowel that could be dropped in any circumstances (Sommerstein 1977). According to this line of thinking, it may be true that the constraint *EFFORT may be ranked as subordinate because epenthesis in the WBO must require more articulatory effort than usual.

2.2. WHY EPENTHESIS OCCURS

In OT, epenthesis is derived from a resolution of a conflict at the expense of faithfulness (Kager 1999). It attests that DEP-IO (DEPENDENCY-IO) is made irrelevant in the analysis of epenthesis (Kager 1999). DEP-IO requires that output segments have input correspondents. When the costs of inserting a non-underlying segment are less than those of maintaining marked syllable structure (Kager 1999), the grammar allows epenthesis to make the syllable structure less marked. Therefore, well-formedness outweighs faithfulness.

There are two crucial syllabic properties to consider in the analysis of vowel epenthesis. First, no language disallows onsets (Kager 1999). This property is represented by the constraint ONSET that requires that syllables begin with consonants. Second, there is no language in which syllables must have codas (Kager 1999). This property is denoted by NO-CODA.

These constraints indicate that syllable types like CV and V are unmarked, whereas CVC and VC are marked. Universal grammar prefers unmarked segments to marked ones (Wolfram and Johnson 1982, Kager 1999). Therefore, the syllable type CV is ideal because it satisfies both ONSET and NO-CODA, whereas CVC, V, and VC are less perfect because they do not fully satisfy these requirements (Kager 1999).

Within OT, it is generally recognized that vowel epenthesis occurs when it could help either increase the syllabic well-formedness or decrease the syllabic markedness (Kager 1999). Sommerstein (1977: 227) puts this principle of epenthesis elaborately:

> "It is known that the one universal syllable structure is CV, and the one first systematic (not babbling) utterances of children are regularly of this form. One natural motivation for a phonological process can thus be that *it serves to bring the structure of some syllables closer than they would otherwise be to the 'ideal' CV shape.* Processes of this type would include *epenthesis of vowels between adjacent consonants*" (emphasis added).

Hall (2006: 387) endorses "epenthetic vowels, which are phonological segments

inserted in order to repair illicit structures."

2.3. PARSING THE TARGET WORDS

It may be worth considering first how a target word should be parsed when it has a schwa epenthesized for emphasis in its WBO before exploring the constraint rankings in OT. POM (The Principle of Onset Maximization) entails that as many consonants as possible should be assigned to word-medial consonant clusters in accordance with syllable template constraints and phonotactic constraints (Selkirk 1999). We need to take POM into account because it helps parse intervocalic consonants in *carash* and *carunch*. When POM prevails in the target language, syllable parsing is initiated directionally from right to left (Itô 1989).

To understand this better, let us consider the segment VCCV in English. This must be parsed into V.CCV, not *VC.CV, because the latter has a simple word-medial onset and violates POM (Itô 1989). Therefore, it may be postulated that *carash,* with a CVCVC sequence, should be parsed into CV.CVC, not *CVC.VC. The same is true with *carunch,* in that it may be parsed as CV.CVC.

3. CONSTRAINT RANKINGS

This section establishes constraint rankings for certain target phenomena and stress assignment for words with [ə] inserted for emphasis.

3.1 SCHWA EPENTHESIS

Halle and Idsardi (1997), Kager (1999), Orgun (2001), and Tanaka (2009), among others, indicate the following constraints to account for the target phenomenon in OT:

*COMPLEX^{ONS}: Two onsets are banned, and, by implication, three or more.

ONSET: Syllable must have onsets.

ANCHORING-IO: Any segment at the right edge of the output has a correspondent at the right edge of the input.

DEP-IO: Output segments must have input correspondents.

*EFFORT: Less effort must be required in the articulation.

In order to permit the target phenomenon to occur, the author posits the following domination relationship (See (1)). The constraints are listed in Tableau 1 (See Tableau 1). ONSET and ANCHORING-IO outrank DEP-IO and *EFFORT. GEN supply a candidate set of five outputs.

(1) *COMPLEX^{ONS}, ONSET, ANCHORNG-IO >> DEP-IO, *EFFORT

Tableau 1

Input /kræʃ/	*COMPLEX^{ONS}	ONSET	ANCHORING-IO	DEP-IO	*EFFORT
a.☞ kə.ræʃ				*	*
b. kræ.əʃ	*!	*!		*	*
c. krə.æʃ	*!	*!		*	*
d. kræ.ʃə	*!		*!	*	*
e. ə.kræʃ	*!	*!		*	*

Let us see first how superordinate constraints play out in the Tableau.

*COMPLEX^{ONS} bans all the outputs except candidate (a), since they all have a CC cluster in the onset (See Tableau 1). So they are marked as *! in the cells. ONSET bans the outputs (b), (c), and (e) since (b) and (c) lack an onset in their last syllables, and (e) lacks it in its penult. Since the candidate (d) has a schwa inserted after the final coda, it violates ANCHORING-IO and is marked as *! in its cell. The superordinate but unmentioned constraint *CODA/r does not allow the output [kəɹ. æʃ], and *STRESSED-SCHWA bans [kə. ɹæʃ] (where [ə] receives primary stress).

As for subordinate constraints, all the output candidates from (a) to (e) run afoul of the faithfulness constraint DEP-IO. So they are marked as *. The markedness constraint *EFFORT is also violated in all the outputs since schwa epenthesis in the WBO supposedly requires more extra-articulatory energy than otherwise. Conversely, the undominated *EFFORT precludes schwa epenthesis in the WBO since it bans extra-articulatory energy for emphasis from being expended (Tanaka 2009).

The output (a) emerges as being optimum since it does not incur any serious violation of the constraints and only violates the lower ranked constraints (See Tableau 1). Since schwa is a short vowel contributing one mora to the syllable in Moraic Theory (Piggott 1995), the initial syllable of the target word has weight through the process of schwa epenthesis for emphasis.

Assuming that this line of thinking is correct, we can corroborate Kager (1999: 105)'s claim that "epenthesis always results in a decrease of structural markedness." The target input has the CCVC structure, which has a marked onset, whereas the optimum (a) has the less marked syllable structure, CV.CVC (See §2.2, 2.3).

3.2. R-SOUND LENGTHENING

This section dissects the constraint ranking that permits r-sound lengthening in certain words. Most importantly, the anti-lengthening constraint DEP-μ-IO must be dominated by other markedness constraints because an r-sound will not lengthen with DEP-μ-IO undominated in the Tableau (Kager 1999). *CODA/r outranks all the other constraints because it helps exclude the output candidate [kəɹ. æʃ] in the Tableau. Therefore, we posit the following constraint ranking to account for emphatic r-sound lengthening (See (2)).

(2) *CODA/r >> DEP-IO, *EFFORT, DEP-μ-IO

Tableau 2

Input /kræʃ/	* CODA/r	DEP-IO	*EFFORT	DEP-μ-IO
a.☞ kr:æʃ			*	*
b. kər.ræʃ	*!	**	**	

We now have a candidate set of two outputs which GEN supplies in Tableau 2 (See Tableau 2). Tableau 2 shows that candidate (a) is the grammatical output for *crash*, which incurs the most economical violation of the constraints. The candidate (a) respects *CODA/r, violating *EFFORT and DEP-μ-IO. The r-sound lengthening for emphasis requires

more articulatory effort than usual, which runs counter to *EFFORT. Violation of DEP-μ-IO helps the r-sound lengthen for an extended period of time. If these three subordinate constraints are treated as superordinate, then the emphatic forms such as *crrrash!* and *crrrunch!* (Cassidy 1983) would not surface.

3.3. STRESS ASSIGNMENT

This section establishes a relationship of domination in stress assignment in target words which have a schwa epenthesized for emphasis.

*COMPLEX^{ONS} should be one of the superordinate constraints because the target words have a CC cluster in the onset. If *COMPLEX^{ONS} were dominated in the constraint ordering, then schwa epenthesis would not take place in the WBO (See Tableau 1). Syllable weight has changed in the target words under emphasis, as compared to that under normal pronunciation. Hayes (1995) indicates that the ideal quantitative shape of disyllabic iambs is (L**H**) cross-linguistically. As an example, let us consider how the word *carash* is assigned stress when it is emphatically spoken with a schwa epenthesized in its WBO;

(3) a. crash [kɹæʃ]
(CCVC) → |μμ| → (**H**)
b. c*a*rash [kə.ɹæʃ]
(CV.CVC) → |μ.μμ| → (L**H**)

The word *crash* has the heavy monosyllable (**H**) under normal pronunciation, as in (3a), whereas the target word under emphasis has the ideal quantitative shape of the syllable, as in (3b) (Hayes 1995). This property causes the foot well-formedness constraint UNEVEN-IAMB to be superordinate in the Tableau. When UNEVEN-IAMB is outranked in the Tableau, the final syllable does not bear primary stress.

The initial syllable of the target word has an epenthetic schwa (See §3.2). As found in iambic words such as *police* and *marine*, *carash* in (3b) respects "quantity sensitivity" and foot binarity, while violating NONFINALITY (Kager 1999). ("Quantity sensitivity" is defined as the phonological pressure which makes syllable weight correspond to prominence (Kager 1999).)

It can be argued that *COMPLEX^{ONS}, UNEVEN-IAMB, GRWD=PRWD, and FT-BIN are superordinate. When these constraints overshadow DEP-IO and *EFFORT, schwa epenthesis is likely to occur for emphasis (Kager 1999). When UNEVEN-IAMB outranks NON-FINALITY, "the effect of extrametricality revocation" (Prince and Smolensky 2002: 57) takes place in the Tableau.

Now we need to consider GRWD=PRWD and FIBIN. GRWD=PRWD entails that a grammatical word must be a prosodic word. The phonological representation consists of hierarchical configurations that contain segments, moras, syllables, feet, and prosodic words. The higher phonological units are made up of the lower ones (Piggott 1995). Therefore, GRWD=PRWD implies that grammatical words must have at least one foot (Kager 1999). FIBIN, which is also known as the "anti-degenerate foot constraint" (Kager

1999: 156), works with this property.

For the purposes at hand, the following relationship may be postulated:

(4) *COMPLEXONS, UNEVEN-IAMB, GRWD=PRWD, FT-BIN >> NON-FINALITY, DEP-IO, *EFFORT

*COMPLEXONS: Two onsets are banned, and, by implication, three or more.

UNEVEN-IAMB: A canonical iamb (L**H**) is better iamb than (L**L**) or (**H**).

GRWD=PRWD: A grammatical word must be a prosodic word.

FT-BIN: Feet are binary under moraic or syllabic analysis.

NON-FINALITY: No foot is final in the prosodic word.

DEP-IO: Output segments must have input correspondents.

*EFFORT: Less effort must be required in the articulation.

Let us now consider Tableau 3, where GEN supplies three outputs: (kə. ɾǽʃ), kə.(ɾǽʃ), and kə. ɾ æ ʃ (where the parenthesis represents a foot structure in the Tableau). Due to space constraint for Tableau 3, the constraints *COMPLEXONS and FT-BIN are not shown in the Tableau. All the output candidates respect *COMPLEXONS and the candidates (a) and (b) respect FT-BIN. FT-BIN is irrelevant with candidate (c).

Candidate (a) is optimum because in the ranking, it incurs the most economical violation of the constraints. Candidate (a) violates NONFINALITY too because it has primary stress in the final syllable. It also violates DEP-IO because an epenthetic segment is used in the penult.

Candidate (b) violates UNEVEN-IAMB since it does not have a canonical iamb, so it is marked as *! This makes the candidate suboptimal. Candidate (c) violates one of the superordinate constraints GRWD=PRWD because the output does not represent a foot structure. Candidate (c) violates UNEVEN-IAMB and therefore is treated as suboptimal because it is not qualified to have primary stress fall on its final syllable.

Tableau 3

Input /kræʃ/	UNEVEN-IAMB	GRWD = PRWD	NON-FINALITY	DEP-IO	*EFFORT
a.☞(kə.ɾǽʃ)			*	*	*
b. kə.(ɾǽʃ)	*!		*	*	*
c. kə.ɾæʃ	*!	*!		*	*

4. CONCLUSION

Past studies indicated the target phenomena in the 1980s, but since then, few phonologists have analyzed them in OT. In order to break through the inertia, this paper addresses two research questions and proposes two constraint rankings for the target phenomena under emphatic pronunciation and one for stress assignment in target words which have an epenthesized schwa.

Emphatic pronunciation causes the schwa to break up the WBO of the target word, which causes the marked syllabic structure to become more harmonic (Sommerstein 1977).

* Thanks go to the audience for my presentation at ELSJ 6th Spring International Forum 2013. All the errors are mine.

REFERENCES

Cassidy, Frederick G. (1983) "The intensive prefix *ker-*," *American Speech* 58(4), 291-302.

de Lacy, Paul (2002) *The formal expression of markedness*, Doctoral dissertation, University of Massachusetts, Amherst.

Halle, Morris and William Idsardi (1997) "r, hypercorrection, and the Elsewhere Condition," *Derivations and constraints in phonology*, ed. by Iggy Roca, 331–348, Clarendon Press, Oxford.

Hall, Elizabeth N. (2006) "Cross-linguistic patterns of vowel intrusion," *Phonology,* 23(3), 387-429.

Hayes, Bruce (1995) *Metrical stress theory: Principles and case studies*, University of Chicago Press, Chicago.

Itô, Junko (1989) "A prosodic theory of epenthesis*," Natural Language and Linguistic Theory* 7, 217-259.

Kager, René (1999) *Optimality theory*, Cambridge University Press Cambridge.

Orgun, Cemil O. (2001) "English r-insertion in optimal theory," *Natural Language & Linguistic Theory* 19, 737-749.

Piggot, Glyne L. (1995) "Epenthesis and syllable weight," *Natural Language and Linguistic Theory* 13, 283-326.

Prince, Alan and Paul Smolesnky (2002) *"Optimal theory: Constraint interaction in generative grammar*," ROA Version. Rutgers University Center for Cognitive Science Technical Report 2. <http://roa.rutgers.edu/files/537-0802/37-0802-PRINCE-0-0.PDF>

Rose, Yvan and Katherine Demuth (2006) Vowel epenthesis in loanword adaptation: Representational and phonetic consideration. *Lingua* 116, 1112-1139.

Selkirk, Elizabeth (1981) "Epenthesis and degenerate syllables in CaireneArabic," *Theoretical issues in the grammar of Semitic languages*, ed. by Hagit Borer and Youssef Aoun, 209-232, The MIT Press, Cambridge, MA.

Selkirk, Elizabeth (1999) "The syllable," *Phonological theory: The essential readings*, ed. by John A. Goldsmith, 328-350, Blackwell, Malden, MA.

Sommerstein, Alan H. (1977) *Modern Phonology*, Edward Arnold, London.

Tanaka, Shinichi (2009). *Nichijō-gengo ni hisomu otohōsoku no sekai* (Phonological studies of everyday language usages), Kaitakusha, Tokyo.

Urbanczyk, Suzanne (1999) "Double reduplication in parallel," ed. by René Kager, Harry van der Hulst and Wim Zonneveld, *The prosody-morphology interface*, 390-428, Cambridge University Press, Cambridge.

van Donselaar, Wilma, Cecile Kuijpers, and Anne Cutler (1999) "Facilitatory effects of vowel epenthesis on word processing in Dutch," *Journal of Memory and Language* 41, 59-77.

Wolfram, Walt and Robert Johnson (1982) *Phonological analysis: Focus on American English*, Prentice-Hall, NJ.

Japanese Reciprocal Anaphor *Otagai* with Split Antecedents in Disguise and Multi-Dominant Syntactic Structure*

Tomoya Kosuge
Tohoku University

Keywords: *otagai*, right node raising, *aw*-construction, multi-dominant structure, *pro* in Japanese

1. INTRODUCTION

This paper concerns the peculiar nature of Japanese reciprocal anaphor *otagai* 'each other'. *Otagai* basically does not allow split antecedents as illustrated in (1).

(1) a. John-to Bill-ga otagai-o nagut-ta.
John-and Bill-Nom each.other(e.o.)-Acc hit-Past
'John and Bill hit each other.'

b.* John-ga Bill-to otagai-o nagut-ta.
John-Nom Bill-with e.o.-Acc hit-Past

Japanese has another way to indicate reciprocity between plural subjects. A special type of V-V compound is used, which we call the *aw*-construction where a reciprocal verb *aw* 'meet' resides in V2.

(2) John-to Bill-ga naguri-aw-ta.
John-Nom Bill-Acc hit-meet-Past
'John and Bill hit each other.'

Furthermore, *otagai* and the *aw*-construction can co-occur in a single sentence as illustrated in (3a). What is interesting is that *otagai* exceptionally allows split antecedents when occurring in the *aw*-construction as illustrated in (3b)

(3) a. John-to Bill-ga otagai-o naguri-aw-ta.
John-and Bill-Nom e.o.-Acc hit-meet-Past
'John and Bill hit each other.'

b. John-ga Bill-to otagai-o naguri-aw-ta.
John-Nom Bill-with e.o.-Acc hit-meet-Past
'John and Bill hit each other.'

Furthermore, *otagai* allows split antecedents when occurring in the Right Node Raising (hereafter RNR) construction as in (4).

(4) John-ga syoko-de, Bill-ga kenkyuusitu-de otagai-o nagut-ta.
John-Nom library-in Bill-Nom laboratory-in e.o.-Acc hit-Past
'(lit.) John in the library, Bill in the lab, hit each other.'

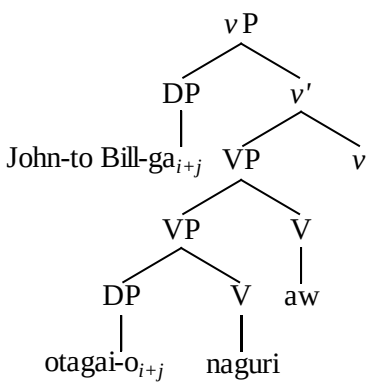
What follows explains why *otagai* allows split antecedents when occurring in the *aw*-construction and the RNR-construction, and argues for a multi-dominant-structure analysis of the RNR-construction proposed by Citko (2005, 2011) and Wilder (1999), among others.

This paper is organized in the following way. Section 2 summarizes Kosuge's (2014) analysis of the *aw*-construction, and section 3 discusses *otagai* in the RNR-construction and argues for the multi-dominant structure analysis of the RNR-construction. In section 4 we see a parallelism between English and Japanese reciprocal expressions. Finally, section 5 concludes the discussion.

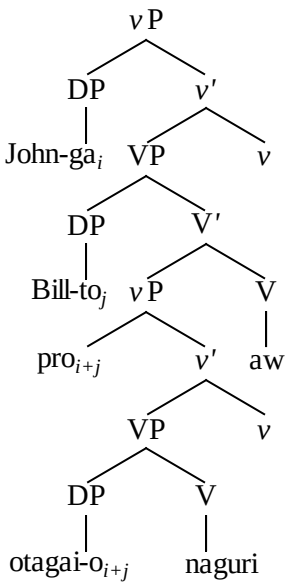
2. THE AW-CONSTRUCTION

The *aw*-construction has been analyzed in various ways by Ishii (1989), Nishigauchi (1992) and Yumoto (2005) among others. As for *otagai* in the *aw*-construction, I proposed in Kosuge (2014) that *aw* selects VP or *v*P as its complement, depending on whether the antecedents of *otagai* are split or not, and that when *aw* selects *v*P, *pro* occurs in [Spec, *v*P]. Then (3a, b) have the structure illustrated in (5a, b), respectively.

(5) a.



b.



We do not discuss the *aw*-construction in detail here because of space limitations, but the point is that. *otagai* in (5a) is bound by the subject DP whereas *otagai* in (5b) is bound by *pro*. More precisely, in (5a), the antecedents of *otagai* are not split, since *otagai* is bound by *[John-to Bill]*. *Otagai* in (5b) is bound by *pro* rather than *John-ga* 'John-Nom' and *Bill-to* 'Bill-with'. Note that non-obligatory control *pro* allows split antecedents as in (6a) whereas obligatory control PRO does not as in (6b).

(6) a. John$_i$ told Mary$_j$ [that [[pro$_{i+j}$ washing each other] would be fun.]]

b. *John$_i$ told Mary$_j$ [PRO$_{i+j}$ to wash each other.]

(Hornstein (1999: 73) with slight modification)

Therefore, the antecedents of *ogatai* in (5b) are not split, since their indices are unified into one by *pro*.

3. *OTAGAI* IN THE RNR-CONNSTRUCTION

This section discusses *otagai* in the RNR-construction. Section 3.1, reviews three previous analyses of the RNR, the Across-the-Board (ATB) movement analysis, the gapping analysis, and the multi-dominant structure analysis, and points out a problem with the ATB movement analysis and the gapping analysis. Section 3.2 explains why *otagai* allows split antecedents when occurring in the RNR-construction, adopting the multi-dominant analysis.

3.1. PREVIOUS STUDIES OF THE RNR-CONSTRUCTION

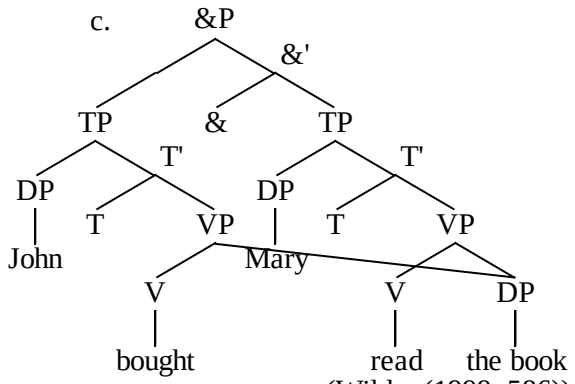
The Right Node Raising construction like (7) has been analyzed mainly in the following three ways: the ATB movement analysis in (8a) (cf. Postal (1974)), the gapping analysis as in (8b) (cf. Wilder (1997)), and the multi-dominant structure analysis as in (8c) (cf. Citko (2005, 2011), Wilder (1999)).

(7) John bought and Mary read the book.

(8) a. [John bought t_i] and [Mary read t_i] [*the book*]$_i$

b. John bought ~~the book~~ and Mary read the book

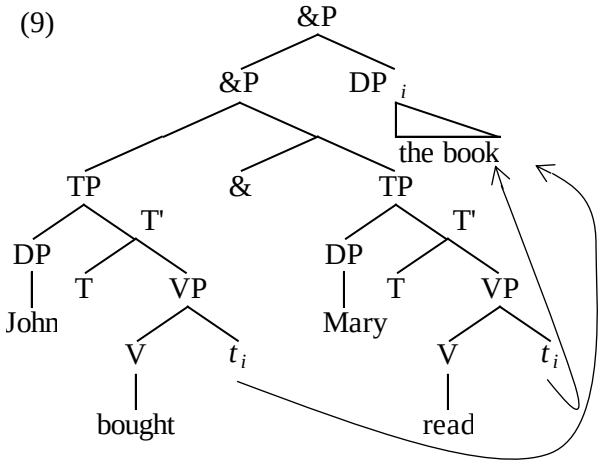
c.



(Wilder (1999: 586))

In (8a), the identical constituents, 'the book' move out of the two conjuncts in an ATB fashion as in (9).

(9)



In (8b), 'the book' in the first conjunct is simply deleted. In (8c), 'the book' is shared by the two conjuncts. To put it more precisely, in (8c), the object DP *the book* merges with the verb *bought* and project VP at first. Then, *the book* merges with the verb *read* and project another VP (This operation is proposed in Citko (2005, 2011), and she calls this operation *Parallel Merge*). Each VP projects to TP and they are coordinated by *and* to project &P.

However, (8a, b) are defective in analyzing (4), because (4) should then be a coordination of two ungrammatical sentences. Note that (10) in isolation is ungrammatical.

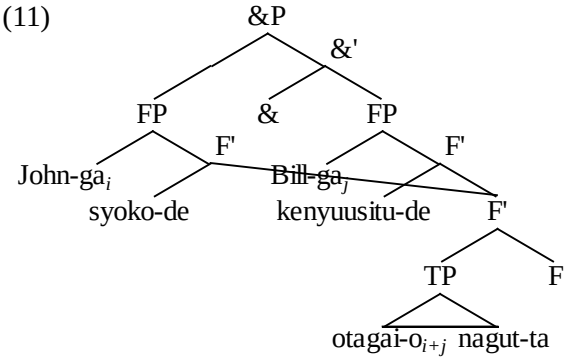
(10) *John-ga otagai-o nagut-ta.
John-Nom e.o.-Acc hit-past
'(lit.) John hit each other.'

Therefore, I pursue the multi-dominant structure analysis in (8c). However, just adopting the multi-dominant structure to (4) cannot solve the question as to why *otagai* allows split antecedents when occurring in the RNR construction. We have to unify the split indices in one way or another.

3.2. AN ALTERNATIVE

The previous section pointed out that we should adopt the multi-dominant structure for the RNR-construction. I show the structure of (4) in (11), where F' is shared by the two conjuncts and *pro* occurs in the shared TP as its subject.

(11)

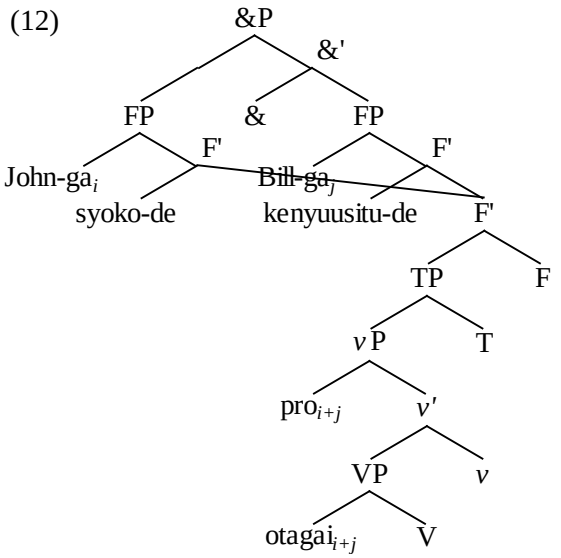


The following two sub-sections show how this structure can account for (4).

3.2.1. THE UNIFICATION OF SPLIT ANTECEDENTS

We have seen that we should adopt the multi-dominant structure analysis for the Japanese RNR-construction in (4). However, we still have a problem as to why *otagai* exceptionally allows split antecedents in the RNR-construction. To solve this problem, I propose that *pro* resides in (4) to unify split indices into one just as we saw in the *aw*-construction. I suppose that *pro* occurs in [Spec, *v*P], namely, *pro* occurs as the subject, and that *John-ga* 'John-Nom' and *Bill-ga* 'Bill-Nom' occur in Spec of a functional head which resides above TP as in (12).

(12)



It seems safe to posit *John-ga* and *Bill-ga* in these positions provided that non-shared constituents of the RNR-construction are interpreted as contrastive focus. Now we can explain why *otagai* in the RNR-construction allows split antecedents in the same way as we did when considering the *aw*-construction: The antecedents of *otagai* are not split, since *otagai* is bound by *pro* which unifies the split indices of John and Bill.

3.2.2. THE SHARED CONSTITUENTS

In the proposed structure in (11), the two conjuncts share not only the object NP *otagai-o* 'each other-Acc' and V *naguru* 'hit', but also *v* and T. This can capture the following facts.

First, the two conjuncts have to agree in tense in Japanese RNR-construction. (13) shows this point: (13a) is acceptable, since both of the two conjuncts refer to a past event. On the other hand, (13b) is unacceptable, since the two conjuncts do not agree in tense.

(13) a. John-ga kinoo, Bill-ga
John-Nom today Bill-Nom
kyoo, otagai-o nagut-ta.
toda e.o.-Acc hit-past
'John yesterday, Bill today, hit each other.'

b. *John-ga kinoo, Bill-ga
John-Nom today Bill-Nom
asita otagai-o nagut-ta.
tomorrow e.o.-Acc hit-past
'(lit.) John yesterday, Bill tomorrow hit each other.'

Second, the two conjuncts have to agree in voice. (14a, b), where two conjuncts agree in voice, are acceptable. In (14c), however, active voice and passive voice are coordinated, resulting in an unacceptable sentence.

(14) a. John-ga Bill-o, Mary-ga
John-Nom Bill-Acc Mary-Nom
Ann-o nagut-ta.
Ann-Acc hit-Past
'John hit Bill and Mary hit Ann.'

b. John-ga Bill-ni, Mary-ga
John-Nom Bill-Dat Mary-Nom
Ann-ni nagurare-ta.
Ann-Dat be.hit-Past
'John was hit by Bill and Mary was hit by Ann.'

c. *John-ga Bill-o, Mary-ga
John-Nom Bill-Acc Mary-Nom
Ann-ni nagurare-ta.
Ann-Dat be.hit-Past
'(lit.) John hit Bill and Mary was hit by Ann.'

This fact can be straightforwardly captured by (12), since (12) has only one T and *v*.

In this section, I reviewed three analyses of the RNR-construction, namely, the ATB movement analysis, the gapping analysis, and the multi-dominant structure analysis. I pointed out a problem with the ATB movement analysis and the gapping analysis, and argued for the multi-dominant structure analysis to explain why *otagai* in the RNR-construction allows split antecedents. I also proposed that *v* and T are shared by two conjuncts as well as the object NP

and the verb, and that *pro* resides in the subject position of the shared TP to unify split indices of the antecedents into one.

4. PARALLELISM BETWEEN ENGLISH AND JAPANESE RECIPROCAL EXPRESSIONS

English has two ways to indicate reciprocity between plural subjects, namely, the *each-the-other* configuration and the *each-other* configuration.

(15) a. John and Bill each hit the other.
b. John and Bill hit each other.

However, only the former can occur in the RNR-construction.

(16) a. John at the library and Bill at the lab each hit the other.
b.* John at the library and Bill at the lab hit each other.

We can see a similar contrast in Japanese reciprocal expressions as well. *Otagai* can occur in the RNR-construction as illustrated in (4) (repeated here as (17a)), whereas the *aw*-construction cannot occur in the RNR-construction as illustrated in (17b)

(17) a. John-ga syoko-de, Bill-ga
John-Nom library-in Bill-Nom
kenkyuusitu-de, otagai-o nagut-ta.
lab-in e.o. -Acc hit-Past
'John in the library, and Bill in the lab, each hit the other.'
b. * John-ga syoko-de, Bill-ga
John-Nom library-in Bill-Nom
kenkyuusitu-in, naguri-aw-ta.
'(lit.) John in the library, and Bill in the lab, hit each other.'

I claim that (16b) and (17b) are ruled out for the same reason.

Fiengo and Lasnik (1973) show that there is a semantic distinction between *each-the-other* and *each-other*: in *each-the-other* configuration, two events can occur at different places and at different times as illustrated in (18a), whereas in *each-other* configuration, the two events must occur at the same time and at the same place as illustrated in (18b).

(18) a. Each of the cars bumped into the other; the Pontiac bumed into the Plymouth on Monday, and the Plymouth bumped into the Pontiac on Tuesday.
b. The cars bumped into each other; *The Pontiac bumped into the Plymouth on Monday, and the Plymouth bumped into the Pontiac on Tuesday.

(Fiengo and Lasnik 1973: 450-451)

Kosuge (2014) points out that the same difference can be seen between Japanese reciprocal expressions. (19a), the one with *otagai*, can mean (19b), whereas (20), the one with the *aw*-construction, cannot mean (19b).

(19) a. John-to Bill-ga otagai-o
John-and Bill-Nom e.o.-Acc
nagut-ta.
hit-Past.
b. 'John hit Bill on Monday, and Bill hit John on Tuesday.'

(20) John-to Bill-ga naguri-aw-ta.
John-and Bill-Nom hit-meet-Past

I suppose that (16a) and (17a) are acceptable since there is no restriction on spatio-temporal identity between the two events; hence the two events can be modified by different spatio-temporal adverbs. On the other hand, (16b) and (17b) are ruled out, since spatio-temporal identity is required between the two events. Modifying each events by different spatial adverbs is not compatible with this configuration.

5. CONCLUSION

This paper is concerned with the peculiar nature of Japanese reciprocal anaphor *otagai*: it basically does not allow split antecedents, but exceptionally allows split antecedents when occurring in the *aw*-construction and the RNR-construction. This paper focused on *otagai* in the RNR-construction, and argued for the multi dominant structure analysis of the RNR-construction. In doing so, first, I proposed that *pro* which unifies split indices into one occurs in the RNR-construction as well as in the *aw*-construction; hence *otagai* allows split antecedents. Second, I showed a parallelism between English and Japanese reciprocal expressions.

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References

Citko, Barbara (2005) "On the Nature of Merge: External Merge, Internal Merge, and Parallel Merge," *Linguistic Inquiry* 36, 475-496.

Citko, Barbara (2011) *Symmetry in Syntax: Merge, Move and Labels*, Cambridge University Press, New York.

Fiengo, Robert and Howard Lasnik (1973) "The Logical Structure of Reciprocal Sentences in English," *Foundations of Language* 9, 447-468.

Hornstein, Norbert (1999) "Movement and Control," *Linguistic Inquiry* 30, 69-96.

Ishii, Yasuo (1989) "Reciprocal Predicates in Japanese," *Proceedings of ESCOL* 6, 150-161.

Kosuge, Tomoya (2014) "The Syntax of Japanese Reciprocal V-V Compound: A View from Split Antecedents," ms., Tohoku University.

Nishigauchi, Taisuke (1992) "Syntax of Reciprocals in Japanese," *Journal of East Asian Linguistics* 1. 157-196.

Postal, Paul (1974) *On Raising*, MIT Press, Cambridge.

Wilder, Chris (1997) "Some Properties of Ellipsis in Coordination" *Studies on Universal Grammar and Typoogica Variation*, ed. by A. Aexiadou and T. A. Hall, 59-107, John Benjamins, Amsterdam.

Wilder, Chris (1999) "Right Node Raising and the LCA," *Proceedings of the Eighteenth West Coast Conference on Formal Linguistics*, 586-598.

Yumoto, Yoko (2005) *Hukugou Doushi, Hasei Doushi no Imi to Tougo* (Syntax and Semantics of Compound Verbs and Derived Verbs), Hitsuji Shobo, Tokyo.

The Semantics of the English *Have a* Construction

Kiyomi Kumazawa
Gakushuin University

Keywords: the *have a* construction, telic events, do it a bit, casualness, the meaning of 'to try'

1. Introduction

This paper discusses the English *have a* construction such as *have a look, walk,* and *chat*, as shown in (1).

(1) a. You should **have a look** at the instructions on the label.
b. We **had a walk** in the park this morning.
c. I **had a chat** with her on the phone last night.

This construction is considered to express essentially the same meaning as the construction with the corresponding simple verb such as *walk*, *look* and *chat*, as shown in example (2) (Quirk et al. 1985, Wierzbicka 1988, Alergo 1995, Huddleston and Pullum 2002, Dixon 2005, Swan 2005, and others):

(2) a. You should **look** at the instructions on the label.
b. We **walked** in the park this morning.
c. I **chatted** with her on the phone last night.

However, some researchers such as Wierzbicka and Dixon observe that the *have a* construction has specific meanings and it cannot be used for certain types of events. For example, they claim that telic events, which have an endpoint of action, are unacceptable in the *have a* construction. Consider the following examples:

(3) a. John **had a walk around** the town.
b. *John **had a walk to** the post office to post a letter.
(Wierzbicka 1988:298, 327)

(4) a. Let's **have a sing**.
b. *Let's **have a sing of** that song.
(ibid.:323)

(5) a. **have a swim in** the river
b. ***have a swim across** the river
(Dixon 2005：469)

According to Wierzbicka and Dixon, (3b) is unacceptable because *walk to the post office* is a telic activity, which ends when John gets to the post office. Similarly, *sing that song* in (4b) and *swim across the river* in (5b) are telic activities and thus they are unacceptable.

However, this analysis is falsified by actual examples such as (6).

(6) a. I'll **have a walk to** the buffet car and have a drink. My legs have seized up from sitting.
b. Maybe, I'll **have a watch of this film**. [*said when switching channels to try and find a good film on television*]
c. Just **had a swim across** the bay at Bondi in my brand new wetsuit! I can't believe how good these things are.

These sentences are perfectly acceptable despite the fact that they involve telic phrases.

The aims of this paper are, (i) to propose that the *have a* construction can express the meaning of 'to try', and (ii) to claim that this semantic property accounts for the acceptability of telic events in the construction, which are considered unacceptable by

Wierzbicka and Dixon.

2. Previous studies by Wierzbicka (1988), Dixon (2005) and their problem

Before going to discuss the proposal of this paper, we will briefly observe the previous studies by Wierzbicka (1988) and Dixon (2005). Their analyses are basically similar and can be summarized as in (7).

(7) Events described in the *have a* construction should be;

a. agentive or volitional
b. done for relief or pleasure
c. aimless or not purposeful
d. done for some time or repeatable

We will examine these properties by observing the examples presented by Wierzbicka and Dixon, shown in (8) to (10).

First, let us look at example (8), which corresponds to (7a) and illustrates that events described in the *have a* construction should be agentive or volitional.

(8) a. **Have a look** at the baby.
b. ***Have a see** of the baby.

(Dixon 2005: 460)

See something or somebody, in the sense of perception, is not volitional and thus **have a see of* is not acceptable, whereas *have a look at* can be a good instance of the construction.

Example (9) represents (7b).

(9) a. **Have a lie-down/sit-down**.
b. ***Have a kneel-down.**

(Wierzbicka 1988:296, 301)

Wierzbicka explains that (9b) is unacceptable because in general, *kneel down* is not an activity that gives you relief or pleasure, whereas *lie down* and *sit down* are such activities.

As for (7c), consider example (10).

(10) a. Go outside and **have a play.**
b. *John **had a work/study.**

(Wierzbicka1988:304)

According to Wierzbicka, the acceptability of (10a) is attributed to the aimlessness of *play*; when a young child plays outside, there is no any other purpose but enjoying himself. On the other hand, *work* and *study* are purposeful activities, which involve an external aim or goal to achieve. To put it differently, for most people the purpose of working is to earn money and that of studying is to pass exams, get qualifications or anything that you are serious about. In that sense, *work* and *study* are purposeful and thus unacceptable in the *have a* construction.

In order to examine the property in (7d), we will return to examples (3) to (5), reproduced here. Wierzbicka and Dixon argue that (7d) accounts for the unacceptability of these sentences .

(3) a. John **had a walk around** the town.
b. *John **had a walk to** the post office to post a letter.

(4) a. Let's **have a sing**.
b. *Let's **have a sing of** that song.

(5) a. **have a swim in** the river
b. ***have a swim across** the river

Wierzbicka explains that the telic phrases in (3b) and (4b) are unacceptable because they describe activities that cannot be done for some time or repeatable. Moreover, those activities are not aimless or non-purposeful because they have a goal. Dixon also argues that a limitation of time or space prevents a telic event from occurring in the construction, and thus (5b) is unacceptable.

However, as we have already seen, this analysis is problematic in that telic events are possible in certain cases. Let us return to (6), reproduced here, and more closely look at the

situations described in the sentences.

(6) a. I'll **have a walk to** the buffet car and have a drink. My legs have seized up from sitting.

b. Maybe, I'll **have a watch of this film**.

c. Just **had a swim across** the bay at Bondi in my brand new wetsuit! I can't believe how good these things are.

In (6a), the speaker is not really determined to do the action, but just tries to ease the pain in his legs by walking to the buffet car and having a drink. (6b) is intended to mean that the speaker is trying out the film to see if it is worth watching, and in (6c) the speaker has just tried out his new wetsuit by swimming across the bay and indicates that he likes it.

In short, all the sentences in (6) express the speaker's intention to 'try', that is, to try to do something or try out something, especially when they are not really serious about what they do and they just do it in a casual manner.

Additional similar examples with a telic phrase are shown in (11).

(11) a. Maybe I'll **have a stroll to** John Lewis at lunchtime and see if they have any in yet - then go online and find it cheaper.

b. Okay well I'll **have a read of them both** if I ever finish the first lot.

In both sentences in (11), the speaker's intention to try is expressed; (11a) means that the speaker may try the department store (John Lewis) to check the thing that she wants to buy before going online, and (11b) indicates that the speaker will try reading the books recommended by a friend and see if she likes them or not.

Now it has been made clear that telic phrases can be used in the *have a* construction and that this does not conform to the property of (7d). It appears that we need an alternative account for the acceptability of the examples in (6) and (11).

In the following section, I will offer an alternative idea for the semantic properties of the *have a* construction, which includes an account for the acceptability of telic phrases in the construction.

3. Core meaning and two semantic types of the *have a* construction

My proposal for the semantic properties of the *have a* construction is as follows; (i) the core meaning of the construction is 'do it a bit', and (ii) in addition to this meaning, the construction is divided into two semantic types depending on its additional implications, as shown in (12).

(12) The action is done;

a. to feel pleasure or relaxed

b. to try

In the following section, I will show some pieces of evidence that support my claim.

3.1. The meaning of 'do it a bit' and the casualness of the event

We begin with the core meaning of the *have a* construction, 'do it a bit'. Dixon considers this meaning to be a semantic element of the *have a* construction and points out that the phrase of 'a bit of' is commonly inserted as shown in (13).

(13) We had **a bit of a walk/talk/think.**

(Dixon 2005:469)

As Dixon fails to explain where the meaning of 'do it a bit' comes from, it is my attempt to show how this meaning is brought about and is related to the implications in (12).

Let us examine the difference between the

pair of sentences in (14).

(14) a. I **had a chat** with her on the phone last night. (=1c)

b. I **chatted** with her on the phone last night. (=2c)

Since both sentences can describe the same event, the difference must lie in the conceptualization of the event. Specifically, when you say *I had a chat with her*, you conceptualise the activity of *chat* as being bounded in time. This boundary of time gives rise to the concept of 'a bit'. This concept holds even if your chatting lasted for quite a long time in reality because it is a matter of construal.[1] Furthermore, the notion of 'do it a bit' leads to a sense of casualness about the activity. That is, the activity is done casually, in a relaxed manner or not determinedly, and this sense of casualness is closely related to the acceptability of telic events in the construction.

3.2. The meaning of 'to feel pleasure or relaxed'

We will not discuss the meaning of 'to feel pleasure or relaxed' in that much detail here, for the suggestion of Wierzbicka and Dixon for the semantic property in (7b) and my proposal of this meaning share the idea that the activity denoted in the *have a* construction can be pleasurable or relaxing. However, since Wierzbicka and Dixon claim that this semantic property is closely related to the aimlessness or non-purposefulness of the activity described in the construction, we will discuss their claim briefly, and see that the 'casualness' sense of the construction is a more plausible explanation for the meaning of 'to feel pleasure or relaxed'.

Indeed there are quite a few examples that indicate the specified activity is done to feel pleasure or relaxed; *have a read, play, walk, swim* and *chat*, which can be characterised as 'pleasure' type, and *have a rest, break, sleep, nap* and *lie-down*, which can be characterised as 'relax' type. The question is whether these activities should be treated as aimless or non-purposeful.

Look at the examples in (15):

(15) a. So I plan to do a couple of hours writing in the morning then go off and **have a swim** in the afternoon.

b. Why don't you **have a run around** outside?

(BNC)

Although the activities of *have a swim* and *have a run around* do not have any 'external goal' such as reaching somewhere, it does not necessarily mean that they are aimless or non-purposeful. One may say that 'to feel pleasure or relaxed' could be a good aim or purpose for performing a certain activity. On the other hand, an activity done for pleasure or relaxation tends to be 'casual'; one does it without thinking about it seriously or with a relaxed state of mind. Hence it is more appropriate to associate the casualness of the activity to this meaning than the aimlessness.

Moreover, the casualness sense can extend to spontaneity of semi-volitional actions such as *have a laugh* or *cry*, as shown in (16).

(16) a. I was embarrassed at the time but I **had a good laugh** about it later. (CALD)

b. I felt much better after I'd **had a good cry**. (LDOCE)

The above examples denote that both speakers were relieved somewhat after laughing or crying. Hence they can be good instances of the property of 'to feel pleasure or relaxed'.

3.3. The meaning of 'to try'

The other semantic property of the *have a* construction is the meaning of 'to try'. The claim that the construction implies this meaning is the main proposal of this paper and it accounts for the acceptability of a telic phrase in the construction.

As mentioned in section 2, all the acceptable sentences in (6) and (11) indicate that the given actions are to be taken by the subjects to try to do/doing something, or to try something out. The question is how the construction can express the meaning of 'to try'.

In this section we will observe some cases in which the actions described in the *have a* construction are interpreted as involving the subject's intention 'to try'. Specifically, the construction implies three different types of try; 'to try to find out', 'try out' and 'have a try'.

First, we will examine how the 'try to find out' meaning is implied in the construction. Observe the following examples:

(17) a. I **have a look** in my pockets to see if I got any sweets or anything, but I ain't. All I got is a ball of string and some bits of paper. I **have a look** at the paper to see what it is.

b. When tapes come into me I **have a listen to** the beginning and end of them all to sort of see what sort of quality they are. (BNC)

c. Is that shirt silk? Ooh, let me **have a feel**! (CALD)

Have a look in/at in (17a) means *examine* or *look in/at something with attention* and this is more than what the simple verb *look* regularly means; to direct one's gaze in a specified direction (ODE). Although the simple verb *look* can also mean *examine* in a certain context, *have a look* appears in a context where you intend to find out about something by looking. The same is the case for *have a listen* in (17b). *Have a feel* in (17c) also illustrates a very similar interpretation to the verb *feel*; the phrase, *have a feel (of something)* means *examine (something) by touch* and this is also more than the simple verb *feel* means.

Moreover, the difference in acceptability between the pair in (18) illustrates that the construction provides the specific meaning of 'to try to find out'.

(18) a. Let me **have a think about** the consequences of this plan.

b. *Let me **have a think about** you.

Have a think about is only used for a problem or question to be solved when you have a decision to make in particular. In other words, when you try to find out what decision to make, you *have a think about* the consequences or any potential problems, and thus (18a) is acceptable. On the other hand, (18b) is not interpreted as involving any 'to try to find out' meaning (except the case in which 'you' is the problem to be solved), and thus it is not acceptable.

From the observation of the above examples, we can conclude that the *have a* construction can imply the meaning of 'to try to find out'. [2]

There is another type of the meaning of 'to try'; the meaning of 'to try out'. 'Try something out' means to use something to discover if it works or if you like it (CALD). This 'try out' meaning can be indicated in the *have a* construction with a wider range of activities than the 'try to find out' meaning can.

Let us observe the following example:

(19) I **had a play with** the new computer game. (OALD)

The above sentence does not simply mean that the speaker played the new computer game a bit, but rather means that he actually tried it out.

Let us observe some more examples:

(20) Johnny let Jimmy **have a throw of** his new boomerang.

(Wierzbicka 1988:322)

(21) a. Let me **have a carry of** that new suitcase you designed.

b. Let me **have a handle of** that new racket.

c. Let me **have a catch of** that new ball.

(Dixon 2005:477)

All the sentences in (20) and (21) are interpreted as denoting very similar situations, that is, someone tries something out. In fact, these sentences are introduced by Wierzbicka and Dixon as examples showing that an activity described in the *have a* construction should be something that you can enjoy, or more strongly, something that you indulge yourself in doing. However, I will counter their suggestion by claiming that these sentences are more suitable to be interpreted as denoting the situations of 'try out'. Example (20) indicates that Jimmy was allowed to try out Johnny's new boomerang, and examples (21a-c) indicate that the speakers wish to try out the new things. Indeed, these examples illustrate that the *have a* construction can express the meaning of 'to try out'. The fact that all the objects of the activities described in (19) to (21) are modified by the adjective 'new' supports this argument, for the things that you try out are normally 'new'. This interpretation can be applied to some of the acceptable sentences with telic phrases as shown in (6b, c) and (11b).[3]

The last type of the 'to try' meaning is 'have a try at'. There are several idiomatic expressions using the construction, which has almost the same meaning as 'have a try at'.

(22) a. The competition's open to anyone-why don't you **have a crack**?

(LDOCE)

b. I want to **have a go at** finishing my essay tonight.

c. I thought I'd **have a shot at** making my own wine.

d. I'd never tried snorkelling before but I **had a stab at** it while I was in Greece.

(CALD)

Have a bash and *have a whack* also count as good examples. These expressions are used to talk about an attempt, especially for something you do for the first time and in many cases you are not sure that you will succeed. Therefore, in the sentences in (22), the speakers are trying to do the activity without caring too much, or in a relaxed manner, specifically they are trying to do it casually.

This idiomatic use of the construction supports my claim that the construction can be semantically specified as expressing 'try casually', which is derived from the core meaning of the construction, 'do it a bit' and one of its semantic properties, 'to try'.

4. Concluding remarks

In this paper, we have discussed the semantic properties of the *have a* construction and made clear that the construction expresses the meanings of 'do it a bit' and 'to try'. Thus the construction can be compatible with the description of 'try a bit', that is, 'try casually', for the 'do it a bit' sense extends to the

casualness of the event. This property accounts for the acceptability of telic events such as those in (6) and (11). On the other hand, examples (3b), (4b) and (5b) are judged unacceptable because the contexts do not tell us whether or not the situations involve any intention to try.

Notes

1. Dixon (2005:469) notes that *have a long walk* or *have a short walk* can describe the activity in a long or short time, or over a long or short distance. However, his discussion is to show that the activity of 'walk' described in *have a walk* is not for getting anywhere and thus aimless, and has nothing to do with the conceptual boundary of the activity.

2. Wierzbicka (1988:308) classifies examples like *have a try*, *a look for* and *a think about* as a type of tentative action, which one performs to get knowledge about something (as for *have a try*, to find out whether one can do the action). However, she claims that the acceptability of these examples can be explained by the 'pleasure' that one can get by coming to know something, not by the implication of 'to try' itself.

3. It has been suggested that the *have a* construction tends to be used in the imperative form, or for making suggestions when one wants to sound softer or polite in ordering (Live 1973, Stein 1991, and others). The following examples should be treated as instances of the 'friendly imperative', not as expressing the meaning of 'to try'.

(i) a. **Have a look at** the view.
b. **Have a listen to** this album.
c. I still encourage you **to have a read of** this book.

References

Alergo, J. 1995. Having a look at the expanded predicate. In Bas Aarts and Charles F. Meyer (eds.). *The Verb in Contemporary English*, 203-235. Cambridge University Press.

Dixon, R. M. W. 2005. *A Semantic Approach to English Grammar, Second Edition*. Oxford University Press.

Huddleston, R. and G. Pullum. 2002. *The Cambridge Grammar of the English Language*. Cambridge University Press.

Leech, G. and J. Svartvik. 2002. *A Communicative Grammar of English, Third Edition*. Longman.

Live, Anna. 1973. The Take–Have Phrasal English. *Linguistics* 95,31-50.

Quirk, R., S. Greenbaum, G. Leech and J. Svartvik. 1985. *Comprehensive Grammar of English*. Longman.

Stein, G. 1991. The Phrasal Verb Type 'To Have a Look' in Modern English, *IRAL*, 2-29.

Swan, M. 2005. *Practical English Usage, Third Edition*. Oxford University Press.

Wierzbicka, A. 1988. *The Semantics of Grammar*. John Benjamins Publishing.

Dictionaries

Cambridge Advanced Learner's Dictionary, Third Edition.2008.Cambridge University Press. (CALD)

Longman Dictionary of Contemporary English, Fifth Edition. 2009. Person Education Limited. (LDOCE)

Oxford Advanced Learner's Dictionary, Eighth Edition. 2010. Oxford University Press. (OALD)

Corpus

British National Corpus. (BNC)

The Motive for Stress Assignment Rule in the Positional Function Theory

Sha Liu
Fukuoka University

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The Positional Function Theory (Yamada 2010a, 2010b, 2012) consists of two sets of stress assignment rule, the primary stress assignment rule (hereafter, PSAR) and the subsidiary stress assignment rule (hereafter, SSAR), where PSAR is composed of three "Positional Functions" (which is said to be a preliminary analysis in the Positional Function Theory with regard to primary stress assignment) and SSAR sixteen "Positional Functions." This paper, based on British English data, presents motives for PSAR and SSAR in terms of the parameters of English stress assignment and English data.

1. PSAR and SSAR in the Positional Function Theory

The 3 Positional Functions of PSAR are "*Bounded Binarity* (*BB*)," "*Heaviness* (*H*)," and "*Rhythmic Adjustment* (*RA*)."

The 16 Positional Functions of SSAR are "*Alveolar Consonant Sequence* (*ACS*)," "*Bare Nucleus Avoidance* (*BNA*)," "*Binarity* (*B*)," "*Category Selection* (*CS*)," "*Double Stop* (*DS*)," "*Edge Exemption I* (*EE-I*)," "*Edge Exemption II* (*EE-II*)," "*Farness* (*F*)," "*Free Binarity* (*FB*)," "*Heaviness* (*H*)," "*Rhythm* (*R*)," "*Rhythmic Adjustment* (*RA*)," "*Sole Stress Resistance*(*SSR*)," "*Stress Reduction* (*SR*)," "*Trace* (*T*)," and "*Velar-Alveolar Sequence* (*VAS*)."

In the Positional Function Theory (henceforth, PFT), order exists between PSAR and SSAR. To put it more precisely, firstly, PSAR is applied to a word to determine the position for its primary stress; secondly, SSAR is applied to the word to account for its subsidiary stress. Take the word *torment* (verb), with the stress pattern *tòrmént* (21),[1] as an example:

(1) tòrmént (21) (verb)

```
                *
 +              +
tor ——— men ——— <t>  #——→
 3       2      <1>  0
h(3)=+  h(2)=+        ┼  H
        ra(2)=*       ┼  RA
S(3)=+<S(2)=+*
```

Firstly, in (1), PSAR is applied to this word to decide the position of its primary stress. When it comes to the computation of primary stress, "#" and the number "0" stand for the word boundary; the capital letter "S" "syllable"; and the signs "+" and "*" stress value. In (1), after the extrametricality of "t," the related Positional Functions of *Heaviness* (*H*) and *Rhythmic Adjustment* (*RA*) are applied to relevant syllables, which finally presents the computation of "*S*(*3*) = + < *S*(*2*) = +*". Since the syllable "men" bears more stress value than the other syllable "tor," "men" bears the primary stress. The next step is to apply SSAR to the word *torment* to account for its subsidiary stress.

(2) tòrmént (21) (verb)

```
 +
tor ————— ment ——→
1          0
h(1)=+     ┼  H
S(1)=+
```

When it comes to the subsidiary stress assignment, PFT uses the number "0" to stand for the position of primary stress as in (2). The numerals under the central segmental melody line (here, only one numeral, "1") indicate each syllable position counted leftward from the primary stressed position. In (2), after the application of the relevant Positional Function of *Heaviness* (*H*), the

computation of "*S*(*1*)=+" is obtained. Being the only syllable to which a Positional Function is applied and thus the only syllable with stress value, "tor" bears secondary stress in *tòrmént* (21) (verb).

With the combination of the results from (1) and (2), the stress pattern of the verb *tòrmént* (21) can be fully accounted for.

In this section, a simple illustration about how PSAR and SSAR in PFT work has been presented; in the next section, the motives for PSAR and SSAR will be probed into.

2. Motive for Stress Assignment Rule in PFT

In this part, focus will be on the motive for PSAR and SSAR, which is further divided into the parameters of English stress assignment and English data.

2.1. The Parameters of English Stress Assignment

The parameters of English stress assignment include weight-sensitivity, cycle, left foot head, right end stress, and so on.

2.1.1. Weight-Sensitivity

"Weight-sensitivity" means that stresses tend to fall on heavy syllables in English. This parameter is stated in the Positional Function *Heaviness* (*H*), whose definition is that "assigns stress '+' to the heavy syllable by the formula *h*(*x*) = *y* with the stress value '+', i.e. *h*(*x*) = +" (Yamada 2010a:305). *Heaviness* (*H*) is not only a Positional Function of PSAR but also of SSAR. For the primary stress assignment, the word *conundrum* will be cited here to show how the Positional Function *Heaviness* (*H*) can be applied:

(3) conúndrum

```
                                  ↑
          +                       |
co —— nun —— <drum>  #  ——→
3      2        <1>   0
       h(2)=+        |   H
_______________      |
       S(2)=+
```

In (3), after the extrametricality of the last syllable "drum," the syllable "nun" is the only heavy syllable and is subject to the Positional Function *Heaviness* (*H*). Being the only syllable subject to a Positional Function and thus the only syllable with stress value, "nun" bears primary stress in *conundrum*.

Similarly, in (4), *Heaviness* (*H*) can be applied to the heavy syllable "en" in *engineer* for the subsidiary stress assignment:

(4) èngineér (201)

```
                    ↑
+                   |
en —— gi —— neer ——→
2      1     0
h(2)=+      |   H
_________   |
S(2)=+
```

In (4), the heavy syllable "en" is subject to the Positional Function *Heaviness* (*H*). Being the only syllable to which a Positional Function is applied and thus the only syllable with stress value, "en" bears secondary stress in *èngineér* (201).

2.1.2. Cycle

"Cycle" arguably means that English preserves a phonological "trace" of the stress given on an earlier cycle, which is stated in the Positional Function *Trace* (*T*) of SSAR. It says that "stress the position of a trace with a value '+' using the expression *t*(*x*) = +, where a trace is defined as a position of stress given on an earlier cycle" (ibid.:305). Take the word *degeneration*, with the stress pattern *degènerátion* (02010), as an example:

(5) degènerátion (02010) (< degénerate) (ibid.:192)

```
                                  ↑
          +                       |
          +                       |
de —— (ge —— ne) —— ra – tion ——→
3      2      1      0
       t(2)=+        |   T
       b(2)=+        |   B
_______________      |
       S(2)=++
```

In (5), the Positional Function *Trace* (*T*) is applied to the syllable "ge" in *degeneration*, because of the trace from the

primary stress on “ge” in the base form “*degénerate*.” The next Positional Function that can be applied to “ge” is *Binarity* (*B*), which says that “add ‘+’ under a syllable position where a Positional Function *Trace* is given, using the expression ‘*b*(*x*) = +’, if and only if the immediately following syllable is weak and unmarked for any other Function” (ibid.:305). Since “ne,” the immediate following syllable of “ge,” is weak and unmarked for any Function, the condition for the application of the Positional Function *Binarity* (*B*) is met; and *Binarity* (*B*) is applied to the syllable “ge.” The syllables “ge” and “ne” are paired in parentheses to show the application of *Binarity* (*B*) clearly. Being the only syllable with stress value, “ge” bears secondary stress; thus, the correct stress pattern *degènerátion* (02010) is presented.

2.1.3. Left Foot Head

“Left foot head” means: (1) each foot encompasses two syllables; (2) the foot head is on the left syllable. To put it in another way, in each foot, the stress is on the left syllable.

For PSAR, the left-foot-head parameter is stated in the Positional Function *Bounded Binarity* (*BB*), which says that “in a successive sequence of two light syllables metrically adjacent to the origin (0, 0), an Intrinsic Positional Function *Bounded Binarity* (*BB*) is triggered on the left head of the binary constituent, placing a stress for the binary constituent by the formula *bb*(*x*) = +” (Yamada 2012:4). The word *vigilant* will be used as an instance:

(6) v ǵilant

```
 +                                  ┼
(vi ——— gi) ——— <lant>   #  ———→
 3        2        <1>   0
bb(3)=+                 ┼   H
S(3)=+
```

In (6), after the extrametricality of the final syllable “lant,” syllables “vi” and “gi” are a successive sequence of two light syllables metrically adjacent to the origin (0, 0), so they are treated as a binary constituent and form one foot (vi gi). The Positional Function *Bounded Binarity* (*BB*) is applied to the syllable “vi,” with the left foot head in the foot (vi gi). With the application of *Bounded Binarity* (*BB*), syllables “vi” and “gi” are paired in parentheses to show the application of *Bounded Binarity* (*BB*) clearly. Being the only syllable to which a Positional Function is applied and thus the only syllable with stress value, “vi” bears the primary stress as shown in *v ǵilant*.

For SSAR, the left-foot-head parameter is stated in Positional Functions of *Binarity* (*B*), *Edge Exemption I* (*EE-I*), *Edge Exemption II* (*EE-II*), *Farness* (*F*), *Free Binarity* (*FB*), *Rhythmic Adjustment* (*RA*), *Sole Stress Resistance* (*SSR*), and *Stress Reduction* (*SR*). Take the Positional Function *Binarity* (*B*) as an example. As has been discussed in *2.1.2. Cycle*, *Binarity* (*B*) is defined as “add ‘+’ under a syllable position where a Positional Function *Trace* is given, using the expression ‘*b*(*x*) = +’, if and only if the immediately following syllable is weak and unmarked for any other Function” (Yamada 2010a:305). The condition that “if and only if the immediately following syllable is weak and unmarked for any other Function” is in line with the nature of English of being a trochaic language. For ease of exposition, “the immediately following syllable” will be marked here as “Y”; the preceding syllable “X”; and the foot “(X Y).” In this way, the condition for the application of *Binarity* (*B*) is that “add one stress value to the syllable X, if and only if Y is weak and unmarked for any other Function.” In other terms, *Binarity* (*B*) adds one stress value to the left syllable in a foot. As a result, the way the *Binarity* (*B*) assigns stress value is in line with the parameter of English foot typology. Take the word *anticipation*, with the stress pattern *ân tìcip átion* (32010), as an example:

(7) ànt ìcip átion (32010) (< ant ícipate) (ibid.:190)

```
          +                  |
+         +                  |
an —— (ti —— ci) —— pa − tion ——→
3       2       1       0
h(3)=+                     |  H
        t(2)=+             |  T
        b(2)=+             |  B
S(3)=+<S(2)=++
```

In (7), the first syllable "an" is subject to the Positional Function *Heaviness* (*H*) because "an" is a heavy syllable. Next the syllable "ti" is subject to the Positional Function *Trace* (*T*) because of the primary stress on the syllable "ti" in its base form "anticipate"; at the same time, "ci," the immediate following syllable of "ti," is weak and unmarked for any Function. As a result, syllables "ti" and "ci" can form one foot "(ti ci)"; and the Positional Function *Binarity* (*B*) is applied to the left syllable "ti" in the foot "(ti ci)." With the application of *Binarity* (*B*), syllables "ti" and "ci" are paired in parentheses to show the application of *Binarity* (*B*) clearly. With regard to the subsidiary stress assignment, when the difference of stress value between two syllables is one, the stronger one will bear secondary stress and the weaker one tertiary stress. The computation of "*S*(*3*) = + < *S*(*2*) = ++", where the capital letter "S" stands for "syllable" and the stress strength of "*" is the same as that of "+", shows that the syllable "an" is weaker than "ti" by one stress value; as a result, "an" bears tertiary stress and "ti" secondary stress. The stress pattern of *ànt ìcip átion* (32010) is correctly given.

2.1.4. Right End Stress

"Right end stress" means that primary stress in English tends to be on the right part of words, which is stated in the Positional Function *Rhythmic Adjustment* (*RA*) of PSAR. The definition of *Rhythmic Adjustment* (*RA*) is that "when an even-stressed pattern appears, augment the rightmost of the relevant syllables by one, by means of the formula *ra*(*x*) = *" (Yamada 2012:5). The word *complaisant* will be given as an instance:

(8) compl áisant (ibid.:5)

```
            *                  |
+           +                  |
com —— plai —— <sant>  #  ——→
3       2       <1>    0
h(3)=+  h(2)=+                 |  H
        ra(2)=*                |  RA
S(3)=+ < S(2)=+*
```

In (8), after the extrametricality of the final syllable "sant," syllables "com" and "plai" are both subject to the Positional Function *Heaviness* (*H*), because they are both heavy syllables. With the application of "*h*(*3*) = +" and "*h*(*2*) = +", an even stress pattern appears, since both "com" and "plai" bear one stress value. Under the circumstances, the Positional Function *Rhythmic Adjustment* (*RA*) is triggered under the syllable "plai", because "plai" is the rightmost syllable among relevant ones. In this way, the sum of stress value is computed: i.e., the stress on the syllable "plai" is stronger than "com"; thus, "plai" bears the primary stress in *complaisant*, yielding the required stress pattern.

2.2. English Data

Positional Functions of *Alveolar Consonant Sequence* (*ACS*), *Bare Nucleus Avoidance* (*BNA*), *Double Stop* (*DS*), *Rhythm* (*R*), *and Velar-Alveolar Sequence* (*VAS*), all of which belong to SSAR, are in line with British English data.

Take the Positional Function *Bare Nucleus Avoidance* (*BNA*) as an example. This Function is defined as follows: "stress assignment is avoided on a non-branching bare nucleus at the leftmost edge of a word by the formula *bna*(*x*) = −, provided that no Intrinsic Positional Function is applied to the bare nucleus" (Yamada 2010a:306). To put it more precisely, there are two conditions for the application of *Bare*

Nucleus Avoidance (*BNA*): firstly, the leftmost edge of a word must be a non-branching bare nucleus; secondly, no Intrinsic Positional Function should be applied to the bare nucleus. Accordingly, this paper examines all words beginning with a non-branching bare nucleus syllable, namely, "a," "e," "i," "o," and "u" in *Wells* (2008) and finds out that 88% of words beginning with those syllables do not bear subsidiary stress on the first short-vowel syllables when the leftmost syllables do not meet conditions for the application of any intrinsic Positional Functions, that is to say, Positional Functions of *Trace* (*T*), *Binarity* (*B*), or *Free Binarity* (*FB*). As a result, the Positional Function *Bare Nucleus Avoidance* (*BNA*) reflects the tendency in the British English data; or in others words, *Bare Nucleus Avoidance* (*BNA*) is supported by the British English data. The word *electrician*[2] and one of its stress variants, *el ètr íian* (0210), will be cited as an instance here:

(9) el ètr íian (0210) (< el éctric) (ibid.:227)

```
                *
                +
*               +
e ———————— lec ———————— tri − tian ——→
2               1                0
                h(1)=+           ┼  H
                t(1)=+           ┼  T
                vas(1)=*         ┼  VAS
bna(2)=−                         ┼  BNA
r(2)=+*                          ┼  R
S(2)=*   <   S(1)=++*
```

In (9), the syllable "lec" is subject to the Positional Functions of *Heaviness* (*H*), *Trace* (*T*), and *Velar-Alveolar Sequence* (*VAS*). With regard to the first syllable "e," since it is a non-branching bare nucleus at the leftmost edge of the word and is not subject to any intrinsic Positional Functions, it thus meets the condition for the application of the Positional Function *Bare Nucleus Avoidance* (*BNA*), whose application is expressed by the formula "*bna* (*2*) = −". The second Positional Function that can be applied to "e" is *Rhythm* (*R*), which "is activated on the leftmost syllable if the syllable immediately preceding the primary stressed syllable bears stress" (ibid.:305-06). In the word *electrician*, *the syllable immediately preceding the primary stressed syllable* is the syllable "lec," which, with the application of the Positional Functions *Heaviness* (*H*), *Trace* (*T*), and *Velar-Alveolar Sequence* (*VAS*), does bear stress value; to put it more precisely, the condition for the application of the Positional Function *Rhythm* (*R*) has been met and *Rhythm* (*R*) is thus applied to the leftmost syllable, "e." The final computation of "*S*(*2*) = * < *S*(*1*) = ++*" indicates that the stress strength of "e" is weaker than that of "lec" by two. In PFT, when the stress value difference between two syllables is no less than two, the stronger syllable will bear secondary stress and the weaker one no stress. Here, the syllable "lec" is stronger than "e" by two stress value; consequently, "lec" bears secondary stress and "e" no stress, which gives the correct stress pattern *el ètr íian* (0210).

3. Conclusion

In conclusion, this paper reveals the motive for the primary stress assignment rule and the subsidiary stress assignment rule in PFT in terms of the parameters of English stress assignment mechanism by the use of the British English data.

NOTES

[1] In this paper, stress values are represented as follows: (´) = primary stress, (`) = secondary stress, (^) = tertiary stress; 0 = no stress, 1 = primary stress, 2 = secondary stress, and 3 = tertiary stress. For example, "*èxp âct átion* (2310)" bears secondary stress on the first syllable "ex," tertiary stress on the second syllable "pec," primary stress on the third

syllable "ta," and no stress on the fourth syllable "tion."

[2] For the word "electrician," there are altogether three stress variants, "elèctrícian (0210)," "èlectrícian (2010)" and "èlêctrícian (2310)." Here, only the first stress variant "el èctr ícian (2010)" is used as an example; for the discussion of "èlectrícian (2010)" and "èlêctrícian (2310)", refer to Liu (2012).

REFERENCES

Chomsky, Noam and Morris Halle (1968) *The Sound Pattern of English*, Harper & Row, New York.

Edwards, Harold T (1997) *Applied Phonetics: The Sounds of American English*, Singular, CA.

Halle, Morris and Jean-Roger Vergnaud (1987) *An Essay on Stress*, MIT Press, Cambridge.

Joseph, Brian D. and Richard D. Janda (2003) *The Handbook of Historical Linguistic*, Blackwell, MA.

Liu, Sha (2012) "The Role of the 'Basic Variant' in Subsidiary Stress Assignment for Words with Variant Stress Patterns," *Proceedings of the 145th Conference of the Linguistic Society of Japan*, 40-45.

Roca, Iggy and Wyn Johnson (1999) *A Course in Phonology*, Blackwell, Oxford.

Thorum, Arden. R (2013) *Phonetics: A Contemporary Approach*, Burlington, Jones & Bartlett Learning, MA.

Wells, John (2008) *Longman Pronunciation Dictionary*, Pearson Education, Essex.

Yamada, Eiji (2010a) *Subsidiary Stresses in English*, Kaitakusha, Tokyo.

Yamada, Eiji (2010b) "Optionality in English Subsidiary Stress Assignment," *Studies in English Literature (Regional Branches Combined Issue)* 3, 543-556.

Yamada, Eiji (2012) "Main Stress Assignment in English Words," paper presented in the 30th Conference of the English Linguistic Society of Japan.

Yamada, Eiji (2013) "Main Stress Assignment in English Words," *JELS* 30, 229-235.

Yavaş, Mehmet (2011) *Applied English Phonology*, Willey-Blackwell, MA.

The Cleft Construction in Irish

Hideki Maki and Dónall P. Ó Baoill
Gifu University and Queen's University Belfast, Professor Emeritus

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1. INTRODUCTION

This paper investigates the properties of the cleft construction in Irish, as illustrated in (1),

(1) Is é [an carr seo]$_1$ Op$_1$ a
COP.PRES it the car this aL
cheannaigh Seán t_1.
bought John
'It is [this car]$_1$ that John bought t_1.'

and points out (i) that CPs and adjective phrases (APs) can be clefted in Irish, unlike English or Japanese, and (ii) that while NP clefting allows six chain patterns with one embedded clause, clefting of the other categories only allows two chain patterns, just like the comparative construction in Irish. Based on these findings, we claim (i) that the chain patterns allowed in the cleft and the comparative constructions suggest that what moves in the comparative construction is not nominal, (ii) that the [-Q] COMPs *that* in English and *to* 'that' in Japanese must agree with the higher verb or INFL, while the [-Q] COMP *go*/*gur* in Irish must agree with the clausemate verb-INFL complex, and (iii) that a copula cannot be stranded at PF, or must agree with a real predicate.

The organization of this paper is as follows. Section 2 reviews the properties of complementizers in Irish as the background to the subsequent sections. Section 3 provides the cleft examples in Irish. Based on the newly found data, Section 4 discusses what they might suggest for the theory of (Irish) grammar. Finally, Section 5 concludes this paper.

2. BACKGROUND

Irish has three types of complementizers: the [-Q] marker, the direct relative marker, and the indirect relative marker. (2) is a declarative sentence, and the embedded clause is headed by the [-Q] COMP *gur* 'that.' When the sentence involves wh-interrogative clause formation, as in (3), the embedded COMP must change to the direct relative marker *aL*, and at the same time, another COMP *aL* must be inserted right after the wh-phrase.

(2) Creideann Seán gur cheannaigh Máire
believe John that bought Mary
an carr.
the car
'John believes that Mary bought the car.'

(3) Cad é a chreideann tú a
what aL believe you aL
cheannaigh Seán ***t***?
bought John
'What do you believe that John bought?'

There is another way to form a wh-interrogative clause in Irish. Observe the example in (4).

(4) Cad é a gcreideann tú gur
what aN believe you that
cheannaigh Seán **é**/****t***?
bought John it
'What do you believe that John bought?'

In (4), the topmost COMP of the wh-interrogative clause is an indirect relative marker *a*, the COMP of the embedded clause is a [-Q] COMP, and the embedded clause contains a resumptive pronoun (RP) *é* 'it' instead of a gap.

McCloskey (2002) assumes that the SPEC of *aL* contains a null operator/null pronoun (henceforth,

null operator) as a result of movement, that in the SPEC of *aN*, there is a base-generated operator, and that in the SPEC of *go*/*gur*, there is no operator. If this is correct, the structure of the wh-interrogative clause construction in Irish looks like a cleft sentence, as shown in (5).

(5) (it is) WH_1 [Op_1 aL/aN [$_{IP}$…t_1/RP_1…]]

As for the structure of the Irish cleft construction, following Chomsky's (1977) analysis of the cleft construction in English, we assume the structure in (6), where XP is a clefted phrase.

(6) it is XP_1 [Op_1 aL/aN [$_{IP}$…t_1/RP_1…]]

3. DATA

Having outlined the particular background, let us consider the properties of the cleft construction in Irish. We first examine examples with short distance clefting in 3.1, and then those with long distance clefting in 3.2.

3.1. SHORT DISTANCE CLEFTING

In this subsection, we consider examples with short distance clefting in Irish. Irish allows NPs, PPs, CPs, and APs to be clefted. Let us start by examining example (1), where the object NP is clefted. In (1) the operator that corresponds to the clefted object undergoes movement from the object position of the sentence to the SPEC of *aL*. Note that *aL* signals that movement has taken place across it. However, when the clefting operation does not use the movement strategy, but uses the resumption strategy signaled by *aN*, clefting does not succeed in some cases, as shown in (7).

(7) * Is é [an carr seo]$_1$ Op_1 ar
COP.PRES it the car this aN
cheannaigh Seán $é_1$.
bought John it
'It is [this car]$_1$ that John bought t_1.'

However, when the clefted NP is heavy enough, (7) becomes grammatical, as shown in (8).

(8) Is é [an carr seo a ba
COP.PRES it the car this aL COP.PAST
mhaith liom a dhiiol]$_1$
good with.me to sell
Op_1 ar cheannaigh Seán $é_1$.
aN bought John it
'It is [this car which I wanted to sell]$_1$ that John bought t_1.'

Therefore, in the following, we assume that in principle, short distance NP clefting allows the resumption strategy, putting aside the question of why it is impossible when the clefted NP is not heavy enough.

Next, let us turn to PP clefting examples. (9) shows that a place adverb can be clefted under the movement strategy, while (10) shows that it cannot be clefted under the resumption strategy.

(9) (Is é) [i mBéal Feirste] a
(COP.PRES it) in Belfast aL
cheannaigh Seán an carr seo anuraidh.
bought John the car this last year
'It is [in Belfast]$_1$ that John bough this car last year t_1.'

(10)*(Is é) [i mBéal Feirste] ar
(COP.PRES it) in Belfast aN
cheannaigh Seán an carr seo anuraidh.
bought John the car this last year

Next, let us consider CP clefting examples. (11) shows that a clause headed by the COMP *gur* 'that' can be clefted under the movement strategy, while (12) shows that it cannot be clefted under the resumption strategy.

(11) (Is é) [gur cheannaigh Seán carr]
(COP.PRES it) that bought John car
a chreideann Máire.
aL believe Mary
'*It is [that John bought a car]$_1$ that Mary believes t_1.'

(12)* (Is é) [gur cheannaigh Seán carr]
(COP.PRES it) that bought John car

ar chreideann Máire.
aN believe Mary

Finally, let us consider AP clefting examples. (13) shows that an AP can be clefted under the movement strategy, while (14) shows that it cannot be clefted under the resumption strategy.

(13) Róchliste atá Seán.
too.clever aL+be.PRES John
'*It is [too clever]$_1$ that John is t_1.'

(14)* Róchliste a bhfuil Seán.
too.clever aN be.PRES John

3.2. LONG DISTANCE CLEFTING

Let us then turn to long distance clefting in Irish. It will be shown that NP clefting allows six chain patterns with one embedded clause, just like wh-interrogative formation with one embedding, while clefting of the other phrases only allows two chain patterns. McCloskey (2002) shows five chain patterns for wh-interrogative formation with one embedding, shown in (3) and (4), and (15)-(17), and Maki and Ó Baoill (2011) finds the sixth pattern, as shown in (18).

(15) [Cad é] a raibh súil agat a cheannófá
what aN was hope at.you aL buy.COND
t?
'What$_1$ did you hope that you would buy t_1?' (aN, aL, *t*)

(16) [Cad é] a chreideann tú ar cheannaigh
what aL believe you aN bought
'What$_1$ do you believe that John bought t_1?'
(aL, aN, RP)

(17) [Cad é] a gcreideann tú ar cheannaigh
what aN believe you aN bought
Seán é?
John it
'What$_1$ do you believe that John bought t_1?'
(aN, aN, RP)

(18) [Cad é] a mheasann Seán gur cheart dúinn
what aL think John that right for.us
é a cheannach?
it to buy
'What$_1$ does John think that we ought to buy t_1?' (aL, that, RP)

Let us start by examining NP clefting examples in (19)-(24), which are all grammatical in Irish.

(19) Is é [an carr seo] a chreideann
COP.PRES it the car this aL believe
tú a cheannaigh Seán.
you aL bought John
'It is [this car] that you believe that John bought t_1?' (aL, aL, *t*)

(20) Is é [an carr seo] a raibh súil
COP.PRES it the car this aN was hope
agam a cheannófa.
at.me aL buy.COND.2.SG
'It is this car that I hoped that you would buy.' (aN, aL, *t*)

(21) Is é [an carr seo] a chreideann
COP.PRES it the car this aL believe
tú ar cheannaigh Seán é.
you aN bought John it
'It is this car that you believe that John bought.' (aL, aN, RP)

(22) Is é [an carr seo] a gcreideann
COP.PRES it the car this aN believe
tú ar cheannaigh Seán é.
you aN bought John it
'It is this car that you believe that John bought.' (aN, aN, RP)

(23) Is é [an carr seo] a gcreideann
COP.PRES it the car this aN believe
tú gur cheannaigh Seán é.
you that bought John it
'It is this car that you believe that John bought.' (aN, that, RP)

(24) Is é [an carr seo] a mheasann
COP.PRES it the car this aL think
Seán gur cheart dúinn é a cheannach.
John that right for.us it to buy

'It is this car that John thinks that we ought to buy.' (aL, that, RP)

These examples thus show that NP clefting with one embedded clause patterns together with wh-movement with one embedding with respect to the resulting chain patterns.

Next, let us turn to PP clefting examples with a place adverb. We found that unlike NP clefting, PP clefting only allows two chain patterns that end with a trace. Due to space limitations, only the grammatical examples are provided in (25)-(26).

(25) Is é [i mBéal Feirste] a
COP.PRES it in Belfast aL
chreideann Máire a cheannaigh Seán
believe Mary aL bought John
an carr seo anuraidh.
the car this last year
'It is [in Belfast]$_1$ that Mary believes that John bought this car last year t_1.' (aL, aL, *t*)

(26) Is é [i mBéal Feirste] a raibh
COP.PRES it in Belfast aN was
súil agam a cheannófá carr t_1.
hope at.me aL buy.COND car
'It is [in Belfast]$_1$ that I hoped that you would buy a car t_1.' (aN, aL, *t*)

Next, let us turn to CP clefting examples. Just like PP clefting, this type of clefting also only allows two chain patterns that end with a trace. Due to space limitations, only the grammatical examples are provided in (27)-(28).

(27) Is é [gur cheannaigh Seán carr]
COP.PRES it that bought John car
a chreideann Máire a dúirt siad.
aL believe Mary aL said they
'It is [that John bought a car]$_1$ that Mary believes that they said t_1.' (aL, aL, *t*)

(28) Is é [gur cheannaigh Seán carr]
COP.PRES it that bought John car
a raibh súil agam a déarfá
aN was hope at.me aL say.COND.2.SING
'It is [that John bought a car]$_1$ that I hoped that you would say t_1.' (aN, aL, *t*)

Finally, let us examine AP clefting examples. Just like CP clefting, this type of clefting also only allows two chain patterns that end with a trace. Due to space limitations, only the grammatical examples are provided in (29)-(30).

(29) Is é [róchliste] a chreideann
COP.PRES it too.clever aL believe
Máire atá Seán.
Mary aL+be.PRES John
'It is [too clever]$_1$ that Mary believes that John is t_1.' (aL, aL, *t*)

(30) Is é [róchliste] a raibh súil
COP.PRES it too.clever aN was hope
agam a bheadh Seán.
at.me aL be.COND John
'It is [too clever]$_1$ that I hoped that John would be t_1.' (aN, aL, *t*)

To summarize, two important facts were observed in this section. First, Irish allows a variety of clefting with an NP, PP, CP, and AP being clefted. Second, NP clefting allows six types of chain patterns with one embedded clause, but the other types of clefting only allow two types of chain patterns with one embedded clause, which terminate with a trace.

4. DISCUSSION

Let us now consider what the observed facts might suggest for the theory of (Irish) grammar. First, the finding that NP clefting allows six chain patterns with one embedded clause, but the other XPs, namely, PPs, CPs, and APs, only allow two chain patterns in the same environment suggests that what moves in the comparative construction is not nominal. Clefting of non-NPs only permits the chains that are terminated with a trace, not a resumptive pronoun. Maki and Ó Baoill (2011) point out that the comparative construction only allows

two chain patterns, exactly like those permitted by the cleft construction that does not involve NP clefting. Let us review the comparative construction in Irish, a typical example of which is shown in (31).

(31) Cheannaigh sí níos mó úllaí ná a
bought she more apples than aL
cheannaigh Seán *t*.
bought John
'She bought more apples than John bought.'

In (31), *ná* is the head of the comparative clause, which is followed by the COMP *aL*. Note that when the COMP is *aN*, the sentence becomes ungrammatical, as shown in (32).

(32)* Cheannaigh sí níos mó úllaí ná ar
bought she more apples than aN
cheannaigh Seán (iad).
bought John them

According to Maki and Ó Baoill (2011), the comparative construction in Irish with one embedding allows the chain patterns in (33), but disallows those in (34), and the generalization about chain properties of the comparative construction in Irish is (35).

(33) a. (aL, aL, *t*) b. (aN, aL, *t*)
(34) a.* (aL, aN, RP) c. * (aN, that, RP)
b.* (aN, aN, RP) d. * (aL, that, RP)

(36) *Generalization on the comparative construction in Irish*
In the comparative construction in Irish, the chain must end with a trace.

(36) is exactly parallel to the generalization on the cleft construction in Irish that does not involve NP clefting stated in (37).

(37) *Generalization on the cleft construction in Irish that does not involve NP clefting*
In the cleft construction in Irish that does not involve NP clefting, the chain must end with a trace.

These two generalizations suggest that what moves in the cleft construction that does not involve NP clefting and in the comparative construction is not nominal in nature. This suggests that in spite of the fact that what moves in the comparative construction in English, for example, looks like an NP, as indicated by the [ ] in example (38),

(38) John bought more books that Mary sold [ ].

what is actually involved in the computation is the degree phrase that is not nominal in nature. This in turn provides a straightforward account for the fact that island violations with the comparative construction are far worse than mere Subjacency violations.

Second, the finding that CPs can be clefted in Irish, while they cannot be in English or Japanese, suggests that the [-Q] COMPs *that* in English and *to* 'that' in Japanese must agree with the higher verb or INFL, while the [-Q] COMP *go*/*gur* 'that' in Irish must agree with the clausemate verb-INFL complex. Let us compare the Irish example in (11) with the corresponding English and Japanese examples shown in (39)-(40).

(39)* It is [that John bought a car]$_1$ that Mary believes t_1.

(40)* Mary-ga shinjiteiru-no-wa [John-ga
Mary-Nom believe-NO-Top John-Nom
kuruma-o katta to] desu.
car-Acc bought that be
'It is [that John bought a car]$_1$ that Mary believes t_1.'

The question is why CPs can be clefted in Irish, not in English or Japanese. We propose that this difference is attributed to the difference in what the given COMP is to agree with. In the cleft structure under Chomsky's (1977) hypothesis, the clefted part (XP_1) is base-generated in the pre-CP position, as shown in (41).

(41) it is XP$_1$ [$_{CP}$ Op$_1$ *that* [$_{IP}$…t_1…]]

When a CP is clefted, the structure will look like (42).

(42) it is [$_{CP}$…C…]$_1$ [$_{CP}$ Op$_1$ *that* [$_{IP}$…t_1…]]

Note here that no matter whether the CP originates from the object position or the subject position, the grammaticality remains the same in Irish and English, as shown in (43)-(44). (Note that Japanese does not allow a CP subject.)

(43) Is é [gur cheannaigh Seán carr] a
COP.PRES it that bought John car aL
chuir *t* iontas ar Mháire.
put surprise on Mary
'*It is [that John bought a car]$_1$ that surprised Mary.'

(44)* It is [that John bought a car]$_1$ that t_1 surprised Mary.

There is a crucial difference between Irish and English/Japanese in terms of the agreement of the predicate. Irish has overt COMP-Predicate (verb+INFL) agreement, as shown in (45)-(46).

(45) Síleann Seán **go** **gceannófá** carr.
think John COMP buy.COND.2.sg. car
'John thinks that you would buy a car.'

(46) Síleann Seán **gur** **cheannaigh**
think John COMP.PAST bought
tú carr.
you car

In (45), the embedded predicate (verb+INFL) is of the conditional form, and the COMP is represented as *go*, while in (46), the embedded predicate is of the past tense form, and the COMP is represented as *gur*. This indicates that there is a visible agreement relationship between COMP and the predicate (verb+INFL) in Irish.

Based on these facts, we propose that the [-Q] COMP *go*/*gur* 'that' in Irish must agree with the clausemate verb-INFL complex, while the [-Q] COMPs *that* in English and *to* 'that' in Japanese must agree with the higher verb or INFL, and under Chomsky's (1977) base-generation approach to the cleft construction, the COMPs in English and Japanese in the clefted position cannot agree with the higher predicate, which makes CP clefting impossible in these languages. On the other hand, in grammatical examples in English such as (47)-(48), the COMP can agree with the predicate.

(47) Mary believes [that John bought a car].

(48) [That John bought a car] surprised Mary.

In (47), no other head intervenes between the higher predicate *believes* and the COMP *that*, so that *that* can agree with *believes*, which licenses it. In (48), the CP in the subject position is in agreement with the predicate *surprised*. Since the COMP *that* is the head of the CP, it should be in agreement with the predicate.

Third, the finding that APs can be clefted in Irish, while they cannot be in English or Japanese, seems to suggest the generalization that a copula cannot be stranded at PF, or must agree with a real predicate. Irish allows AP clefting, as shown in (13), while English and Japanese do not, as shown in (49)-(50).

(49)* It is [very clever]$_1$ that John is t_1.

(50)* John-ga no-wa [totemo kashikoi] desu.
John-Nom NO-Top very clever be
'It is very clever that John is.'

However, APs can be moved in some cases in English, as shown in (51).

(51) a. How clever is John? (Question)
b. How clever John is! (Exclamation)

The AP *how clever* is moved by wh-question formation, as in (51a), or by exclamation formation, as in (51b).

Note that the same patterns are observed in Japanese, as shown in (52).

(52) a. John-wa dore hodo kashikoi desu
John-Top which degree clever be
ka? (Question)
Q
'How clever is John?'

b. John-wa nan-te kashikoi-n(o)-
John-Top what-COMP clever-NO-
desu ka! (Exclamation)
be EX

'How clever John is!'

These data thus seem to suggest that APs can in principle be clefted, but there is a condition on the copula in the presupposition part of the cleft construction in English and Japanese, not in Irish. We speculate that two conditions are disjunctively imposed on copulas. The first condition is that a copula cannot be stranded at PF. This explains the ungrammaticality of (49)-(50), where the copulas are stranded, and the grammaticality of (13), where the copula is merged to COMP, under Chomsky's (1977) base-generation approach to the cleft construction. This condition further predicts that clefting of NP predicates is impossible in English and Japanese, while it is possible in Irish. This prediction is actually borne out, as shown in (53)-(55).

(53)* It is a football player that John is.

(54)* John-ga no-wa sakkaa senshu desu.
John-Nom NO-Top football player be
'It is very clever that John is.'

(55) (Is) imreoir peile
COP.PRES player football.Gen
atá i(n) Seán.
aL+be.PRES in John
'*It is a football player that John is.'

The second condition is that a copula must agree with a real predicate. In the following, we call an AP predicate, not its null operator counterpart, a real predicate. This condition explains the ungrammaticality of (49) and the grammaticality of (51a, b) under the base-generation approach to the cleft construction. In all these examples, the copulas are stranded at PF. Therefore, the first condition will rule out any of them. However, there is a difference between (49) and (51a, b). In (49), the AP is base-generated in the clefted position, so that the presupposition part contains the null operator that corresponds to the AP at the base structure. On the other hand, in (51a, b), the fronted AP was right after the copula at the base structure. If an AP predicate and its null counterpart have different properties, and a copula must agree with a real AP predicate, the contrast between (49) and (51a, b) is expected.

5. CONCLUSION

This paper investigated the properties of the cleft construction in Irish. Based on the newly found properties, we claimed (i) that the chain patterns allowed in the cleft and the comparative constructions suggest that what moves in the comparative construction is not nominal, (ii) that the [-Q] COMPs *that* in English and *to* 'that' in Japanese must agree with the higher verb or INFL, while the [-Q] COMP go/gur in Irish must agree with the clausemate verb-INFL complex, and (iii) that a copula cannot be stranded at PF, or must agree with a real predicate.

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REFERENCES

Chomsky, Noam (1977) "On Wh-Movement," *Formal Syntax*, ed. by Peter Culicover, Thomas Wasow and Adrian Akmajian, 71-132, Academic Press, New York.

Maki, Hideki and Dónall P. Ó Baoill (2011) *Essays on Irish Syntax*, Kaitakusha, Tokyo.

McCloskey, James (2002) "Resumption, Successive Cyclicity, and the Locality of Operations," *Derivation and Explanation in the Minimalist Program*, ed. by Samuel Epstein and Daniel Seely, 184-226, Blackwell, Cambridge, MA.

On the Long-Distance Nature of the Polite Form of Japanese Locative Demonstratives*

Mioko Miyama
University of Tokyo

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1. Introduction

One of the ways employed in Japanese to express honorification/politeness is to attach the honorific prefix *o-/go-* to nouns (1a), adjectives (1b), or adverbs.[1]

(1) a. Sore-wa Sasaki-sensei-no o-nimotu da.
that-Top S-prof-Gen **HP**-luggage is
'That is Professor Sasaki's luggage.'

b. Hanako-san-wa totemo o-utukusi-i.
H-Pol-Top very **HP**-beautiful-Pres
'Hanako is very beautiful.'

When these nouns/adjectives bear honorific/polite meaning, they are categorized into *honorific expressions*. Honorific expressions require the possessor or the person that they modify to be respected, as illustrated in (2).

(2) a. sensei-no go-kazoku
prof-Gen HP-family
'The professor's family'

b. *watasi-no go-kazoku
I-Gen HP-family
'My family' (Sakai and Ivana (2009: 438))

Using honorific expressions is grammatical regardless of whether the sentence contains verbs with honorification/politeness or not as in (3).[2]

(3) a. Sensei-no go-kazoku-ga soto-de
prof-Gen HP-family-Nom outside-at
o-mati-desu / o-mati-da.
HP-wait-Pol / HP-wait-is
'The professor's family is waiting outside.'

b. Sensei-no go-kazoku-ga soto-de
prof-Gen HP-family-Nom outside-at
matte-i-masu / matte-iru.
wait-is-Pol / wait-is

There are three possible honorific forms of verbs which honorific expressions with *o-/go-* are grammatical with: (i) honorific prefix + the nominalized form of V + the polite forms *desu/masu* (e.g. *o-mati-desu*/HP-wait-Polite), (ii) honorific prefix + the nominalized form of V + copula *da* (e.g. *o-mati-da*/HP-wait-is) and (iii) V + *desu/masu* (e.g. *matte-i-masu*/wait-is-Polite). The "politeness" conveyed by the use of *desu/masu* basically expresses the polite attitude of the speaker towards the hearer. Honorific expressions can also appear in sentences with the verb in the plain form as in (3b).

Apart from honorific expressions, there is a class of words which convey honorification/politeness but behave differently from honorific expressions. The words that belong to this class clearly interact with the honorification/politeness of the sentence. The aim of this paper is to provide an analysis of the distribution of this class of words; specifically, I propose that the items agree with the same element with which the polite items *desu/masu* agree. As shown in the next section, this explanation goes along with a previous analysis that the polite items *desu/masu* in embedded clauses are licensed in a long-distance manner by the element which licenses *desu/masu* in the matrix clause.

The examples below show that the word *dotira* 'where' can appear in environments where the verb is in the honorific form (4b), has both the honorification prefix and the polite form (4a), or only has the polite form (5a).[3]

(4) a. Yamada-sensei-wa dotira-ni

Y-prof-Top where-at
o-sumai-desu ka?
HP-live-Pol Q
'Where does Professor Yamada live?'

b. Yamada-sensei-wa dotira-ni
Y-prof-Top where-at
o-sumai na {no ka naa / no daroo}?
HP-live is.Adn *no* Q SFP *no* I.wonder

(5) a. Hanako-wa dotira-ni
H-Top where-at
sum-deiru no desu ka?
live-is *no* Polite Q
'Where does Hanako live?'

b. *Hanako-wa dotira-ni
H-Top where-at
sum-deiru {no ka naa / no daroo}?
live-is *no* Q SFP *no* I.wonder

Using *dotira* 'where' is ungrammatical when the verb is in the plain form, as in (5b).

Note that, in addition to the meaning of location shown in examples (4) and (5), the word *dotira* has the interpretation of partitive ('which one') and direction ('which way.') As exemplified in (6a), *dotira* in the partitive meaning allows the verb to be in the plain form, behaving differently from locative *dotira* 'where.'

(6) a. Yamada-sensei-wa dotira-o
Y-prof-Top which-Acc
eranda/o-erabi-ni-nat-ta no?
chose/HP-choose-Dat-become-Past Q
'Which one did Professor Yamada choose?'

b. Yamada-sensei-wa dotira-o erabi-masi-ta
Y-prof-Top which-Acc choose-Pol-Past
/o-erabi-ni-nari-masi-ta ka?
/HP-choose-Dat-become-Pol-Past Q

Partitive *dotira* 'which one' can also appear in sentences where the verb is in the polite form, the honorific form, or when the verb has both the honorific prefix and the polite *masu*, as in (6). It seems that partitive *dotira* 'which one' does not convey much honorification/politeness.

Other items that fall under the class of "honorific" expressions which behave like *dotira* 'where' are the demonstratives which share the morpheme *-tira* with *dotira* 'where.' As is well known, Japanese demonstratives have the paradigm *ko-so-a-do*. The locative demonstratives *kotira/sotira/atira* 'here/there/there' are also ungrammatical when the verb is in the plain form:

(7) a. Yamada-sensei-wa kotira/sotira/atira-ni
Y-prof-Top here/there/there-at
o-sumai-desi-ta / o-sumai-dat-ta/
HP-live-Pol-Past / HP-live-is-Past/
sum-dei-masi-ta.
live-is-Pol-Past
'Professor Yamada was living here/there.'

b. *Hanako-wa kotira/sotira/atira-ni
H-Top here/there/there-at
sum-dei-ta-yo.
live-is-past-SFP
'Hanako was living here/there.'

In the next section, the behavior of the items *kotira/sotira/atira/dotira* 'here/there/there/where' in embedded clauses is investigated and we conclude that the items are licensed by *desu/masu* indicating politeness. Furthermore, building on the proposal of Miyagawa (2012) about the agreement involved in sentences with *desu/masu*, I claim that *kotira/sotira/atira/dotira* 'here/there/there/where' can be in a long-distance agreement relation with the probe in the agreement operation involved in sentences containing *desu/masu*. This contrasts with honorific verbs, which consistently require a local relation with the items they agree with. The proposal put forth neatly explains the distribution of the polite forms of the locative demonstratives, which is different from the distribution of honorific expressions and the polite items *desu/masu* in embedded clauses. Section 3 concludes the paper.

2. The "Long-Distance" Nature of Politeness

2.1. The Data

In embedded clauses, using *dotira* 'where' is grammatical if the embedded verb is in the honorific form (8a), while it is not when only the matrix verb is in the honorific form (8b). (Compare this with the grammaticality of the sentence with the plain locative item *doko* 'where.')

(8) a. Taro-wa [Yamada-sensei-ga dotira-ni
T-Top Y-prof-Nom where-at
o-sumai ka] tazune-ta.
HP-live Q ask-Past
'Taro asked where Professor Yamada lives.'

b. *Yamada-sensei-wa [Taro-ga dotira-ni
Y-prof-Top T-Nom where-at
sum-deiru ka] o-tazune-ni-nat-ta.
live-is Q HP-ask-Dat-become-Past
'Professor Yamada asked where Taro lives.'

cf. Yamada-sensei-wa [Taro-ga **doko**-ni
Y-prof-Top T-Nom where-at
sum-deiru ka] o-tazune-ni-nat-ta.
live-is Q HP-ask-Dat-become-Past

Dotira 'where' is also allowed to appear in embedded clauses such as embedded questions if the matrix verb is in the polite form accompanying *desu/masu*, as exemplified in (9). The plain locative item *doko* 'where' does not have this difference in grammaticality.

(9) Taro-wa [Hanako-ga dotira-ni
T-Top H-Nom where-at
sum-deiru ka] tazune-{*ta/masi-ta}.
live-is Q ask-Past/Pol-Past
'Taro asked where Hanako lives.'

cf. Taro-wa [Hanako-ga **doko**-ni
T-Top H-Nom where-at
sum-deiru ka] tazune-{ta/masi-ta}.
live-is Q ask-Past/Pol-Past

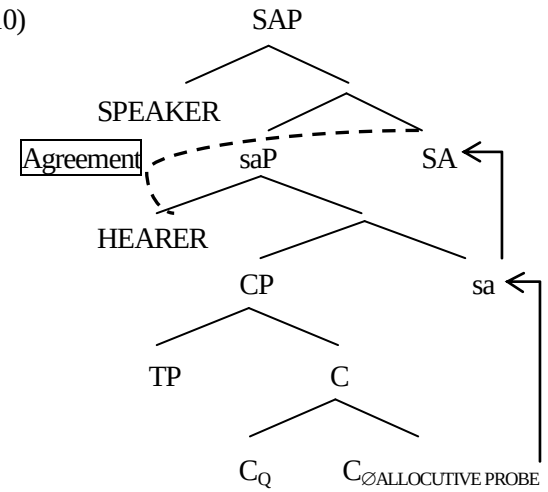
Kotira/sotira/atira 'here/there/there' behave in the same way as *dotira* 'where.'

The facts given above suggest that *kotira/sotira/atira/dotira* 'here/there/there/where' can be licensed from outside the clause they reside in. What is more, they are allowed in the presence of the polite *desu/masu* in the matrix clause, since they are ungrammatical with only the matrix verb in the honorific form, as in (8b).

2.2. Previous Studies on Politeness

Miyagawa (2012) proposes that the polite *desu/masu* forms are instantiations of allocutive agreement, in which an appropriate agreement marker is realized depending on the hearer. Building on the observation that allocutive agreement takes place in the C domain, Miyagawa (2012) proposes the following structure for the C domain of sentences containing *desu/masu*.[4]

(10)



'SA' and 'sa' in the structure stand for 'speech act' and project phrases that contain the covert SPEAKER and HEARER. C which hosts the probe of allocutive agreement raises to 'SA' via 'sa' and agrees with the goal HEARER.[5] According to Miyagawa (2012: 89), this structure accounts for the ungrammaticality of the polite forms *desu/masu* in embedded questions as in (11).

(11) Hanako-wa [dare-ga kuru/*ki-masu ka]
H-Top who-Nom come/come-Pol Q
sitte i-mas-u.
know be-Pol-Pres
'Hanako knows who is coming.'

The matrix verb selects for questions, but the existence of *desu/masu* requires the larger structure shown in (10). The existence of *desu/masu* thus leads to a selectional mismatch for the matrix verb.

However, some constructions allow *desu/masu* to appear in embedded clauses. For example, in direct discourse complements headed by *to* (12a) and in adverbial clauses (12b), *desu/masu* are allowed (taken from Harada (1976: 544, 559)).

(12) a. Taro-wa [Hanako-ga ki-masi-ta to] it-ta.
T-Top H-Nom come-Pol-Past C say-Past
'Taro said that Hanako came.'

b. [Hima desi-ta kara] Ginza-ni iki-masi-ta.
free Pol-Past since Ginza-to go-Pol-Past
'I went over to the Ginza Street because I had nothing to do.'

Miyagawa (2012) claims that in these constructions also, the structure in (10) exists in the embedded clause. He proposes that in "root" clauses originally put forward by Emonds (1969), for example, in the reported S in direct discourse (direct discourse complement (12a)) and an S immediately dominated by the highest S (adverbial clauses (12b)), Speech Act Phrase (SAP) is allowed to project.

In addition to the environments listed by Harada (1976) and others, Uchibori (2008: 113, 117) gives a few more environments where *desu/masu* can appear in embedded clauses. Importantly, the behavior of *desu/masu* in complement clauses of verbs such as *negaw* 'hope' is the same as that of *kotira/sotira/atira/dotira* 'here/there/there/where' for the most part. The difference in judgment between (13a) and (13b) shows that the polite items *desu/masu* in the embedded clause are grammatical in the presence of the matrix polite *desu/masu*, but not in the presence of the matrix honorific verb. (Naturally, the plain form of the matrix verb does not suffice to make *desu/masu* in the embedded clause grammatical (13c).)

(13) a. Hitobito-wa [ame-ga huri-masu-yoo(ni)]
people-Top rain-Nom fall-Pol-C
negai-masi-ta.
hope-Pol-Past
'People hoped that it could rain.'

b. ??/?*Oohisama-wa [ame-ga
queen-Top rain-Nom
huri-masu-yoo(ni)] negaw-are-ta.
fall-Pol-C hope-Honorific-Past
'The queen hoped that it would rain.'

c. ?*Hitobito-wa [ame-ga
people-Top rain-Nom
huri-masu-yoo(ni)] negat-ta.
fall-Pol-C hope-Past
'People hoped that it could rain.'

Uchibori (2008) argues for simultaneous long-distance licensing of *desu/masu* in embedded clauses and those in matrix clauses by some modal head in the matrix clause (related to the speaker's attitude towards the hearer).

2.3. Proposal

Taking into account the "long-distance" nature of the licensing of *desu/masu*, I claim that *kotira/sotira/atira/dotira* 'here/there/there/where' undergo long-distance agreement with an item in SAP in the matrix clause, required by the existence of *desu/masu*. Specifically, I argue for a simultaneous agreement between the probe and the two goals: HEARER in the matrix SAP and *kotira/sotira/atira/dotira* 'here/there/there/where' in the embedded clause. This is because the data presented in this section indicate that the class of items can appear with occurrences of the polite items *desu/masu* in the same clause or the matrix clause. I limit myself to claiming that the probe of the long-distance agreement has an ability to probe down into the embedded clause, and do not commit myself to the theoretical details of long-distance agreement.

My claim goes along in some part with Uchibori's (2008), although the items considered in

this paper have a wider distribution than occurences of *desu/masu* in embedded clauses. *Desu/masu* are allowed in the embedded clauses of only a limited number of constructions, while *kotira/sotira/atira/dotira* 'here/there/there/where' are allowed in almost any construction as long as *desu/masu* is in the sentence or a sufficiently local honorific verb is present.

The "long-distance" characteristic of the polite *desu/masu* contrasts with the honorific forms of the verb. Recall that honorific forms of the matrix verb cannot license *kotira/sotira/atira/dotira* 'here/there/there/where' in the embedded clause:

(8) b. *Yamada-sensei-wa [Taro-ga dotira-ni
Y-prof-Top T-Nom where-at
sum-deiru ka] o-tazune-ni-nat-ta.
live-is Q HP-ask-Dat-become-Past
'Professor Yamada asked where Taro lives.'

The fact shows that the honorific prefix, when it agrees with a goal with an honorific feature (including *kotira/sotira/atira/dotira* 'here/there/there/where,' assuming that they can carry either the allocutive feature or the honorific feature,) has to be in a local relation with the goal. This is in line with previous studies on honorifics (cf. Boeckx and Niinuma (2004) and Sakai and Ivana (2009) among others).[6]

2.4. Another "Honorific/Politeness Agreement"?

Recall that *kotira/sotira/atira/dotira* 'here/there/there/where' cannot be licensed by the plain form of the verb in either the matrix clause or the embedded clause, as in (14).

(14) a. *Hanako-wa dotira-ni sum-deiru
H-Top where-at live-is
{no ka naa / no daroo}? (= (5b))
no Q SFP *no* I.wonder
'Where does Hanako live?'

b. *Taro-wa [Hanako-ga dotira-ni
T-Top H-Nom where-at
sum-deiru ka] tazune-ta.
live-is Q ask-Past
'Taro asked where Hanako lives.'

However, there is a way to rescue the unacceptability of (14): changing the subject into a respectable person makes the sentences better.

(15) a. Yamada-sensei-wa dotira-ni sum-deiru
Y-prof-Top where-at live-is
{no ka naa / no daroo}? (= (5b))
no Q SFP *no* I.wonder
'Where does Professor Yamada live?'

b. Yamada-sensei-wa [Hanako-ga dotira-ni
Y-prof-Top H-Nom where-at
sum-deiru ka] tazune-ta.
live-is Q ask-Past
'Professor Yamada asked where Hanako lives.'

c. Taro-wa [Yamada-sensei-ga dotira-ni
T-Top Y-prof-Nom where-at
sum-deiru ka] tazune-ta.
live-is Q ask-Past
'Taro asked where Professor Yamada lives.'

Why are the sentences in (14) rescued with a respectable subject? There is no *desu/masu* in the sentence and there is nothing which *dotira* 'where' can agree with (even in a long-distance manner). Further, honorific agreement cannot be taking place here since it occurrs with the honorific prefix on the predicate as the probe.

I would like to draw the reader's attention to the fact that the sentence improves by replacing with a respected person not only the embedded subject as in (15c) but also the matirix subject as in (15b). Since the effect seems not to be locally restricted, my speculation is that something like the "honorific concordance" that Hasegawa (2006) suggests is taking place here too, under the assumption that *kotira/sotira/atira/dotira* 'here/there/there/where' are not only polite forms but also honorific forms.

Hasegawa (2006: 533) gives (16) and suggests that a "honorific concordance" may be

taking place in these sentences.

(16) a. Sensei-wa **go**-zibun-de
teacher-Top **HP**-self-Acc
o-kuruma-o araw-u.
HP-car-Acc wash-Pres
'The teacher washes her car by herself.'

b. Sensei-wa zibun-de
kuruma-o **o**-arai-ni-nar-u.
HP-wash-Dat-become-Pres

c. Sensei-wa **go**-zibun-de
o-kuruma-o **o**-arai-ni-nar-u.

As Hasegawa (2006) observes, the important point is that when the subject is a respectable person, the object and the predicate need not be in the honorific form. She states the possibility that the speaker's respect towards the respectful person is indicated by a presence of an operator over a sentence, and this operator requires at least one item to be in the honorific form.

Although I stay neutral on Hasegawa's (2006) suggestion about the honorific operator, I agree with her that the respectable subject can license *kotira/sotira/atira/dotira* 'here/there/there/where' and that something like the "honorific concordance" is indeed taking place in (15).

3. Concluding Remarks

This paper has shown that the polite forms of the Japanese locative demonstratives *kotira/sotira/atira/dotira* 'here/there/there/where' in the embedded clause interact with the polite items *desu/masu* in the matrix clause in a long-distance manner. This behavior of *kotira/sotira/atira/dotira* 'here/there/there/where' has never been noted in the literature before. On the basis of the fact that it resembles the relation between the polite items *desu/masu* in the embedded clause and in the matrix clause in some environments, I have proposed that *kotira/sotira/atira/dotira* 'here/there/there/where' agree with the same element with which the polite items *desu/masu* agree. Further, when the polite forms of the locative demonstratives are in embedded clauses, they are licensed through long-distance agreement with the element in the matrix clause with which the polite items *desu/masu* in the matrix clause agree.

The details of the process of long-distance agreement (in particular, the problem of word order (cf. note 5) and the problem of how items agree across a clause boundary) are left to be investigated in future study. In addition, specifically what property of the irems contributes to their behavior is open for future research.

Notes

* The discussion in Section 2.4 owes much to the comments from the participants of the presentation made at the 6th International Spring Forum. My gratitude also goes to Christopher Tancredi and Vicki Carstens for reading an earlier version of this paper. All remaining errors are my own.

[1] The abbreviations used in this paper are: Abs = Absolutive, Acc = Accusative, Adn = Adnominal, All = Allocutive, Aux = Auxiliary, Col = Colloquial, Dat = Dative, Erg = Ergative, Gen = Genitive, HP = Honorific Prefix, Ms = Masculine, Neg = Negation, Nom = Nominative, Perf = Perfect, Pol = Polite, Pres = Present, Q = Question Particle, SFP = Sentence-Final Particle, Sg = Singular, Top = Topic.

[2] Sakai and Ivana (2009) propose that in honorification words, honorification agreement occurs in the nominal domain, since the honorification meaning is present in the absence of a verb. They claim that the honorific prefix bearing the honorific feature agrees with the structurally nearest *n*P with an honorific feature, which consists of NP (the person in a socially high status) and *n* (applative suffixes such as *san* 'Mr./Miss/Mrs.' and *sama* 'Mr./Miss/Mrs.').

[3] The subject of the sentence is *Yamada sensei*

'Professor Yamada' in (4) and *Hanako* in (5) respectively because the verb is with the honorific particle only in (4). When the verb is with the honorific particle, the subject has to be a respectable person and when it is with *desu/masu*, the choice of the subject is not restricted, since the use of *desu/masu* basically expresses the polite attitude of the speaker towards the hearer and is irrelevant to the subject/object of the uttered sentence itself. When the verb is in the plain form, the most natural choice of the subject is a non-respectable/neutral person, but it is actually possible to take a respectable person as the subject. See the discussion in Section 2.4.

[4] Miyagawa (2012) does not make clear the precise location of *desu/masu*; he only claims that it is realized in the C domain.

[5] Consider the word order realized in allocutive agreement observed in Souletin, a dialect of Basque:

(i) (To a male friend)

Pettek	lan	egin	dik.
P.Erg	work.Abs	do.Perf	Aux-3rd.Sg.Abs
-2nd.Sg.Col.Ms.All-3rd.Sg.Erg			

'Peter worked.' (Miyagawa (2012: 82))

Note that the allocutive agreement marker (glossed 2nd.Sg.Col.Ms.All) is attatched before the subject agreement marker (glossed 3rd.Sg.Erg). If allocutive agreement is occurring in the C domain, the word order should be "subject agreement marker (the structurally lower element) - allocutive agreement marker (the structurally higher element) ." The situation is the same in Japanese as in Souletin: the past tense forms of the polite forms *desu/masu* (the realization of allocutive agreement) are formed by attatching the past tense morpheme *-ta* to the polite items (*desi-ta/masi-ta*). Since my proposal made below builds on Miyagawa's (2012) claim, it also carries the problem of how the word order is derived. I leave this problem for future research.

[6] Boeckx and Niinuma (2004) account for Japanese object honorification by claiming that *v* has to be in an Agree relation (cf. Chomsky (2000)) with the object (= target of honorification). Object honorification fails if there is another object, and this is an instance of "defective intervention" according to them.

References

Boeckx, Cedric and Fumikazu Niinuma (2004) "Conditions on Agreement in Japanese," *NLLT* 22, 453-480.

Chomsky, Noam (2000) "Minimalist Inquiries: The Framework," *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin et al., 89-155, MIT Press, Cambridge, MA.

Emonds, Joseph (1969) *Root and Structure-Preserving Transformations*, Doctoral dissertation, MIT.

Harada, Shin-Ichi (1976) "Honorifics," *Syntax and Semantics 5: Japanese Generative Grammar*, ed. by Masayoshi Shibatani, 499-561, Academic Press, New York.

Hasegawa, Nobuko (2006) "Honorifics," *The Blackwell Companion to Syntax: Volume II*, eds. by Martin Everaert and Henk van Riemsdijk, 493-543, Blackwell, MA.

Miyagawa, Shigeru (2012) "Agreements That Occur Mainly in the Main Clause," *Main Clause Phenomena: New Horizons*, ed. by Lobke Aelbrecht et al., 79-111, John Benjamins, Amsterdam.

Sakai, Hiromu and Adrian Ivana (2009) "Rethinking Functional Parametrization: A View from Honorification in the Nominal Domain in Japanese," *English Linguistics* 26, 437-459.

Uchibori, Asako (2008) "A Short Note on Japanese Politeness Verb *-des/mas* in Embedded Contexts," *Scientific Approaches to Language* 7, 103-122, Kanda University of International Studies.

The Derivation of Japanese Relative Clauses with Scrambling and Quantifier Float*

Hisashi Morita
Aichi Prefectural University

Keywords: smuggling, movement of NP to its DP, spec, and sideward movement

1. Introduction

This paper will make two new claims with regard to relative clauses in Japanese. One is that long-distance scrambling is employed to move NP (or DP) to CP, spec. The other claim is that the same mechanism as quantifier floating is applied to expose NP out of DP, so that the same NP will be able to merge with a new D (sideward movement) and serves as the head noun of a relative clause.

Let us start with an analysis of English relative clauses. According to Aoun and Li (2003), two different types of derivations are necessary for two types of relatives, *wh*-relatives as in (1) and *that*-relatives as in (2):

(1) John saw the person who$_i$ t_i hit Mary. (*wh*-relative)

(2) John saw the person$_i$ that t_i hit Mary. (*that*-relative)

Since both types are subject to the subjacency condition as in (3), some kind of A' movement is necessary in both relatives.

(3) *John saw the person {who/that} Mary left [after she hit *t*].

Nevertheless, Aoun and Li claim that the derivations of the two types are distinct from each other. More specifically, in the case of *wh*-relatives, a *wh*-element, such as *who* in (1), is an operator which goes through overt A'-movement (so called matching analysis), whereas, in the case of *that*-relatives, a head noun, i.e. *person* in (2), is raised out of the relative clause (so called head-raising analysis).

I will introduce one piece of evidence from Aoun and Li (2003) for the distinction in this paper. Due to reconstruction of the head noun, *that*-relatives exhibit scope interaction while *wh*-relatives do not as follows:

(4) I phoned the two patients {that/who} every doctor will examine tomorrow.

Aoun and Li (2003: 98, 113)

In the case of *that*, the head noun, *two patients*, can take either wide or narrow scope with respect to *every* doctor, but only the wide scope for *two patients* is possible in the *wh*-relative of (4). This difference indicates that the head noun itself goes through movement in *that*-relatives, while it does not in *wh*-relatives.

Next let us turn to Japanese relatives. At a first glance, it is not clear whether any kind of operator movement is involved. Moreover, there are data which seem to support a non-movement analysis as follows:

(5) $[_{DP}[_{DP}[_{CP}\ e_i\ e_j$ kiteiru]
wearing.is
[yoohfuku]$_j$]-ga yogoreteiru][sinsi]$_i$]
suit-Nom dirty.is gentleman
'(Lit.) a gentleman who the suit that (he) is wearing is dirty'

Kuno (1973: 239, adapted)

Suppose that *sinsi* 'gentleman' is generated inside the most embedded CP. Then, if it tries to move across the inner head noun, *yoofuku* 'suit', violation of the subjacency condition is expected contrary to the fact. Thus, one may consider that there is no movement in Japanese relatives

(Murasugi (1991)).[1]

However, there are several pieces of evidence for the existence of movement, only two of which will be presented in this paper due to limited space.[2] First, Japanese relatives show scope interaction between the head noun and an object inside the relative clause as in (6):

(6) [kinoo minna-ga t_i zibun-no ie-de
yesterday everyone-Nom self-Gen home-at
mita] eiga$_i$-no namae-o (zenbu) osiete
saw movie-Gen name-Acc all tell.me
'Tell me all the names of movies that everyone$_j$ watched in his$_j$ house'
'every' >> 'names of movies'; 'names of movies' >> 'every' Morita (2006:122)

As in English *that*-relatives (e.g. (4)), 'names of movies' can take wide or narrow scope with respect to 'everyone' in (6). If the head noun were base-generated in the matrix clause, its narrow scope interpretation would be impossible contrary to the fact. Thus, it is plausible to consider that the head noun is actually base-generated in the object position in the embedded clause first, and then is raised to the matrix clause.

Second, Japanese relatives show anaphoric reconstruction as follows:

(7) Mary-wa [[John$_i$-ga e_j taipusita]
-Top -Nom typed
[<u>karezisin$_i$</u>-no ronbun]$_j$]-o mottekita
kimself-Gen paper-Acc brought
'Mary brought himself$_i$'s paper that John$_i$ typed.' Ishii (1991: 29)

The anaphor, *karezisin* 'himself', can refer to the subject of the relative clause, *John*, which indicates that *karezisin* was first generated inside the relative clause and raised to the matrix clause. Accordingly, Japanese *relatives* are similar to English *that*-relatives; that is, head nouns are raised, which automatically accounts for why *wh*-elements are not employed in Japanese relatives.[3]

2. Two kinds of movement in Japanese relatives

This section will show that there are at least two types of movement involved in Japanese relatives: scrambling as A'-movement to CP, spec and the quantifier floating operation which induces sideward movement of NP out of DP. Let us discuss scrambling first.

2.1. Scrambling and relative clauses

Long-distance scrambling and relative clause constructions in Japanese have a few common characteristics. For example, both exhibit scope interaction and anaphoric reconstruction, the data of which are omitted here. However, these facts are not surprising because both types of constructions require A'-movement and A'-movement generally allows reconstruction. Nonetheless, there is a piece of evidence that the two types of movement are of the same kind. Examine the following sentences:

(8) a. *[riyuu-mo-naku]$_i$ Mary-ga [John-ga
reason-even-without -Nom -Nom
t_i sono setu-o sinziteiru to] omotteiru.
that theory-Acc believe C think
'Without a reason$_i$, Mary thinks [that John believes that theory t_i].'
(Saito 1985: 175)

b. *[Mary-ga [John-ga t_i sono setu-o
-Nom -Nom that theory-Acc
sinziteiru to] omotteiru] [$_{DP}$ riyuu]$_i$.
believe C think reason
'The reason$_i$ [that Mary thinks [that John believes that theory t_i]]

As already noted in Saito (1985) and Murasugi (1991), reason adverbs cannot go through long-distance scrambling as in (8)*a* or

long-distance relativization as in (8)*b*.

Interestingly, according to Morita (2012), long-distance relations in both constructions become possible when numerals, such as *ikutuka* 'several', are attached to the moved elements as follows:

(9) a.[$_{PP}$ikutuka-no riyuu-de]$_i$ Mary-ga
several-Gen reason-at -Nom
[John-ga t_i sono setu-o sinjiteiru to]
-Nom that theory-Acc believe C
omotteiru.
think
'For several reasons$_i$, Mary thinks [that John believes that theory t_i].'

b. [Mary-ga [John-ga t_i sono setu-o
-Nom -Nom that theory-Acc
sinjiteiru to] omotteiru]
believe C think
[$_{DP}$ ikutuka-no riyuu]$_i$.
several-Gen reason
'Several reasons$_i$ [that Mary thinks [that John believes that theory t_i]]

The contrast between (8) and (9) shows that only entity-level expressions, not propositional-level, can go through long-distance scrambling and relativization. Although the reason for the contrast is not clear at the moment, the data independently supports the movement analysis of Japanese relatives.

Moreover, if the discussion above is correct, Japanese relative clauses resort to the same mechanism as long-distance scrambling in order to move NP (or DP) to CP, spec. In other words, A'-movement of the head noun to CP, spec is achieved with scrambling in Japanese relatives (while *wh*-movement is employed in English relatives).

2.2. Quantifier Floating

Theoretically speaking, the head-raising analysis in English and Japanese relative clauses is problematic. The θ-criterion is one because the same noun phrase has to receive more than one θ-role (due to its own A' movement and subsequent sideward movement). To prevent a DP from receiving more than one θ-role, one can adapt Hicks' (2009) smuggling analysis to relative clause constructions. In other words, an NP inside a covert D is released for reuse after A'-movement to CP, spec, and merges with a new D. If the θ-criterion applies to DP, not NP, then two Ds for one NP can satisfy the criterion.

The present paper supports Hicks (2009). In other words, as will be shown below, quantifier floating raises NP to spec of its own DP in the case of Japanese relatives. As a result, the NP can be reused as the head noun by merging with a new D later in the derivation. Furthermore, it implies that DP, spec must be empty in order for the derivation to build a relative clause. There is one piece of evidence for this claim, but before presenting such evidence, let us discuss one anaphor, *zibun*.

Although anaphoric reconstruction (cf. (7)) was presented to support the movement analysis of Japanese relatives in the previous section, one particular type of anaphor, *zibun* 'self', is different from other types of anaphoric elements in that it may not allow reconstruction as follows:

(10) *[$_{DP}$[John$_i$-ga e_j taipusita] [<u>zibun$_i$</u>-no
-Nom typed self-Gen
ronbun]$_j$]
paper
'(Lit.) self$_i$'s paper (that) John$_i$ typed'
Hasegawa (1988: 59)

However, there are cases in which *zibun* can be reconstructed as follows:

(11) [$_{DP}$ [John$_i$-ga e_j taipusita] [zibun$_i$
-Nom typed self
-nituite-no ronbun]$_j$]
-about-Gen paper
'(Lit.) a paper about self$_i$ John typed.

(12) [Mary-ga e_i totta] [zibun$_j$-no shasin]$_i$
-Nom took self-Gen picture
-ga soko-ni aru.
-Nom there-at is
'[Pictures of herself$_j$]$_i$ that Mary$_j$ took t_i are there.' Morita (2012: 77)

The contrast between (10) on one hand and (11) and (12) on the other indicates that reconstruction is possible when *zibun* is complement or adjunct to the head noun. More specifically, I argue that reconstruction of the whole DP is disallowed when *zibun* is at DP, spec as in (10).[4]

There are more data which support the claim that relativization is inhibited when DP, spec is filled. Compare the following examples:

(13) a. *[$_{CP}$ daremo$_i$-ga t_i totta] [$_{DP}$ zibun$_i$-no
everyone-Nom took self -Gen
nanmaika-no shasin]
some-Gen pictures

b. [$_{CP}$ daremo$_i$-ga t_i totta] [$_{DP}$ nanmaika
everyone-Nom took some
-no zibun$_i$-no shasin]
-Gen self-Gen pictures
'Some of their pictures that everyone took'

If *zibun* precedes a numeral such as *nanmaika-no* 'some-Gen' as in (13)*a*, the example becomes ungrammatical. According to Watanabe (2008: 517), the structure of Japanese DP can be the following:

(14) [$_{DP}$ [$_{QP}$ [$_{\#P}$ [$_{CaseP}$ [$_{NP}$]]]]]

Numerals such as *nanmaika-no* are generated under the head of #P and raised to the head of QP. Thus, it is plausible that *zibun*, which precedes, and hence, is higher than *nanmaika-no*, occupies DP, spec. In this configuration, the derivation of a relative clause is disallowed as in (13)*a*.

In contrast, if *zibun* follows *nanmaika-no* as in (13)*b*, the example becomes acceptable because *zibun* is not at DP, spec. To summarize so far, the discussion above has indicated that DP, spec must be vacated in order for a relative clause to be derived.[5]

Moreover, according to Watanabe (2008), NP (CaseP in his paper) can be raised over #P to spec of DP, which separates NP and #P, the result of which is called quantifier floating. Therefore, it is plausible to consider that NP is raised to its own DP, spec to initiate sideward movement, and merge with a new D in the matrix clause later.

There is one piece of evidence for the DP-internal movement. First, consider the following sentence:

(15) daremo -ga [$_{DP}$ zibun-no nanmaika-no
everyone-Nom self-Gen some-Gen
shasin-o] totta.
picture-Acc took
*'Everyone took some pictures of themselves.'
'Everyone took some pictures which they now possess.'

If *zibun* is at DP, spec as in (15), the sentence can mean 'Everyone took some pictures which they now possess,' but not 'Everyone took some pictures of themselves.'

Next compare the following examples:

(16) a daremo-ga [$_{DP}$ nanmaika-no <u>zibun</u>
everyone-Nom some-Gen self
<u>-no</u> shasin-o] totta.
-Gen pictures-Acc took

b. daremo-ga [$_{DP}$ [$_{NP}$ <u>zibun-no</u> shasin-o]$_i$
everyone-Nom self-Gen pictures-Acc
nanmaika t_i] totta.
some took

In (16)*a*, the order between *zibun* and *nanmaika-no* in (15) is reversed. Since *zibun* is now understood as complement of *shasin* 'picture', the interpretation that everyone took some pictures of themselves is available unlike (15). In addition, (16)*b* is a case of quantifier floating, where the numeral seems to be "floated" out of DP. According to Watanabe (2008), however, NP is moved within its own DP to a position higher than #P, that is, to DP, spec.

Interestingly, (16)*b* has the same interpretation as (16)*a*. The contrast of interpretation between (15) on one hand and (16)*a* and *b* on the other suggests that the quantifier floated example, (16)*b*, is derived from (16)*a*, not from (15). If DP, spec is occupied by *zibun* as in (15), quantifier floating is blocked because NP has nowhere to move to, which is why (15) cannot have the interpretation of (16)*b*.

Moreover, as shown already, if DP, spec is filled, relativization is also prevented. These two facts receive a simple and logical explanation if subextraction of NP through DP, spec is essential for the derivation of relative clauses. Accordingly, the present paper supports Hicks' (2009) smuggling analysis in the case of Japanese relative constructions.

3. Conclusion

This paper has shown that two overt operations are involved to derive relative clauses in Japanese: scrambling and quantifier floating. Scrambling moves DP to CP, spec, where sideward movement takes NP out of DP and merges it with a new D. However, as it is, the derivation cannot see the NP inside DP, so some kind of movement of the NP to its own DP, spec must be applied to expose the NP to the derivation. The present paper has shown that it is the same mechanism as quantifier floating that moves NP to its own DP, spec in Japanese.

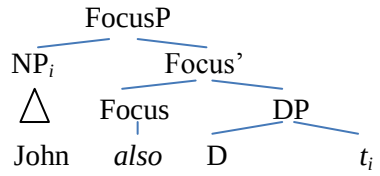
However, one might wonder what happens in the case of English *that*-relatives. According to Aoun and Li (2003), they also induce head-raising. If so, English needs to have a mechanism that lets NP move to its DP, spec for sideward movement. However, no quantifier floating is available in English.[6] Let me conclude the paper by suggesting one solution.

Focus adverbs such as *also* can appear before or after the noun as follows:

(17) a. John also went there.
b. Also John went there.

It is possible that (17)*a* is derived from (17)*b* as follows:

(18)



Due to the focus movement of NP to the edge of DP, the derivation can now see the NP. Suppose the Focus head is covert in the case of *that*-relatives. Then head-raising is possible even in English relatives.

FOOTNOTES

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1 Following Sakai (1994), Hoshi (2004) claims that *sinsi* is actually base-generated in the outer relative clause as a major subject. If so, the example does not count as a counterexample to the movement analysis.

2 For other pieces of evidence, refer to Kitao (2005, 2009, 2011) and Morita (2006, 2012).

3 See also fn. 4 for an argument that Japanese relatives do not have something comparable to *wh*-relatives in English, where lexical items other than noun heads go through A'-movement.

4 Note that (10) is grammatical when *zibun* refers to the matrix subject as follows:

(i) Mary$_j$-wa [John-ga e taipusita] [zibun$_j$-no
-Top -Nom typed selg-Gen
ronbun-o] nakusitesimatta.
paper-Acc lost
'Mary lost her paper that John typed.'

There are at least two ways to explain the derivation of (i). One is to assume that a covert operator goes through A'-movement and matches with the head noun as in *wh*-relatives in English. However, this approach is not tenable according to the present paper, which claims that A'-movement in Japanese relatives is scrambling, because scrambling cannot apply to covert elements.

The other way is simply that only *ronbun* 'paper' goes through A'-movement and later merges with *zibun*. If so, it suggests that Japanese relative clauses employ only one type, that is, head raising, unlike English, which has head raising and matching methods according to Aoun and Li (2003).

5 One may wonder why many speakers feel (7) better than (10). It may be simply contextual. The following example shows that *karezisin* before a numeral blocks relativization:

(i) *Peter-wa John$_i$-ga taipusita [karezisin$_i$
-Top -Nom typed himself
-no sambon -no rombun-o] mottekita
-Gen three -Gen paper-Acc brought
'(Lit.) Peter brought himself$_i$'s paper that John$_i$ typed.'

(i) is ungrammatical because *karezisin* sits at DP, spec, which shows that there is no difference between *zibun* and other anaphoric elements as far as reconstruction is concerned.

6 *All* and *both* may be presented as evidence for quantifier floating in English, but unlike Japanese, the phenomenon is limited to only a few items such as *all* and *both*. Moreover, they cannot be applied to (non-pronominal) objects unlike Japanese. According to Doetjes (1992), they are simply adverbials.

REFERENCES

Aoun, Joseph and Y-H Audrey Li (2003). *Essays on the Representational and Derivational Nature of Grammar*, MIT Press, Cambridge, Massachusetts.

Chomsky, Noam (1977). "On WH-movement," in P. Culicover, T. Wasow and A. Akmajian (eds.), *Formal Syntax*, Academic Press, New York, 71-132.

Doetjes, Jenny (1992). "Rightward Floating Quantifiers Float to the Left," *The Linguistic Review* 9, 313-332.

Hasegawa, Nobuko (1988) "Remarks on 'Zero Pronominals': In Defense of Hasegawa (1984/85)," in M. Nakayama and W. Tawa (eds.), *Proceedings of Japanese Syntax Workshop: Issues on Empty Categories*, 50-76.

Hicks, Glyn (2009) "Tough-Construction and Their Derivation," *Linguistic Inquiry* 40, 535-566.

Hornstein, Norbert (2001). *Move! A Minimalist Theory of Construal*, Blackwell, Oxford.

Hoshi, Koji (2004). "Remarks on N-Final Relativization in Japanese," *English Language and Literature* 44, Keio University, 113-147.

Ishii, Yasuo (1991). *Operators and Empty Categories in Japanese*, doctoral dissertation, University of Connecticut.

Kitao, Yasuyuki (2005). "Movement and Deletion Theory: A Study of Relative Clauses," *Gengobunkagaku (Journal of Language and Culture)* 14, Osaka University, 47-71.

Kitao, Yasuyuki (2009). *The Nature of Relativization: A Minimalist Perspective*, doctoral dissertation, Osaka University.

Kitao, Yasuyuki (2011). "The Presence of Head-raising and Resumptive-stranding in Japanese Relative Clauses," *Acta Linguistica Hungaria* 58, 313-335.

Kuno, Susumu (1973). *The Structure of the Japanese Language*, MIT Press, Cambridge, Massachusetts.

Morita, Hisashi (2006). "The Promotion Analysis of Japanese Relative clauses," *English Linguistics* 23:1, 113-136.

Morita, Hisashi (2012). "Evidence for Movement in the Derivation of Relative Clauses in Japanese," *Mulberry* 61, 67-94, Department of British and American Studies, Aichi Prefectural University.

Murasugi, Keiko (1991). *Noun Phrases in Japanese and English: A Study in Syntax Learnability and Acquisition*, doctoral dissertation, University of Connecticut.

Rizzi, Luigi (2006). "On the Form of Chains: Criterial Positions and ECP Effects," in L.L.-S. Cheng and N. Corver (eds.), *WH-Movement: Moving On*, MIT Press, Cambridge, Massachusetts, 97-133.

Saito, Mamoru (1985). *Some Asymmetries in Japanese and Their Theoretical Consequences*, doctoral dissertation, MIT.

Sakai, Hiromu (1994) "Complex NP Constraint and Case-Conversions in Japanese," in M. Nakamura (ed.), *Current Topics in English and Japanese*, Hituzi Shobo, Tokyo, 179-203.

Watanabe, Akira (2008). "The Structure of DP," in S. Miyagawa and M. Saito (eds.), *The Oxford Handbook of Japanese Linguistics*, Oxford University Press, Oxford, 513-54.

Japanese Clausal Coordination and Inferential Processing Units*

Miyuki Nagatsuji
Nara Women's University

Keywords: clausal coordination, inference, propositions, information units

1. Introduction

English *and*-conjunctions can be used to convey a range of inferential relations between the states of affairs described in the conjuncts. For example, in (1), John's missing the train and his being late for work are understood as having a cause–consequence relation. In (2), in contrast, the speaker's keeping in touch and his or her going out for a meal with some other person are interpreted as parallel.

(1) John missed the usual train and he was late for work.

(2) We still keep in touch, and we sometimes go out for a meal.

Given a context, however, the hearer might be able to go further in comprehension of (1) and (2). A conjoined proposition expressing causality in (1), "John missed the usual train and, as a result, he was late for work," could allow the derivation of an implicature such as "John will get a long lecture from his boss." On the other hand, the propositions of the individual conjuncts in (2) could lead to the same implicature, "The speaker and the person referred to have been and remain good friends." The point is that these sentences differ in terms of which propositions can function as *inferential processing units*, that is, information units for the drawing of inferences when *and*-conjunctions are interpreted.

By contrast with the English situation, clausal coordination in Japanese corresponding to the *and*-structure can be expressed with several different linguistic forms (Ohori 2004: 54–56). Typical examples include the adverbial form of a predicate, called *ren'yō-kei* in Japanese, and the conjunctive suffixes *-te*, *-tari*, and *-shi*.

(3) Hanako-ga kagi-o ***toridashi***,
Hanako-Nom key-Acc *take-out (adv. form)*
Taro-ga doa-o ake-ta.
Taro-Nom door-Acc opened
'Hanako took out the key and Taro opened the door (with it).' [Temporal]

(4) Taro-wa inhuruenza-ni kakat-***te***,
Taro-Top influenza-Dat get-*te*
gakkō-o isshūkan yasun-da.
school-Acc for-a-week was-absent
'Taro got the flu and he was absent from school for a week.' [Causal]

(5) Shi-no kaihatsu jigyō de,
city-Gen development program in
atarashii dōro-ga kensetsusa-re-***tari***,
new road-Nom be-constructed-*tari*
jidōsha kōjō-ga yūchisa-re-***tari*** shi-ta.
car factory-Nom be-invited-*tari* did
'In the development program of the city, new roads were constructed and car factories were invited.' [Paratactic]

(6) Yūbinuke-wa tegami de
mail-box-Top letter with
ippaidat-ta-***shi***, ie-no akari-wa
was-crammed-*shi* house-Gen light-Top
subete kie-te-i-ta.
all was-off
'The mail box was crammed with letters, and all the lights in the house were off.' [Paratactic]

(3)–(6) indicate that these four structures can

be used in a similar way to English *and*-conjunctions. Then, do all these structures contain proposition patterns that function similarly as inferential processing units allowing the comprehension of each structure in the same way?

The present paper shows that there are two proposition patterns used as inferential processing units in Japanese clausal coordinations and proposes that these inferential processing units are a factor in distinguishing the various structures. The organization of the paper is as follows: section 2 introduces the inferential processing units of *and*-conjunctions on the basis of Blakemore and Carston's (2005) analysis. Section 3 examines the inferential processing units of Japanese clausal coordinating structures from a relevance-theoretic perspective (Sperber and Wilson 1995). Section 4 is considers their plausibility and mentions some implications of the analysis. Section 5 is a conclusion.

2. The Inferential Processing Units of English *and*-Conjunctions

Blakemore and Carston (2005) claim that every utterance of the form *P and Q* explicitly communicates three propositions: a conjoined proposition [P & Q] and the propositions of the individual conjuncts [P] [Q]. These propositions are used as inferential processing units, meaning that they play the role of input for a series of inferences.

Consider (7), in a context where Bob has broken his leg:

(7) Ann: Are you entitled to accident compensation?
Bob: Well, a manhole was left uncovered and I fell in. (Carston 2002: 228)

Bob's utterance will be understood by the hearer, Ann, as an indirect answer to her question. She will access a contextual assumption, "If a person falls in a manhole because it is left uncovered, then he is entitled to accident compensation," and use this and Bob's utterance as premises from which to derive the implicature "Bob is entitled to accident compensation." For the proper derivation of the implicature, Bob's utterance should be interpreted to convey something like "A manhole was left uncovered and, as a result, [Bob] fell in," since the conditional clause of the assumption needs to be satisfied. The *and*-conjunction makes it possible to derive the implicature as an indirect answer to Ann's question only when it functions as a conjoined proposition that includes a causal relation. This means that *and*-conjunctions exploit a conjoined proposition [P & Q] as an inferential processing unit.

On the other hand, there are some cases in which the propositions of the individual conjuncts [P] [Q] are used in interpreting *and*-conjunctions. Imagine that a person utters (8) when talking with friends about someone who has excellent marriage prospects:

(8) Hermione is very beautiful, and (furthermore) she comes from a wealthy family.
(Blakemore and Carston 2005: 574)

The state of affairs described in each conjunct here is taken to be evidence for the assumption that Hermione's marriage prospects are excellent. That is, the proposition of the first conjunct about Hermione's beauty, used as a premise, leads to the implicature that Hermione has excellent marriage prospects. Then, the proposition of the second conjunct, about her coming from a wealthy family, is used as another premise, with the same implicature being derived. That is, the individual propositions function as distinct premises in

distinct inferences but result in the same conclusion; therefore, the second conjunct strengthens the implicature of the first by providing further evidence. It follows that *and*-conjunctions also exploit the propositions of the individual conjuncts as inferential processing units. The next section focuses on Japanese clausal coordinating structures.

3. The Inferential Processing Units of Japanese Clausal Coordination

3.1 The Adverbial Form and *-te* Structures

Section 3.1 analyzes which propositions function as inferential processing units in the interpretation of the adverbial form and *-te* structures. The adverbial form of a predicate in a clause *P* connects another clause *Q* in the form *P (adverbial form), Q*, while the suffix *-te* connects two clauses in the form *P-te, Q*. The pattern of propositions used as inferential processing units for both structures is the same as that for *and*-conjunctions: a conjoined proposition [P & Q] and the propositions of the individual clauses [P] [Q].

Consider (9), which is understood to convey that Taro's missing the train caused him to be late for work.

(9) Taro-wa itsumono densha-ni
Taro-Top usual train-Dat
{a. ***noriokure*** / b. noriokure-***te***},
miss (adv. form) miss-*te*
kaisha-ni chikokushi-ta.
office-Dat was-late
'Taro missed the usual train and he was late for work.'

Given a context where Taro's boss gives a long lecture to an employee who is late for work for some reason other than sickness, the hearer will access a contextual assumption, "If an employee is late for work because, for example, he has missed a train, the boss will give him a long lecture," and use this and the utterance in (9a, b) as premises to derive the implicature "Taro will get a long lecture from his boss." To ensure the derivation of this implicature, (9) should function as a conjoined proposition including a causal relation such as "Taro missed the usual train and, as a result, he was late for work," since an interpretation of the relation between the two events is necessary for the conditional clause of the assumption to be satisfied. The interpretation of (9) in this context indicates that the adverbial form and *-te* structures exploit a conjoined proposition [P & Q] as an inferential processing unit.

On the other hand, a conjoined proposition does not seem to contribute to the interpretation of (10), in which the speaker is asked about her friendship with some other person and answers as follows:

(10) Watashitachi-wa imademo renraku-o
we-Top still contact-Acc
{a. ***tori*** / b. tot-***te***}, tokidoki
take (adv. form) take-*te* sometimes
gohan-o tabe-ni iku.
meal-Acc eat-Purp go
'We still keep in touch, and we sometimes go out for a meal.'

The states of affairs described in these clauses can be seen to be evidence for how long and to what extent the speaker and the person referred to have been getting along. The propositions of the individual clauses are used as premises in distinct inferences, yielding the same implicature about their strong and lasting friendship; the second clause adds another piece of evidence and strengthens the implicature. Thus, the propositions of the clauses function separately but contribute collectively to the interpretation of the sentence as an indirect answer, which suggests that the adverbial form and *-te* structures also

exploit the individual propositions [P] [Q] as inferential processing units.

3.2 The *-tari* and *-shi* Structures

Section 3.2 examines the pattern of propositions used as inferential processing units in the comprehension of the *-tari* and *-shi* structures. The suffix *-tari* takes the form *P-tari, Q-tari suru* ('do'), while *-shi* takes the form *P-shi, Q*. These structures, unlike the adverbial form and *-te* structures, do not exploit a conjoined proposition [P & Q] but only the propositions of the individual clauses [P] [Q].

Consider (11), with the same context as (10):

(11) Watashitachi-wa imademo renraku-o
we-Top still contact-Acc
{a. tot-***tari*** / b. toru-***shi***}, tokidoki
take-*tari* take-*shi* sometimes
gohan-o tabe-ni {a. it-***tari*** suru / b. iku}.
meal-Acc eat-Purp go-*tari* do go
'We still keep in touch, and we sometimes go out for a meal.'

The interpretation of (11) will be similar to that of (10); the hearer understands the events described in the clauses as evidence and derives as an indirect answer the implicature "The speaker and the person referred to have been (and are) good friends." In other words, the propositions of the individual clauses function as two distinct premises leading to the same implicature. Therefore, the *-tari* and *-shi* structures exploit the individual propositions [P] [Q] as inferential processing units.

However, no conjoined proposition seems to be used for the drawing of inferences in the interpretation of these structures. Thus, as shown in (12), both structures fail to explicitly communicate that Taro's missing the train caused his lateness:

(12) Taro-wa itsumono densha-ni
Taro-Top usual train-Dat
{a. *noriokure-***tari** / b. *noriokure-ta-***shi**},
miss-*tari* missed-*shi*
kaisha-ni
office-Dat
{a. *chikokushi-***tari** shi-ta / b. *chikokushi-ta}.
be-late-*tari* did was-late
'John missed the usual train and he was late for work.' [intended]

Given the same context as in (9), a conjoined proposition expressing causality would not be recovered from (12), so the implicature "Taro will get a long lecture from his boss," which the adverbial form and *-te* structures in (9) can give rise to, would not be derived either. The *-tari* and *-shi* structures might not be used for the narrative purpose of describing events, which implies that they do not exploit a conjoined proposition [P & Q] as an inferential processing unit.

Indeed, an embedding test should help us to confirm that conjoined proposition [P & Q] does not function as an inferential processing unit in the interpretation of the *-tari* and *-shi* structures. Following Carston (2002: 227–228), if a coordinating structure is embedded in a construction with a logical operator, such as a disjunctive or a comparative, and the interpretation that includes a relation between the events described in the clauses falls within the scope of the operator, then it is likely that the structure exploits a conjoined proposition as an inferential processing unit. Imagine that a boss gives a lecture to employees who have engaged in more than one bad behavior and that the combination of behaviors affects how long the lecture continues. The *-tari* and *-shi* structures embedded in a comparative cannot be used to state which combination will lead the boss to give a shorter lecture:

(13) Kaisha-ni
office-Dat
{a. ??chikokushi-***tari*** / b. *chikokusuru-***shi***},
be-late-*tari* is-late-*shi*
jōshi-ni shitsureina kuchi-o
boss-Dat rude mouth-Acc
{a. ??kii-***tari*** suru / b. *kiku}
work-*tari* do work
yorimo, kaisha-ni
than office-Dat
{a. ??chikokushi-***tari*** / b. *chikokusuru-***shi***},
be-late-*tari* is-late-*shi*
sōji tōban-o
cleaning turn-Acc
{a. ??sabot-***tari*** suru / b. *saboru}
skip-*tari* do skip
hō-ga mada mashida.
side-Nom still preferable
'A lecture to a person who has been late for work and skipped his turn to clean (the room) is shorter than one to a person who has been late for work and spoken to the boss rudely.'

In this context, the interpretation of an additional relation between the states of affairs described in the clauses is necessary, in that it is the accumulation of two bad behaviors that leads to the boss's (longer) lecture. However, the relation expressed by each -*tari* or -*shi* structure of (13) does not fall within the scope of the comparative operator; given the nature of the embedding test above, these structures are unacceptable, since they are not understood as a conjoined proposition including an additional relation. In fact, the adverbial form and -*te* structures, which exploit a conjoined proposition [P & Q] as an inferential processing unit, are acceptable when embedded in a comparative, as shown in (14):

(14) Kaisha-ni
office-Dat
{a. ***chikokushi*** / b. chikokushi-***te***},
be-late (adv. from) be-late-*te*
jōshi-ni shitsureina kuchi-o
boss-Dat rude mouth-Acc
kiku **yorimo**, kaisha-ni
work than office-Dat
{a. ***chikokushi*** / b. chikokushi-***te***},
be-late (adv. form) be-late-*te*
sōji tōban-o saboru **hō-ga**
cleaning turn-Acc skip side-Nom
mada mashida.
still preferable
'A lecture to a person who has been late for work and skipped his turn to clean (the room) is shorter than one to a person who has been late for work and spoken to the boss rudely.'

Thus, the embedding tests show that a conjoined proposition does not play a role in the interpretation of the -*tari* and -*shi* structures; that is, these structures exploit the propositions of the individual clauses [P] [Q], but not a conjoined [P & Q].

4. The Key Factor in Distinguishing Japanese Clausal Coordination Structures

We have seen above that there are two Japanese proposition patterns that function as inferential processing units and that Japanese clausal coordinating structures can be classified on the basis of them: one consisting of a conjoined [P & Q] and the individual [P] [Q], for the adverbial form and -*te* structures, and the other of only the individual [P] [Q], for the -*tari* and -*shi* structures. Section 4 demonstrates that these patterns and this classification are plausible.

The two patterns suggest that the key point is whether or not a conjoined proposition [P & Q] functions as an inferential processing unit. Consider the acceptability of each of the four

structures in a context where a conjoined proposition plays a role as an inferential processing unit:

(15) A chiten-wa yuki-ga
A point-Top snow-Nom
{a. ***toke***, / b. toke-***te***, }
melt (adv. form) melt-*te*
{c. *toke-***tari**, / d. ??toke-ta-***shi***,}
melt-*tari* melted-*shi*
B chiten-wa yuki-ga
B point-Top snow-Nom
{a. nokot-te-iru / b. nokot-te-iru}
remain remain
{c. *nokot-te-i-***tari** suru / d. ?? nokot-te-iru}
remain-*tari* do remain
kara, A chiten yori
because A point than
B chiten-no hō-ga ondo-wa
B point-Gen side-Nom temperature-Top
hikui.
low
'The temperature at Point B is lower than that at Point A because the snow at Point A has melted away and the snow at Point B remains.'

Assume that some children are discussing at which of the two points mentioned the temperature is lower. The individual propositions of the clauses in each structure—that the snow at Point A has melted away and that the snow at Point B remains—are parallel, in that the speaker is straightforwardly describing what he or she observes. However, the conclusion in the main clause, "The temperature at Point B is lower than that at Point A," cannot be logically derived from these propositions alone; to achieve this conclusion, both observations need to be focused on together and compared from the viewpoint of how much snow remains. This means that a conjoined proposition [P & Q] rather than the individual propositions [P] [Q] is used in the interpretation of (15), leading to the prediction that only the adverbial form and *-te* structures will be acceptable, since they exploit a conjoined [P & Q]. This prediction is confirmed by the difference between the acceptability of the adverbial form and *-te* structures in (15a, b) and the unacceptability of the *-tari* and *-shi* structures in (15c, d). Thus, the two proposition patterns discussed above and the corresponding classification of the four structures are on the right track, and inferential processing units are a factor in distinguishing Japanese clausal coordination structures.

Important implications emerge from a comparison of clausal coordination between English and Japanese in terms of inferential processing units. Both English *and*-conjunctions and Japanese clausal coordinating structures can be represented with the same logical structure, 'P & Q.' Thus, the same patterns of propositions should function as inferential processing units, because both conjoined [P & Q] and individual [P] [Q] follow from the truth-functional property of the logical operator *&*. However, this idea is not compatible with the analyses so far. Recall that English *and*-conjunctions exploit a conjoined proposition [P & Q] as well as the individual propositions of the clauses [P] [Q] as inferential processing units; Japanese, on the other hand, has the *-tari* and *-shi* structures, which exploit the individual [P] [Q] but not a conjoined [P & Q]. This indicates that the assumption that the same patterns of propositions function as inferential processing units in the comprehension of clausal coordinating structures cross-linguistically does not hold true. Therefore, clausal coordination in natural languages might not be explainable by a unitary account, and

cross-linguistic differences in inferential processing units could be a key factor.

5. Concluding Remarks

The present paper proposed that Japanese clausal coordination exploits two proposition patterns as inferential processing units and that they are a factor in distinguishing various structures: a conjoined proposition [P & Q] as well as the propositions of the individual clauses [P] [Q] for the adverbial form and -*te* structures, and only the individual [P] [Q] for the -*tari* and -*shi* structures. The difference in patterns between English *and*-conjunctions and the corresponding Japanese structures may yield helpful insights toward a full picture of clausal coordination in natural languages. For instance, are different patterns involved in different discourse functions? This will be my future work.

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References

Blakemore, Diane (1997) "Restatement and Exemplification: A Relevance Theoretic Reassessment of Elaboration," *Pragmatics and Cognition* 5(1), 1-19.

Blakemore, Diane and Robyn Carston (2005) "The Pragmatics of Sentential Coordination with *and*," *Lingua* 115, 569-589.

Carston, Robyn (2002) *Thoughts and Utterances: The Pragmatics of Explicit Communication*, Blackwell, Oxford.

Mihara, Ken'ichi (2010) "Ren'yōkei no Honshitsu (The Nature of Adverbial Forms)," *Nihongo, Nihon Bunka Kenkyu* (Studies in Japanese Language and Culture) 20, 1-9.

Mihara, Ken'ichi (2011) "*Te*-Kei Setsu no Imi Ruikei (The Semantic Classification of *te*-Clauses)," *Nihongo, Nihon Bunka Kenkyu* (Studies in Japanese Language and Culture) 21, 1-12.

Moriyama, Takuro (1995) "Heiretsu Jutsugo Kōbun Kō: *tari*, *toka*, *ka*, *nari* no Imi, Yōhō o Megutte (A Study of Paratactic Constructions for Predicates: The Meanings and Usage of *tari*, *toka*, *ka*, and *nari*)," *Fukubun no Kenkyū* (Studies in Complex Sentences) Book One, ed. by Yoshio Nitta, 127-149, Kuroshio Shuppan, Tokyo.

Nagatsuji, Miyuki (2012) "Nihongo no Setsuzoku-Joshi *shi* ni Kōdokasareru Imi (The Meaning Encoded by Japanese Conjunctive Suffix *shi*)," *KLS* 32, 206-217.

Nakamata, Naoki (2009) *Nihongo Heiretsu-Hyōgen no Taikei to Kijutsu* (A Systematic Description of Paratactic Expressions in Japanese), Doctoral dissertation, Osaka Prefecture University.

Nihongo Kijutsu Bunpō Kenkyūkai, ed. (2008) *Gendai Nihongo Bunpō 6: Fukubun* (The Grammar of Contemporary Japanese 6: Complex Sentences), Kuroshio Shuppan, Tokyo.

Ohori, Toshio (2004) "Coordination in Mentalese," *Coordinating Constructions*, ed. by Martin Haspelmath, 41-66, John Benjamins, Amsterdam.

Sperber, Dan and Deirdre Wilson (1995) *Relevance: Communication and Cognition* 2nd ed., Blackwell, Oxford.

Wilson, Deirdre and Dan Sperber (1993) "Linguistic Form and Relevance," *Lingua* 90, 1-25.

Implicature for Plurals in Child Grammar

Terue Nakato-Miyashita and Tom Roeper
Kitasato University and
University of Massachusetts, Amherst

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1. INTRODUCTION

Is there a definable *interface* that captures the interaction of syntax and semantics? An acquisition perspective provides a unique insight into stages that make the two closely intertwined systems visible.

We propose these two principles,

1. Economy Principle: acquisition follows Economy of Representation (see Pérez-Leroux and Roeper (1999)), beginning with simple structures.
2. Implicatures are computed locally on structures, in contrast to *global* implicatures (Sauerland (to appear)). We argue that Maximal Projections (MPs) are the locus of implicatures because they are Phases which must be interpreted.

The claim has a consequence: implicatures are not required nor necessarily computed below the MP level, for instance the DP level. This has a cross-linguistic dimension: Languages that lack such MPs, if they have only NPs for instance, then implicature computation will not be required.

If acquisition proceeds through stages where MPs are not yet acquired, then implicatures will not be computed at those points. This approach opposes claims that implicatures are acquired all at once at a later stage.

In the semantics of English, interpretation of definite plurals is semantically determined but that of bare plurals is not. The definite *the* can be defined as an operator associated with the notion of maximality (Sharvy (1980), Link (1983), Chierchia (1998)). The operator (ι) is defined as a function which picks up the maximal entities given in a set as in (1a), which results in the uniqueness/maximality presupposition required for (1b) and (1c).

(1) a. ι X = the largest member of X if there is one (elese, undefined)
b. the dogs = ι DOGS = the largest plurality of dogs
c. the dog = ι DOG = the only dog (if there is one) (Chierchia (1998: 346))

If such a presupposition is not satisfied, a sentence with a definite is false. Bare plurals, in contrast, do not require this presupposition and may allow singular reference as in (2).

(2) Does your office have windows?
(Sauerland et al. (2005))

Adult speakers accept (2) and may answer "Yes, one" (Sauerland (2003), Sauerland et al. (2005), Spector (2007)). Singular reference is contextually fixed as exemplified in the contrast between (2) and (3):

(3) #Does a dog have tails?

(2) and (3) differ in lexical choice which changes their acceptability: (3) is unnatural, while (2) is fine. We know that dogs have only one tail, which makes (3) infelicitous for adults because adults compute an implicature. There is an alternative: Does a dog have a tail?[1]

Children seem to misunderstand plurals. They answer "yes" to the question (4b) in the context (4a) (Caponigro et al. (2012)), and to the question (5) (Sauerland et al. (2005)).

(4) a. Cookie Monster loves cookies but not onions. Some cookies and onions are on the plate.
b. Does Cookie Monster like the things on this plate?

(5) Does a dog have tails?

Modyanova and Wexler (2008) suggest that children simply lack a notion of maximality. However, we believe that the child's determination of maximality is itself a complex and not understood phenomenon. If a maximality comprehension is incomplete, then we predict inconsistent yes/no answers.

Suppose a context where a man wants vegetables and he buys two onions and one potato. If we ask the question in (6a), it is not

clear that the answer is "no" because a plural must be represented at the DP node above conjunction, revealed by Agreement: The man and woman ***are*** here. Now if we add articles, new DPs, below conjunctive DP (6b), the answer is clearly "no." (6c) is ambiguous depending on whether the determiner *the* bracketed with *onions* ([the onions]) or both ([the [onions and potatoes]).

(6) a. Did the man buy onions and potatoes?
b. Did the man buy **the** onions and **the** potatoes?
c. Did the man buy **the** onions and potatoes?

Our experiment is the first to address these conjunctive readings for children and adults.

Our hypothesis is that (a) a child does not initially compute an implicature for *the* because (b) the child has not projected a DP but only an NP. Economy of Representation dictates the minimal structure until there is evidence of DP. In effect, the child assumes Japanese until evidence of English is clear.

Nominals in UG have diverse functional projections above NP. [2] If UG links implicatures to MPs, then they must be recognized before implicatures apply. We assume that implicature computation is universal, hence unlearned.

Therefore number interpretation is acquired stepwise. Languages with only NP exist, therefore, the child's first projections are nominal, which are number neutral; languages with non-maximal version of definiteness exist, therefore the definite does not require maximality, that is, the child may not first grasp that *the* is definite. To have a full grasp of plurals, children need a full representation of DP. If DP is a Phase, then it must be interpreted. Thus specification of semantic features on (in)definite determiners is needed to enable children to compute implicatures by comparing alternative forms. Therefore interpreting plurals is difficult initially.

We further consider adult response to (7). Imagine that John loves only *one* dog but *many* cats. Most adults do not have a clear grammaticality intuition about (7). It seems "unnecessary" to object to a buried singular in a situation referring to plural animals:

(7) Is John a dog-lover/ a dog and cat-lover?

The incorporated noun is below the DP level and therefore has no number interpretation. We argue that the same logic holds for plural nouns below DP under coordination, because implicatures do not have to be computed below the MP level of interpretation.

2. ASSUMPTIONS ON ADULT GRAMMAR

Chierchia (1998) argues that the semantics associated with root nouns is parametrized : a mass/kind semantics is a default value. Most syntactic literature assumes that NP has extended functional category (FC) projections such as DP and NumP (Longobardi (2001), Schmitt and Munn (2002), Munn and Schmitt (2005) among others). Another shared assumption is that a projection associated with number is included in projections above NP, such as NumP or φP (Sauerland (2003) among others). Thus the semantics of number morphology and determiners, and implicatures have to be computed at the projections above NP.

Given a layered structure, a question arises with respect to where and how are number-interpretations given. We suggest they should coincide with Agreement at DP, not at a lower NP. Thus for [D [NP and NP]], the NPs become a plural at the DP level as in (8).

(8) [$_{DP}$ The [$_{NP}$ man] and [$_{NP}$ woman]] are here.

It is natural that DP should be the level for implicatures since the definite *the* also imposes maximality. Then, This is consistent with Chierchia's view (p.c.), that implicatures should have local domains. We argue that they should fit Phase interpretation as well (though where Phases are remains debated). Bare plurals have an invisible DP, though the child may not see it at first.

Though still controversial, we assume, following Sauerland (2003) and Spector

(2007), that plurals are semantically unmarked: Their denotation consists of all atomic individuals and all non-atomic individuals defined by summing these atomic individuals. The interpretation of definite plurals is unambiguously determined at DP because the definite *the* semantically picks up the individual which includes the maximal entities. However, the interpretation of bare plurals is not semantically determined at the level of DP. Although they have a DP-projection, nothing semantically must pick up one of the available choices. A *pragmatic* implicature allows their interpreation to be contextually fixed. The atomic individuals remain in the available choices, so singular reference is allowed. If we suppose that there are three dogs in a given context, the interpretations of *the dogs* and *dogs* are illustrated as in (9a) and (9b), respectively.

(9) a. DP = {a+b+c}

D NP = {a, b, c, a+b, b+c, a+c, a+b+c}
the dogs

b. DP = {a, b, c, a+b, b+c, a+c, a+b+c}

D NP = {a, b, c, a+b, b+c, a+c, a+b+c}
dogs

3. A HYPOTHESIS ABOUT CHILD GRAMMAR AND OUR PREDICTIONS

A grammar with a minimal representation, under Economy of Representation, makes early English like Japanese, where number is not marked on nominal heads and they are number neutral: English children could pass through a Japanese stage, but not the reverse. [3]

Starting from the grammar without "DP," English-learning children have to project FCs above NP, based on recognition of *the*. Even they have DP, they still have to associate the uniqueness/maximality presupposition with it. That is, they have to fix semantic features that force pragmatic interpretation. Here again, UG offers variations. When the definite determiner is used with plural nouns, maximality is required in English but not in Salish. [4] Therefore we argue that children begin with the non-maximality version of definiteness (see Pagliarini et al. (2012)).

Our earlier work (Nakato-Miyashita (2011)) has shown that 3- to 6-year-olds fail to grasp number-morphology if number is marked only on nominals. Also, maximality and implicatures have been argued to occur in the 5-to-7-year range (see Modyanova and Wexler (2008), Caponigro et al. (2012), Huang and Snedeker (2009)). Then, we predict a) late recognition of plural interpretation, b) further delay for bare plurals, and c) difficulty rejecting plurals for a singular reference when there is a conflict between context and syntax with conjoined nominals, which holds for adults as well:

(10) Children will not reject a plural for a singular reference until (a) DP is represented with fully specified features and (b) implicatures are computed.

- **1st stage: Grammar without "DP": Number Neutral**
  Children can reject singular reference
  for neither definite nor bare plurals
  2nd stage: Grammar with non-maximal version of definiteness
  Children can reject singular reference
  for neither definite nor bare plurals
  3rd stage: Grammar with DP and maximal version of definiteness, but without implicatures
  Children can reject singular reference
  for definite plurals but **not for bare plurals**
  4th stage: Grammar with DP, maximal version of definiteness, and implicatures
  Children can reject singular reference
  for both definite and bare plurals,
  but can**not do so when two NPs are conjoined below DP level** just as adults

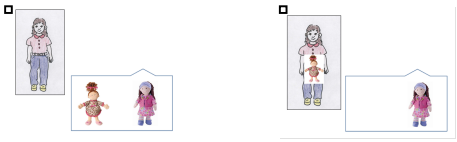
If implicatures are generated locally and MPs vary in UG, then a child who determines the content of determiners also must determine where implicatures will be computed.

4. EXPERIMENT 1

We conducted two TVJT experiments. The first one was conducted with 50 6-to-8-year-olds, employing an indefinite singular, a bare plural or a definite plural ((11)).

(11) Picture 1: A girl is looking at two dolls.
Instruction: This is Suzi. She is looking at dolls that she likes.
Picture 2: The girl is holding one of the two dolls.

Test Sentence: Did Suzi take {**a** doll / dolls / **the** dolls}?

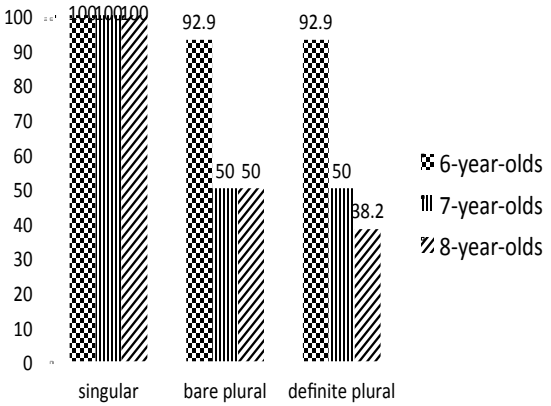


Picture 1 Picture 2

The adult responses are "yes" for indefinite singulars and "no" for bare and definite plurals.[5] We predict that younger children will have difficulty rejecting singular reference for both bare and definite plurals. The rejection rates goes up as children get older but difference is expected between bare and definite plurals: It is easier for children to reject singular reference for definite plurals than for bare plurals.

Each condition had two items, so the target items were six in total.[6] See results in Table 1.

Table 1: Percentages of YES-Responses



What stands out here is the 38% acceptance, or 62% rejection of the plural only among the 8-year-olds (N=19). The youngest group of children (14 6-year-olds) did not distinguish among indefinite singulars, bare plurals, and definite plurals. They accept singular reference for all of them (100% for indefinite singulars, 92.9% for bare and definite plurals). The 7-year-old children (N=17) started to make a distinction between singular and plural, but still they could not find the difference between bare and definite plurals. The acceptance rates for bare and definite plurals reached around the chance-level (50% for both). Around 8 years old, they begin to give different interpretations to bare and definite plurals. They could reject singular reference for definite plurals above chance-level (38.2% of acceptance means 61.8% of rejection) but still did not reject bare plurals so often (50%).

5. EXPERIMENT 2

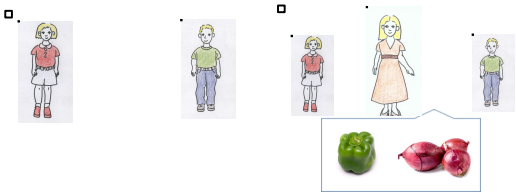
31 6-to-8-year-olds were given pictures and a question with conjoined bare plurals or conjoined plurals with a definite determiner:

(12) Instruction 1 (for Picture 1) :

John likes only green peppers and any kind of onions. Suzi likes any kind of vegetables but not meat.

Instruction 2 (for Picture 2):

Mom went shopping and got one green pepper, onions, but not meat.



Picture 1 Picture 2

Test Sentences:

i. Suzi said, "Oh good, you got peppers and onions but not meat!" Is that right?

ii. John said, "Oh good, you got the peppers and onions!" Is that right?

The context makes one green pepper and some onions salient. Suppose that the mother bought *one* green pepper and *two* onions. With two conjoined bare plurals, the implicature is computed at the DP. Bare plurals allow singular reference, and "yes" responses would be permissible. No conflict between semantics and pragmatics arises because the set with one green pepper and two onions is in the result of semantic computation (see (13a)). Even when two bare plurals are given the projection NP, the same argument holds (see (13b)).

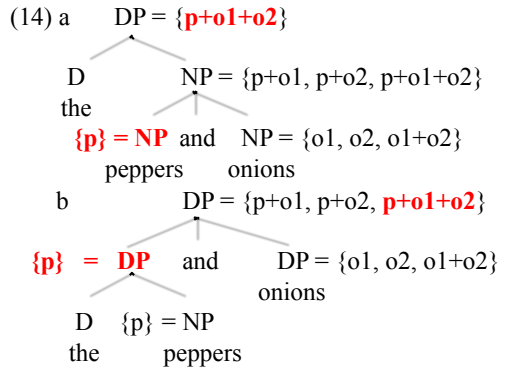
(13) a DP = {p+o1, p+o2, **p+o1+o2** }

{p} = DP and DP = {o1, o2, o1+o2}
peppers onions

b DP = {p+o1, p+o2, **p+o1+o2** }

{p} = **NP** and NP = {o1, o2, o1+o2}
pepper onions

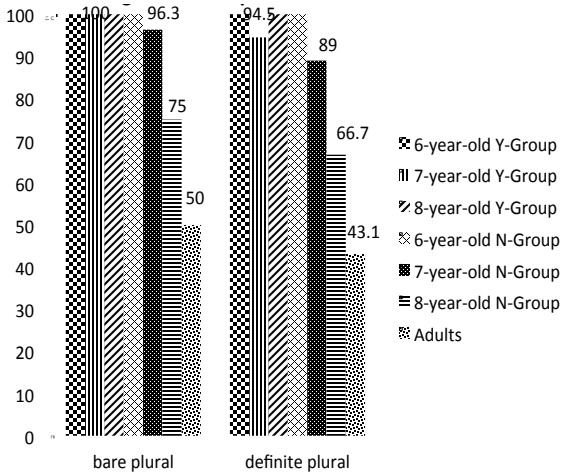
With two conjoined plurals and one preceding definite determiner, the interpretation of DP can be ambiguous depending on the syntactic bracketing: *the* can be attached to the conjoined two NPs as in (14a) or to the first plural, *peppers*, as in (14b).



The semantic rule makes the DP refer to the maximal entity. If *peppers* and *onions* refer to the maximal "peppers" and "onions" in the picture, there is a conflict between the description and context: there are no multiple peppers for the definite plural and hence (14b) is ruled out. To make the given description and context match, adults are forced to assign the structure (14a) and compute an implicature below the determiner, namely NP. This is not an appropriate projection to compute an implicature. This results in unsureness about correct responses because either grammar is violated or the answer fails to be completely correct. The grammar does not *require* this computation. Only if extra situational requirements are present, making the singular-plural difference salient, would a speaker be forced to give such an answer. If someone said "get *two* potatoes and *two* onions", then obviously the requirement would be honored.

Each condition had two items, so the target items were four in total. The children were divided into two groups depending on their response patterns in Experiment 1: those who tended to accept singular reference of plurals and those who could deny it. Most of the 6- and 7-year-olds gave "yes" responses to the plural items, and so the children who could say "no" to one of the four plural items were classified as No-group. The 8-year-olds were classified in the same way, but most of No-group children were able to say "no" to the plurals. Y(es)-Group had 3 6-year-olds, 6 7-year-olds, and 3 8-year-olds; N(o)-Group had 2 6-year-olds, 9 7-year-olds, and 8 8-year-olds. 24 adults also participated. Results are in Table 2.

Table 2: Percentages of YES-Responses



As expected, it seems hard for the children to reject a singular reference even if they make a singular-plural distinction in the first experiment. The acceptance rates for singular reference remained near 100% level in the Y-Group children at all age and in the N-Group children at 6 and 7 years old. Only the 8-year-old N-Group children made a distinction between definite and bare plurals. The acceptance rate was lower for the definite plural items (66.7%) than the bare plural items (75%), which suggests that the children were aware of the impact of *the* for conjoined plurals. The acceptance rates for adults were also lower for the definite plural items (43.1%) than the bare plural items (50%). They remain still around at a chance-level, which suggests that adults resist computing implicatures below the DP.

6. IMPLICATURE BELOW THE DP

If implicatures are not computed below the DP level, then it follows immediately that they should not compute them below the NP level.

In our follow-up study, adult-native speakers (24 undergraduate students) were

asked to answer the following three items. The first one involved *nominal incorporation in compounds*:

(15) John loves only one dog, not others. Bill loves all dogs. Tom loves cocker spaniels. Fred loves cats. Circle the dog-lovers.

Among the three choices, the choice of John indicates the acceptance of singular reference of the noun (*dog*) inside the compound (*dog-lovers*). The response pattern is summarized in Table 3.

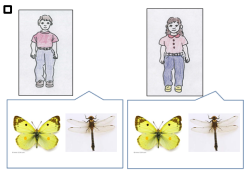
Table 3: Number of Adults for Each Response Pattern

1 token (=John)	all (=Bill)	1 type (=Tom)	
○	○	○	**16**
	○	○	**6**
	○		**2**
		TOTAL	**24**

Adults who accepted three separate interpretations with compounds are highest (N = 16), though some are strictly number sensitive.

The second and third items have two conjoined definite plurals and two conjoined bare plurals (16). These items differ from those in Experiment 2 both contextually and syntactically.

(16) a. Picture: Patrick Jennie

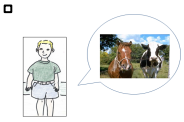


Instruction: Jennie and Patrick went to a mountain separately and caught some insects. Here is what they caught.

b. Did Jennie catch {**the** butterflies and **the** dragonflies / butterflies and dragonflies}?

The picture shows that they each caught one butterfly and one dragonfly. As in (16b), one item has two definite determiners, so they are DPs. Thus plurality/maximality is semantically required to interpret each definite plural, which is not satisfied in the picture. The other item has only one person (17):

(17) a. Picture:

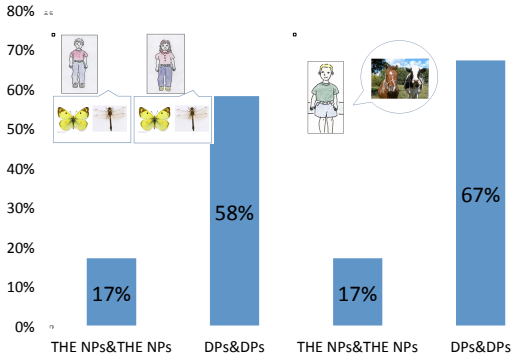


Instruction: John went to a farm and saw some animals. Here is what he saw.

b. Did John see {**the** horses and **the** cows / horses and cows}?

The acceptance rates are shown in Table 4:

Table 4: Percentages of YES-Responses



Acceptance was 17% for the definite plurals, but 58% and 67% for the bare plurals, supporting our theory.

7. DISCUSSION

Our experimental results provide strong evidence that children do not compute implicatures when DP is not fully represented. We have shown that NPs under conjunction, where the DP is not necessary, does allow no implicature to be generated, for children, even when they have passed the stage where they do generate implicatures for bare plurals. In a sense, adults, where conjunctions are involved (perhaps on the fringe of grammar), are the same as children in evading implicatures.

Our evidence provides unique support for the claim: Implicature computation is directly linked not only to higher syntactic categories, but to categories which vary parametrically cross-linguistically. This in turn provides evidence for the claim that the syntax-semantics-pragmatics interface is UG-determined and not a result of purely cognitive factors.

[1] However, there is a complication here. If the subject referred to an unknown animal, we might ask the question, "Does X have tails?", unless the concept of "tail" is limited to one.

[2] See Matthewson et al. (2006) for an argument that English children start out as Salish where determiners have definiteness but not maximality.

[3] Children provide a bound reading for bare NP's *home* and block that reading for explicitly DP level cases (*his home*). Thus children go through a stage only with NP, not DP where nominals are uniformly given a mass/kind semantics.

[4] Children use *the* for a unique reference by 3-year-olds. However, *the* with a singular noun still does not guarantee DP. As de Villers and Roeper (1995) observes, there is no DP barrier initially and children seem to generate *the* as Spec-NP.

[5] With respect to permissible responses for bare plural items, individual difference is observed, because it potentially allows singular reference.

[6] Because younger children were expected to give "yes"-responses for many target items, four filler items were also used in order to make sure that children were able to say "no."

SELECTED REFERENCES

Caponigro, I., L. Pearl, N. Brooks, and D. Barner (2012) "Acquiring the Meaning of Free Relative Clauses and Plural Definite Descriptions," *Journal of Semantics* 29, 261-293.

Chierchia, G. (1998) "Reference to Kinds across Languages," *Natural Language Semantics* 6, 339-405.

Huang, Y. and J. Snedeker (2009) "Semantic Meaning and Pragmatic Interpretation in 5-Year-Olds: Evidence from Real-Time Spoken Language Comprehension," *Developmental Psychology* 45, 1723-1739.

Link, G. (1983) "The Logical Analysis of Plural and Mass Terms: A Lattice-theoretical Approach," in R. Bäuerle, C. Schwarze, and A. von Stechow (eds.), *Meaning, Use and Interpretation of Language*, 302-323, de Gruyter, Berlin.

Longobari, G. (2001) "The Structure of DPs: Some Principles, Parameters, and Problems," *The Handbook of Contemporary Syntactic Theory*, ed. by M. Baltin and C. Collins, 562-603, Blackwell, Malden/Oxford.

Modyanova, N. and K. Wexler (2008) "Maximal Trouble in Free Relatives," *BUCLD 32*, 287-298.

Munn, A. and C. Schmitt (2005) "Number and Indefinites," *Lingua* 115, 821-855.

Nakato-Miyashita, T. (2011) "What Do Singular Indefinites Mean in Child English?" *Linguistic Research* 27, 127-140, The University of Tokyo English Linguistics Association.

Pagliarini, E., G. Fiorin, and J. Dotlač (2012) "The Acquisition of Distributivity in Pluralities," *BUCLD 36,* 387-399.

Pérez-Leroux, Ana Teresa and Thomas Roeper (1999) "Scope and the Structure of Bare Nominals: Evidence from Child Language," *Linguistics* 37, 927-960.

Sauerland, U. (2003) "A New Semantics for Number," in R. Young and Y. Zhou (eds.), *Proceedings of SALT 13*, CLC Publications, Cornell University, Ithaca, NY.

Sauerland, U. (to appear) "On Embedded Implicatures," to appear in *Journal of Cognitive Science* 5-1.

Sauerland U., J. Andersen, and K. Yatsushiro (2005) "The Plural is Semantically Unmarked," in S. Kepser and M. Reis (eds.), *Linguistic Evidence*, Mouton de Gruyter, Berlin.

Spector, B. (2007) "Aspects of the Pragmatics of Plural Morphology: On Higher-Order Implicatures," *Presupposition and Implicature in Compositional Semantics*, ed. by U. Sauerland and P. Stateva, 243-281, Palgrave MacMillan, Hampshire/New York.

de Villiers J. G. and T. Roeper (1995) "Barriers, Binding and Acquisition of the DP/NP Distinction," *Language Acquisition* 4, 73-104.

A Functional and Pragmatic Approach to NQ-Scrambling in Japanese

Eiki Ôno
Takushoku University

Keywords: NQ-scrambling, Japanese, focus, pragmatics

1. Introduction

In Japanese, nouns can form numeral NPs with NQs (i.e. numeral quantifiers) marked by the genitive particle *no*, as given in (1):

(1) Taroo-ga [$_{NP}$ **sansatu-no** hon-o]
Taro-Nom three-Gen book-Acc
katta.
bought
'Taro bought three books.'

NQs can also be postposed or preposed out of their associated NPs, as given in (2a, b):

(2) a. Taroo-ga [$_{NP}$ hon-o] **sansatu** katta.
b. **Sansatu** Taroo-ga [$_{NP}$ hon-o] katta.

In (2a, b), although the NQ *sansatu* 'three' is put outside of the bracketed NP, it still modifies its host NP *hon* 'book'. This linguistic phenomenon is generally called "quantifier floating," and the fronted operation like (2b) is especially called "NQ-scrambling." This paper focuses on the latter pattern, NQ-Scrambling, as a main topic, and considers under what conditions NQ-scrambling can be used effectively from a functional/pragmatic perspective.

2. A Previous Analysis: Ishii's (1999) Semantic Approach

Miyagawa (1989) provides a syntactic analysis of NQ-scrambling by means of the mutual c-command requirement and the trace theory:

(3) a. 2-tu, kodomo-ga kozutumi-o
2-CL child-Nom packages-Acc
okutta.
sent
'The child sent two packages.'
(Miyagawa 1989: 50)
b. 2-tu$_i$, kodomo-ga [$_{VP}$ kozutumi-o
t_i okutta].

It is shown in (3b) that the NQ *2-tu* 'two' originally generates in the VP, and then it moves to the sentence-initial position by scrambling, leaving its trace behind. This trace and its host NP *kozutumi* 'package' are mutually c-commanded; hence, the scrambled NQ can be interpreted as the modifier of the NP (see Miyagawa (1989) for further details of his syntactic analysis).

Contrary to this syntactic view, Ishii (1999) considers that all NQs which precede their associated NPs are quantificational adverbs in the sense of Dowty and Brodie (1984) and Sportiche (1988), which are totally different from the movement/scrambling type of NQs that

Miyagawa discusses. According to Ishii's view, this adverb type of quantifiers are base-generated at the sentence/clause initial position; therefore, they are irrelevant to the syntactic restriction of the mutual c-command requirement. Instead, they must obey the semantic restriction of having only a multiple-event reading. In other words, this semantic restriction stipulates that the NQ-scrambling construction is allowed with a multiple-event interpretation, not with a single-event interpretation. The following examples are taken from Ishii (1999: 252-253):

(4) Multiple-event readings:

a. Zenbu-de **hutatu** Taroo-ga
in total two Taro-Nom
mado-o aketa.
window-Acc opened
'Taro has opened two windows in total.'

b. Kesa kara **go-nin**
this morning since five
yuuei kinsi kuiki-o
swimming ban zone-Acc
gakusei-ga oyoida.
student-Nom swam
'Five students have swum in the No Swimming zone since this morning.'

(5) Single-event readings:

a. ?***Yonko** Jiroo-ga onigiri-o
four Jiro-Nom rice ball-Acc
itido-ni densi-renze-ni
all at once microwave-to
kaketa.
put
'Jiro microwaved four rice balls at once.'

b. ?***Nizyuu-nin** ofisu-ni
twenty office-to
gakusei-ga totoo-o nasite
student-Nom group-Acc forming
yattekita.
came over
'20 students came over to my office in a group.'

The examples above are all NQ-scrambling sentences, but the acceptability differs between (4) and (5). Ishii considers that this difference is caused from event plurality, and concludes that NQ-scrambling sentences are limited to a multiple-event reading.[1]

3. Counterexamples

To Ishii's (1999) semantic analysis above, many counterexamples can be found. For instance, the following NQ-scrambling sentences are perfectly acceptable despite having only a single-event reading:

(6) a. **Sansatu** matomete Hanako-ga
three collectively Hanako-Nom
ryoori-no hon-o katta.
cooking book-Acc bought
'Hanako bought three cooking books collectively.' (ibid.:252)

b. **San-nin** tikara-o awasete
three with united efforts
gakusei-ga piano-o motiageta.
student-Nom piano-Acc lifted
'Three students lifted a piano together.'

c. Zenbu-de **hyakusatu** Taroo-ga
in total hundred Taro-Nom
kyookasho-o chuumonsita.
textbook-Acc ordered
'Taro ordered one hundred textbooks in total.'

d. **Nidai** doojini basu-ga
two at the same time bus-Nom
yattekita.
came
'Two buses came at the same time.'

All of the NQ-scrambling sentences in (6a-d) have a single-event reading only; they cannot have a multiple-event reading, owing to the expressions of *matomete* 'collectively', *tikara-o awasete* 'with united efforts', *zenbu-de* 'in total' and *doojini* 'at the same time'. As evidenced by these examples, it is obvious that the acceptability of NQ-scrambling has nothing to do with the semantic notion of event plurality.

4. An Alternative from Functional and Pragmatic Perspective

4.1 A Functional Analysis

Takami (1998) shows that quantifier floating in Japanese can be captured appropriately by the functional notion of information structure. In this analysis, it is considered that a floating NQ conveys the most important information (or newest information), and thus the positions where a floating NQ occurs are compatible with two positions which are normally occupied by a focus element: a preverbal position and a clause-initial position:

(7) a. Taroo-ga hon-o <u>sansatu</u> katta.
preverbal (=2a)

b. <u>Sansatu</u> Taroo-ga hon-o katta.
clause-initial (=2b)

As shown in (7a, b), a floating NQ can appear in a preverbal or clause-initial position, and there it functions as a focus element.

This functional analysis can explain why Ishii's examples in (5a, b) are not acceptable. The reason is that there are separately two focus elements in one sentence: *yonko* 'four' and *itido-ni* 'all at once' in (5a); *nizyuu-nin* 'twenty (people)' and *totoo-o nasite* 'in a group' in (5b). If these two focus elements are put adjacently and are uttered together, they can be understood just as one unit, and the unacceptability in (5a, b) greatly improves:

(8) a. <u>Yonko</u> <u>itido-ni</u> Jiroo-ga
four all at once Jiro-Nom
onigiri-o densi-renze-ni
rice ball-Acc microwave-to
kaketa.
put
'Jiro microwaved four rice balls at once.' (cf. 5a)

b. <u>Nizyuu-nin</u> <u>totoo-o nasite</u>
twenty group-Acc forming
ofisu-ni gakusei-ga yattekita.
office-to student-Nom came over
'20 students came over to my office in a group.' (cf. 5b)

4.2 A Pragmatic Analysis

In what follows, on the basis that Takami's (1998) functional proposal is on the right track, I would like to show that the analysis of NQ-scrambling can be further developed from a pragmatic perspective.

Although the NQ in a clause-initial position has an informational focus in common with the one in a preverbal position, the usage of the former is somewhat more limited. For instance, the quantifier-floating sentences in (2a, b) seem to be both acceptable, but in (2b) the fronted NQ *sansatu* sounds just slightly awkward at a simple-sentence level. This is because the NQ *sansatu* 'three' is uttered out of the blue; the hearer has difficulty in anticipating what the number is related to (before the associated NP *hon* 'book' is uttered).

In what case can we use NQ-scrambling sentences? I would like to claim here that NQ-scrambling is a discourse-based phenomenon. To ascertain this point, let us consider the following dialogue:

(9) A: Kinoo Hanako-wa hon-o
Yesterday Hanako-Top book-Acc
nansatu kaimasita ka?
how many bought Q
'How many books did Hanako buy yesterday?'

B: Tasika **sansatu**, Hanako-wa
probably three Hanako-Top
hon-o kaimasita.
book-Acc bought
'Hanako probably bought three books.'

In (9B), the preposed NQ *sansatu* does not give the impression of abruptness because the content of *sansatu* can be easily inferred from the previous sentence in (9A). Also, moving the NQ to the sentence-initial position enables Speaker B to answer Speaker A's question as early as possible. Furthermore, observe the following dialogue:

(10) A: Konna miyage, urerundesu ka?
such souvenir can be sold Q
'Can such a souvenir be sold?'

B: Ee, kinoo-mo **gonin**
yes, yesterday-also five
kankookyaku-ga
tourists-Nom
katteikimasitayo.
bought
'Yes, (already) five tourists bought it yesterday.'

In (10B), it is not difficult to understand from the previous utterance in (10A) that the fronted NQ *gonin* refers to the people who buy souvenirs (i.e. tourists). As can be observed above, NQ-scrambling is a linguisitic phenomenon which is triggered by pragmatic factors.

5. Conclusion

This paper has discussed NQ-scrambling in Japanese. Ishii (1999) argues that the NQ-scrambling sentences have to obey the semantic restriction of having a multiple-event reading; but it has been made clear with counterexamples that this argument cannot hold. Then, I have claimed that NQ-scrambling is a

discourse-based phenomenon, and have shown that preposing an NQ is triggered by pragmatic context.

Notes

1. Examples (5a, b) do not have a multiple-event reading because the adverbs *itido-ni* 'all at once' and *totoo-o nasite* 'in a group' force a single-event reading.

References

Dowty, David and Belinda Brodie (1984) "The Semantics of 'Floated' Quantifiers in a Transformationless Grammar." *Proceedings of the 3rd West Coast Conference on Formal Linguistics* 3 (WCCFL 3), 75-90. Stanford, CA: Stanford Linguistics Association.

Ishii, Yasuo (1999) "A Note on Floating Quantifiers in Japanese." In M. Muraki and E. Iwamoto (eds.) *Linguistics: In Search of the Human Mind*, 236-267. Tokyo: Kaitakusha.

Miyagawa, Shigeru (1989) *Structure and case marking in Japanese*. New York: Academic Press.

Sportiche, Dominique (1988) "A Theory of Floating Quantifiers and Its Corollaries for Constituent Structure." *Linguisitic Inquiry* 19: 425-449.

Takami, Ken-ichi (1998) "Nihongo-no Suuryooshi-Yuuri-ni Tuite [On Quantifier Float in Japanese]." *Gengo* 27:1, 86-95; 27:2, 86-95; 27:3, 98-107. Tokyo: Taishukan.

On a Weak-Phases Paradox*

Tomonori Otsuka
Graduate School of Kyushu University

Keywords: Feature-Inheritance, Raising to Object, Transfer, Weak-Phases,

1. INTRODUCTION

1.1. Back Ground: Phase Theory

In the recent Minimalist Program, what is worth noting is the introduction of a concept of phases. A phase is argued to represent a proposition. After theoretical and empirical discussions, now it is agreed that v*Ps and CPs are phases. A v*P represents a theta role related proposition and a CP, discourse force information, e.g. declarative, interrogative and so forth. Thus, in phase theory, a sentence like *Who did John hit?* consists of two propositions: namely, "John hits somebody (v*P)," and "Who is the person? (CP)," as shown in (1) (In what follows, *Ph* stands for *Phase*).

(1) $[_{CP\text{-}Ph}$ Who$_i$ did John$_j$ $[_{v*P\text{-}Ph}$ t_j hit $t_i]]$?

In addition, phases are assumed to be not only chunks of meanings but also units of syntactic operations. Therefore, in (1), when the v*P is formed, the set of the syntactic operations of the v*P phase are triggered at once and then the domain of the v*P (namely the VP) is transferred. After the transfer, the set of operations of the CP is subsequently triggered. Since the domain of the v*P (namely the VP) is already transferred, the CP's operations cannot be applied onto the elements in the VP. The ban on access to already transferred elements is called "the Phase Impenetrability Condition (PIC)."

(2) Phase Impenetrability Condition

$[_{CP\text{-}Ph}$ …X… $[_{v*P\text{-}Ph}$ $\boxed{v*}$…$[_{v*P\text{-domain}}$ Y]…]]

Transferred Domain

1. 2. Chomsky's (2008) Framework

What are remarkable in Chomsky's (2008) framework are the concepts of Feature-Inheritance (F-I) and simultaneous movements. In this subsection, I will outline them sequentially.

Firstly, let us take a brief look at Feature-Inheritance. In the Minimalist Program, the set of syntactic operations in a phase is assumed to be triggered by u(ninterpretable)-features on the head of the phase. In particular, a phase head has an Edge Feature (EF), which moves discourse force related elements to the spec of the phase, and an Agree Feature (AF), which agrees with a DP, realized as an inflection. The AF is transmitted to the head of the complement of the phase before starting to probe down. This system is called F-I. Thus, an AF on C is transmitted to T, and an AF on v* is transmitted to V.

(3) Feature-Inheritance

$[_{CP}$ $\boxed{C}${EF, } $[_{TP}$ T{AF}…]]

$[_{v*P}$ $\boxed{v*}${EF, } $[_{VP}$ V{AF}…]]

Secondly, let us move to simultaneous movements. After the AFs are transmitted to the heads of the

complements of the phase heads as is shown in (3), the EFs and the AFs search their domains simultaneously, and the targeted elements move to the respective spec positions simultaneously. The C holds a relation with the *wh*-element in terms of the EF, and the T, in terms of the AF. Similarly, the v* has a relation with the *wh*-element in terms of the EF, and the V, in terms of the AF.

(4) Simultaneous Movements

a. [$_{CP}$ $\boxed{C}${EF} [$_{TP}$ T{AF} [$_{v*P}$ wh …]]]

[$_{v*P}$ $\boxed{v*}${EF} [$_{VP}$ V{AF} wh]]

b. [$_{CP}$ wh [$_{C'}$ $\boxed{C}$ [$_{TP}$ ~~wh~~ [$_{T'}$ T [$_{v*P}$ ~~wh~~…]]]]]

[$_{v*P}$ wh [$_{v*'}$ $\boxed{v*}$ [$_{VP}$ ~~wh~~ [$_{V'}$ V ~~wh~~]]]]

1.3. A Weak-Phases Paradox

In this subsection, the main problem of this paper, namely, a weak-phases paradox is presented. Chomsky's (2008) analysis outlined in 1.2. is mainly about s(trong)-phases. However, Chomsky (2001) argues that there exists another type of phases; w(eak)-phases, which are the topic of this paper.

W-phases have two interesting characteristics noted below. First, the PIC does not hold in w-phases, as is shown in (5).

(5) John was hit.

[$_{CP\text{-}S\text{-}Ph}$ John…was…[$_{vP\text{-}W\text{-}Ph}$ t_{was} hit t]]

ok

cf. [$_{CP\text{-}S\text{-}Ph}$ John…was…[$_{vP\text{-}W\text{-}Ph}$ t t_{was} hit t]] *

Improper Movement

Example (5) is grammatical, although *John* is extracted from within the domain of the w-phase vP. Since the PIC is based on the assumption that the relevant domain is transferred, this implies w-phases do not trigger transfer. It should be noted that *John*'s movement via Spec-vP is prohibited because this is Improper Movement.

Second, w-phases seem to possess u-features.

(6) a. [At which of the parties that he$_i$ invited Mary$_j$ to]$_k$ was every man$_i$ $t_{k'}$ introduced to her$_j$ t_k ?

b.*[At which of the parties that he$_i$ invited Mary$_j$ to]$_k$ was she$_j$ $t_{k'}$ introduced to every man$_i$ t_k ?

(Legate (2003: 2))

(7) Les chaises ont été
the chairs.fem.pl have.pl. been
repaintées.
repainted.fem.pl
'The chairs were repainted.'

(Boeckx (2008: 33))

In (6), *Mary* cannot be c-commanded by *her*, and *he* has to be c-commanded by *every man*. In (6b), the c-command relation is not gained at the position represented as $t_{k'}$, but is held in (6a), which differentiates the grammaticalities of the sentences. Thus, (6a) indicates that v has to have an EF to attract the relevant element. On the other hand, in (7), agreement appears in the vP, meaning that vPs possess AFs.

Concerning u-features, Richards (2007) argues that u-features have to be transferred exactly when they are checked. Otherwise, because after they are checked (or valued), u-features cannot be distinguished from interpretable ones,

u-features are sent to the interfaces improperly, causing the derivation to crash. Thus, transfer cannot be triggered *after* checking. Since the derivation would crash if u-features were transferred *before* checking, feature-checking and transfer have to occur simultaneously. Given this simultaneity problem, if w-phases possess u-features and checking of the features occurs in w-phases, w-phases must trigger transfer.

As has already been noted, example (5) indicates that the transfer cannot be triggered in w-phases whereas examples (6) and (7) imply that the transfer must occur in w-phases. Here, we face a w-phases paradox, the main topic of this paper.

2. PROPOSAL

2.1. Feature-Transcription

In order to solve the paradox described in 1.3., this paper proposes an operation of Feature-Transcription (F-T), which is an extension of F-I. F-T is F-I from an s-phase head onto a w-phase head. Thus, in this framework, there is no distinction of "s-phases" or "w-phases," but rather we have "phases with or without u-features" (although the expressions of s-/w-phases are used below for an explanatory purpose).

(8) Feature-Transcription

a. $[_{\text{S-Ph}}$ $\boxed{\text{Head}_{\text{S-Ph}}}$ $[_{\text{Comp}}$ $[[_{\text{W-Ph}}$ $\text{Head}_{\text{W-Ph}}$
{EF, AF} { , }
$[_{\text{Comp}}$ …]]]]]

b. $[_{\text{S-Ph}}$ $\boxed{\text{Head}_{\text{S-Ph}}}$ $[_{\text{Comp}}$ $[[_{\text{W-Ph}}$ $\text{Head}_{\text{W-Ph}}$
{EF, AF} ⟶ {<u>EF</u>, <u>AF</u>}
$[_{\text{Comp}}$ …]]]]]

2.2. The Derivation of vPs under F-T

Based on the proposal of F-T, the derivation of a passive sentence, *Who was hit?* is shown in (9).

(9) Who was hit?

a. $[_{\text{vP}}$ v $[_{\text{VP}}$ V who]]
{ , }

b. $[_{\text{CP}}$ $\boxed{\text{C}}$ $[_{\text{TP}}$ T $[_{\text{vP}}$ v $[_{\text{VP}}$ V who]]]]
{EF, AF} { , }

c. $[_{\text{CP}}$ $\boxed{\text{C}}$ $[_{\text{TP}}$ T $[_{\text{vP}}$ v $[_{\text{VP}}$ V who]]]]
{EF, AF} ⟶ {<u>EF</u>, <u>AF</u>} F-T

d. $[_{\text{CP}}$ $\boxed{\text{C}}$ $[_{\text{TP}}$ T $[_{\text{vP}}$ v $[_{\text{VP}}$ V who]]]]
{EF, } ⟶ {AF} {EF, } ⟶ {AF} F-I

e. $[_{\text{CP}}$ who $[_{\text{C}'}$ $\boxed{\text{C}}$ $[_{\text{TP}}$ *t* $[_{\text{T}'}$ T $[_{\text{vP}}$ *t* $[_{\text{v}'}$ v $[_{\text{VP}}$ *t*
{EF, } {AF} {EF, }
$[_{\text{V}'}$ V *t*]]]]]]]] Simultaneous
{AF} Movements

f. $[_{\text{CP}}$ who $[_{\text{C}'}$ $\boxed{\text{C}}$ $[_{\text{TP}}$ *t* $[_{\text{T}'}$ T $[_{\text{vP}}$ *t* $[_{\text{v}'}$ v $[_{\text{VP}}$ *t*
$[_{\text{V}'}$ V *t*]]]]]]]] Transfer

In this derivation, the w-phase vP originally does not possess u-features as shown in (9a). When a CP is formed as can be seen in (9b), an s-phase head C transmits its u-features onto the v via F-T as is seen in (9c). As (9d) indicates, after the transcription, each phase head, namely the C and the v, transmits its AF onto the head of its complement by normal F-I. Finally, all of the relevant features probe down to find a *wh*-DP in their c-command domain. Then the *wh*-DP moves to their spec positions. Note that these operations occur simultaneously. That is, the EFs on the C and the v attract the *wh*-DP in terms of the *wh*-feature on it, and the AFs on the T and the V attract it in terms of the φ-feature at once. As a result, multiple copies of the *wh*-DP appear in Spec-CP, Spec-TP, Spec-vP, and Spec-VP. This is shown in (9e).

As a consequence of this derivation, the EF on the v guarantees an A-bar copy on Spec-vP, explaining (6) above. The AF on the V also ensures the presence of Inflections on V in passive sentences, accounting for (7) above. Finally, the C transfers the TP including the vP as is shown in (9f) and thus, the v does not trigger transfer, which enables us to deduce that the PIC does not hold in vPs. Therefore, in this framework, the w-phases paradox is readily resolved.

3. PROBLEMS

3.1. On the Case Manifestation of Japanese Raising-to-Object Constructions

In Japanese, A-movements out of CPs are widely accepted. In this section, it is demonstrated that the case conversion in so called Raising-to-Object constructions in Japanese can be captured in the framework of F-T. The relevant constructions are shown below.

(10) a. Taroo-wa Yuki-o [baka
Taro-Top Yuki-Acc [stupid
da to] omot-teiru.
COP COMP] think-Prog
'Taro thinks that Yuki is stupid.'

b. Taroo-wa [Yuki-ga baka
Taroo-Top [Yuki-Nom stupid
da to] omot-teiru
COP COMP think-Prog
'Taro thinks that Yuki is stupid.'
(Takeuchi (2010: 101))

Note that in (10a), *Yuki* is assigned the Accusative case, while in (10b) the assigned case is Nominative.

What is interesting and complicated here is that under general assumptions, *Yuki* is considered to move out of the CP to receive the Accusative case in (10a). In phase theory, direct movements out of CPs should be prohibited by the PIC as is indicated in (11a). On the other hand, a successive movement of *Yuki* via Spec-CP is assumed to be Improper Movement and should also be banned as is shown in (11b).

(11) a. [$_{v*P\text{-}Ph}$…DP…[$_{CP\text{-}Ph}$ $\boxed{C}$ [$_{TP}$ T[…*t*…]]
]] *

PIC violation

b. [$_{v*P\text{-}Ph}$…DP…[$_{CP\text{-}Ph}$ $\boxed{C}$ [$_{TP}$ T[…*t*…]]
]] *

Improper Movement

Therefore, the question is how the grammatical example (10a) is generated. In the next section, I outline two types of previous analyses and point out problems they face.

3.2. Previous Analyses

In order to deal with the problem concerning (10a), there are two possibilities. One is to assume the relevant CP to be a non-phase. The other possibility is to analyze the successive movements as non-Improper Movement. Two analyses pursuing the possibilities are investigated in the following two subsections.

3.2.1. A CP as a Non-Phase

Takano (2009) argues that what are called Object Control Constructions in Japanese involve a non-phase CP. As Ohtaka (2012: 167) points out, "Takahashi (2012) suggests that abstractly the same holds for a raising-to-object construction." Thus, in their approach, Raising-to-Object constructions are argued to involve a non-phase CP.

However, a clear problem in this approach occurs concerning how (10b) is generated. Since *Yuki* receives the Nominative case, the CP in (10b) should be an s-phase. However, the fact that examples (10a, b) are the same except for the case manifestation on *Yuki* (namely, no morphological difference is observed on the verbs) implies a null-hypothesis that they involve the same kinds of CPs, namely w-phase CPs. Of course it is possible to assume that different Cs are involved in (10a, b), but there is no denying this assumption is ad hoc, since no overt empirical evidence indicating different Cs is found.

3.2.2. Movements as Non-Improper Movement

The other position is to assume that the successive movements via Spec-CP are not counted as Improper Movement. Takeuchi (2010) takes this position and assumes that an AF on C optionally remains on the C, without being transmitted onto T. When the AF remains on the C, a DP's movement to Spec-CP involves agreement and is treated as an A-movement. Then, if the movement to Spec-CP is an A-movement, the successive movements do not involve Improper Movement. Note that this approach can deal with the two possibilities of (10a, b): When the AF remains on the C, an A-movement to Spec-CP occurs and (10a) is generated. When the AF is transmitted on the T, (10b) is generated.

However, this approach also raises a problem. When the AF remains on the C, since the C is not transferred at the CP phase level and the AF is a u-feature, Richard's (2007) simultaneity problem cited above (1.3.) occurs.

4. AN ALTERNATIVE ALANYSIS

4.1. Two Assumptions

In this section, I will offer an alternative analysis to examples (10a, b), based on F-T proposed in section 2. Before moving to the explanation, however, I will introduce two additional assumptions.

4.1.1. Transfer Determines Case Manifestation

First, I assume that case manifestation is determined when the relevant item is transferred. To be specific, case assignment is not involved in AF checking, as is true in the normal framework. Rather, when an XP containing a DP is transferred, the transferring head determines the DP's case. Thus, a DP within C's transfer domain is given the Nominative case and a DP in v*'s transfer domain is assigned the Accusative case as is shown in (12).

(12) Transfer of C:

$\boxed{C}$<[$_{XP}$…DP…]>→[$_{XP}$…DP$_{NOM}$…]

Transfer of v*:

$\boxed{v^*}$<[$_{XP}$…DP…]>→[$_{XP}$…DP$_{ACC}$…]

4.1.2. Two Possibilities of F-T

As a second assumption, I suggest that F-T introduced above has two possibilities. Chomsky (2013) assumes that F-I is a copy like operation of u-features rather than actual transmission between heads. Moreover,

F-I has two possibilities: whether the copied feature is deleted or not.

(13) a. [C{F} [T{F}]] no deletion

b. [C{~~F~~} [T{F}]] deletion

With this possibility applied to F-T, which is assumed to be an extension of F-I, the two possibilities below can be deduced.[1]

(14) a. No deletion (=(13a))

[Head$_{S\text{-}Ph}$…[Head$_{W\text{-}Ph}$]…]

{EF, AF} → {EF, AF}

b. Deletion (=(13b))

[Head$_{S\text{-}Ph}$…[Head$_{W\text{-}Ph}$]…]

{~~EF, AF~~} → {EF, AF}

4.2. An Explanation

This paper claims that the Raising-to-Object Constructions in Japanese include a w-phase CP. Under the framework of F-T, the examples in (10a, b) are generated as is shown below.

As is shown in (15), if the u-features are copied and not deleted when transcribed, the DP can move out the CP to Spec-VP.

(15) Taro-wa Yuki-o baka-da to omot-teiru. (=(10a))

a. [$_{v*P}$[$_{VP}$[$_{CP}$[$_{TP}$…Yuki…T] C] V] v*]
{ } {EF}
{ } {AF}

b. [$_{v*P}$[$_{VP}$[$_{CP}$[$_{TP}$…Yuki…T] C] V] v*]
F-T {EF} {EF}
{AF} {AF}

c. [$_{v*P}$[$_{VP}$[$_{CP}$[$_{TP}$…Yuki…T] C] V] v*]
F-I {AF} {EF} {AF} {EF}
{ } { }

d. [$_{v*P}$[$_{VP}$[$_{CP}$[$_{TP}$…Yuki…T] C] V] v*]
{~~AF~~} {EF} {~~AF~~} {EF}

e. [$_{v*P}$[$_{VP}$…Yuki-o…[$_{CP}$[$_{TP}$…*t*…*t*…T] C] V]$_{ACC}$ v*]

As (15a) shows, the w-phase head C originally does not possess u-features under the F-T framework. After the s-phase v*P is formed, F-T occurs from the v* to the C. Then, F-I is triggered from the v* and the C to their complements' heads. Based on the transmitted AFs, the simultaneous movement of *Yuki* is triggered to Spec-VP and Spec-TP as in (15d). Finally, in this case, the DP is transferred not by the C but by the v*. Thus the DP receives the Accusative case, as is shown in (15e), based on (12).

On the other hand, if the u-features are copied and deleted, (10b) is derived. As is shown in (16), the DP does not move out of the CP and it remains at Spec-TP. In this case, importantly, the copies of the u-features on the v* are deleted, which means that the operations in the v*P-phase are not triggered, nor is the transfer by the v*.

(16) Taro-wa Yuki-ga baka-da to omot-teiru.

a. [$_{v*P}$[$_{VP}$[$_{CP}$[$_{TP}$…Yuki…T] C] V] v*]
F-T(deletion) {EF} {~~EF~~}
{AF} {~~AF~~}

b. [$_{v*P}$[$_{VP}$[$_{CP}$[$_{TP}$…Yuki…T] C] V] v*]
F-I {AF} {EF} { }
{ } { }

c. [$_{v*P}$[$_{VP}$[$_{CP}$[$_{TP}$…Yuki…T] C] V] v*]
{~~AF~~} {EF}

d. [$_{v*P}$[$_{VP}$[$_{CP}$[$_{TP}$…Yuki-ga…*t*…T]$_{NOM}$ C] V] v*]

As (16a) indicates, although F-T occurs from the v* on the C, in this case, the AF and the EF on the v* are deleted and thus, F-I only occurs from the C to the T. Thus,

Yuki moves only to Spec-TP, not to Spec-VP. In addition, since the DP is transferred by the C, the DP is assigned the Nominative case.

5. CONCLUSION

I have demonstrated that the w-phases Paradox concerning F-I and u-feature checking can be solved by the introduction of F-T. I have also shown that F-T is not a mere theoretical deduction but it can be used to account for the case manifestation in Japanese, which has not been explained fully in previous analyses.

NOTES

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[1] Chomsky (2013) assumes that the deletion of u-features in F-I occurs because if a copy of a φ-feature on C remained, the derivation would crash for it cannot be transferred when checked. Thus, concerning F-I, the deletion option is obligatorily chosen. However, when it comes to F-T, the problem of transfer does not occur, and thus I assume that the two possibilities are selectable.

REFERENCES

Boeckx, Cederic (2008) *Understanding Minimalist Syntax: Lessons from Locality in Long-Distance Dependencies*, Blackwell Publishing, Malden, MA.

Chomsky, Noam (2001) "Derivation by Phase," *Ken Hale: A life in Language*, ed. by Michael Kenstowicz, 1-52, MIT Press, Cambridge, MA.

Chomsky, Noam (2008) "On Phases," *Foundational Issues in Linguistic Theory*, ed. by Robert Freidin, Carlos P. Otero and Maria L. Zubizarreta, 133-166, MIT Press, Cambridge, MA.

Chomsky, Noam (2013) "Problems of Projection," *Lingua* 130, 33-49.

Legate, Julie A. (2003) "Some Interface Properties of the Phase," *Linguistic Inquiry* 34, 506-516.

Hornstein, Norbert et al. (2005) *Understanding Minimalism*, Cambridge University Press, Cambridge, MA.

Richards, Marc D. (2007) "On Feature Inheritance: An Argument from the Phase Impenetrability Condition," *Linguistic Inquiry* 38, 563-572.

Ohtaka, Akane (2012) "On Phi-Feature "Copying,"" *JELS* 30, 166-172.

Takahashi, Masahiko (2012) "Case and Phases 1: Nominative/ Accusative Conversion in Japanese," paper presented at Keio Linguistics Colloquium.

Takano, Yuji (2009) "Scrambling, Control and Phases," *Kinjyo Gakuin Daigaku Ronsyu* 5, 78-110.

Takeuchi, Hajime (2010) "Exceptional Case Marking in Japanese and Optional Feature Transmission," *Nanzan Linguistics* 6, 101-128.

Structure-Building via *Merging Economy:* The Scope of Indefinites

Norio Suzuki
Kobe Shinwa Women's University

Keywords: NS structure-building, Merging Economy, scope, ACD, LF

1. Introduction

My goal is to explore a **syntactic basis for the two scopal interpretations** (*wide scope & scope diminishment)* **of (negative) indefinites (INDs)**: (i) *wide scope* (WS) interpretation of IND NPs, typically accounted for in terms of a *choice function* (CH(f); [21]); & (ii) *scope diminishment* (SD) reading in negative IND NPs (*neg (ative)-split;* [12]). Also some analytical implycations of the proposal for other constructions, including antecedent-contained deletion ones (ACDs) & ones involving quantified xpressions.

2. Some Assumptions & Problems

The analysis given is based on ***narrow- syntactic (NS) structure-building*** across the set of prolific domains of [9] (phase-based; [1], etc.; 'amount of TRANSFER' subject to **Merging Economy (ME)** *constraining each step of NS-derivation;* [29], [8]) along with the notion of **interface *invasion/invasive* interface** (**II**; [16]), that of ***bi-directional 'on-line' passage* between NS & the interfaces** ([27]), & the concept of ***Economy*** ([6]). We follow the ***nP/NP approach to nominal phrases*** ([8], [2]). My reanalysis is based on the ***FLB-architectural*** considerations of [10]'s observation that "… *grammar* constrains the organization of meaning in language." The paper deals with recalcitrant **ACDs involving a strong (SQ) vs. weak quantifiers (WQ)** with emphasis on the problem of an "infinite regress (IR)," [19]'s **data** in terms of the assumptions adopted here, & how to make a grammaticality distinction between ***I usually love animals that you do*** (= [4]'s: 114 (45b)) & ****I usually draw animals that you do*** (= [4]'s: 111 (39b)) & also between ***I want a car that you do*** (= [7]'s: 87 (59a)) & ****I read two books that you did*** (= [4]'s: 75 (35b)). Taking seriously [17]'s observation that "… the definition of CH(f) proposed by [20] & [3] *makes the WS of INDs independent of their syntax…. A CH(f) allows an IND nominal to take WS regardless of its syntactic position. But the syntactic position of IND objects seems to be important for WS,*" & basing my architectural reason on [10]'s observation above & [31]'s *distributed interpretation thesis* (DIT)/*co-linearity thesis* (CLT), I provide NS bases for the two *interpretive* phenomena concerning IND NPs: (i) WS interpretation (violating an island constraint; (1a)); & (ii) SD reading in neg NPs (*neg-split*, A-reconstruction; [12]; (2a)):

(1) a. If Bert invites a philosopher, Lud will be angry. ([17])

b. ***Choice-function:*** **∃f (CH(f) ∧ (Bert invites f(philosopher) → Lud will be angry)) (based on [21]; *a philosopher = one of the philosophers)***

c. *Existential-closure:* If …∃y [$_{NuSc/vP}$ Bert invites a philosopher (y)] … (based on [4]; domain of EC being nuclear scope (NuSc), taken to be vP; *a philosopher = any philosopher)*

(2) a. No student may leave. (*may* being a

Neg>Mod modal)

b. ***Split interpretation: Neg > Modal > ∃***

It is not allowed that a student leaves.

c. *De re interpretation: Neg > ∃ > Modal*

There is no specific student x such that x is allowed to leave.

In (1b) *a philosopher* takes scope outside the conditional (strong island for extraction), on the specific interpretation (1b; *de re* interpretation via a CH(f)). In (2), we focus on the *split interpretation* in (2b; *neg-split),* where the "neg" & "IND" components of the neg NP (*no student)* are interpretively separated from each other by the intervening modal. I explore an alternative NS basis for connection to the actual world, based on [24]'s observation that *"Reference, in the extensional sense, is ... an 'edge' phenomenon."* Let us see first some specific details of the NS-derivations of (1a = 3a) with (3b) as the NS basis for the *specific* (Sp-) interpretation in (1b):

(3) a. If Bert invites a philosopher, Lud will be angry. (= (1a))

b. … (a philosopher$_{<+spec>}$) C [$_{TP}$ … [$_{vP}$ Bert invites [$_{VP}$ (invites) [$_{nP}$ a philosopher]]]]

(Keeping to the *if*-conditional, at the completion of strong vP-phase the phase complement VP is TRANSFERred to the pragmatics-interface (P-interface; [16]) so as for the nP to be assigned a [+specific]-feature ([+Sp]); Assuming a [+Sp] to be licensed in C-domain, the IND with the [+Sp] (*a philosopher)* ends up *covertly* raising to the highest C as a result of Internal Merge via P-interface (via a *bi-directional 'on-line' passage;* [27]); The final WS/*de re* interpretation of *a philosopher* may depend on CH(f) application for discourse-licensing of the IND) Let us turn to the NS-derivations of (2a = 4a), with (4b-b') below as the NS basis for its *split interpretation* (2b) above:

(4) a. No student may leave. (= 2a; *may* being a *Neg>Mod* modal)

b. [$_{vP}$ a student$_{<-spec>}$ leave [$_{VP}$ (leave)]]

(The first merger is between *leave* and nP *a student* (given **'[*Op*¬ [a [student]]]'** as complex structure of *no student* (*no* consisting of a neg operator *(Op¬)* and an IND article *a*); [32]); At the completion of strong vP-phase, P-interface invades NS to assign a [–specific]-feature ([–Sp]) to IND in vP, *a student* in [Spec, v] occupying the 'current strong-phase-initial position' so that pragmatics can 'see' that position so as to assign a [–Sp] to it (see [28])

b'. … (*Op*¬) C [$_{TP}$ [$_{nP}$ *Op*¬ [a student]] may [$_{vP}$ (a student$_{<-spec>}$) leave [$_{VP}$ e]]]

(IND *a student* raises to [Spec, T], projecting there up to the nP '[*Op*¬[a student]]'; Interpretation of *Op*¬ is implemented in C-domain, the *Op*¬ portion of the neg Subj (covertly) raising up to C-domain;We obtain the –Sp-interpretation in [Spec, v] for the *a student* portion of *no student* under *may,* while above *may* we get the neg interpretation of *no* portion in C-domain, & hence, the *split interpretation: Neg > Modal > ∃.)*

3. *IND, WQed, and Bare Plural NPs*

3.1. ACDs Involving a SQ vs. WQ

Let us see the following two sets of examples in (5) & (6) involving an ACD structure in them:

(5) a. I read ***every book*** that you did.

(= [4]'s: 75 (36a))

b. *I read ***two books*** that you did.

(= [4]'s: 75 (35b))

(cf. I read ***two of the books*** that you did. (= [4]'s: 72 (28a))))

(6) a. *?Oscar read ***books*** that Olga did.

(= [4]'s: 94 (2b))

b. Oscar usually reads ***books*** that Olga does.

(= [4]'s: 94 (2a))

c. John reads ***books*** that no one else would.

(= [13]'s: 41 (12))

The QP containing the elided material can scope via quantifier raising (QR) out of the antecedent VP containing it to avoid an IR. SQ phrases are subject to QR & thus form operator-variable structures. *The crucial LF-licensing requirement on the interpretation of sentences containing an SQ is that they be LF-represented* **as a Diesing-Style** ([4]) ***quantifier-restrictive-clause-nuclear-scope*** **(Q-RC-NuSc) structure,** *possibly with subsequent* ***reprojection*** (Repr) *turning the whole structure into a QP* ([11]). Let us see the differences in their (LF-) structure between the grammatical example (5a = 7a) & the ungrammatical one (5b = 8a), where the (b)-marked structures are overt NS ones, while those (c)-marked are covert LF structures:

(7) a. I read ***every book*** that you did.

(= (5a), [4]'s: 75 (36a))

b. [$_{CP}$ that [$_{TP}$ you did **(**[$_{vP}$ (you) read [$_{VP}$ (read) [$_{n}$ book]]]**)**]]

(vP being theta-domain of restrictive relative clause (RR); Merger of *read* & *book* in VP for theta purposes; *Read* & External Argument *you* raised to v & [Spec, T], respectively; Merger of *that* & TP; *Did* inserted in T; Parenthesized vP being the target of *VP-ellipsis)*

b'. [$_{nP}$ [$_{n}$ book] [$_{CP}$ that [$_{TP}$ you did **(**[$_{vP}$ (you) read [$_{VP}$ (read) ([$_{n}$ book])]]**)**]]]

(I adopt the *head-raising* approach to RRs a la [14]; Raising of *book* to the CP-initial position, *book* categorially taking CP as its complement & projecting up to nP at this stage)

b''. i) read [$_{nP}$ every [$_{n'}$ [$_{n}$ book] [$_{CP}$ that [$_{TP}$ you did **(**[$_{vP}$ (you) read [$_{VP}$ (read) ([$_{n}$ book])]]**)**]]]]

ii) read [$_{QP}$ [$_{Q}$ every] [$_{nP}$ [$_{n}$ book] [$_{CP}$ that [$_{TP}$ you did **(**[$_{vP}$ (you) read [$_{VP}$ (read) ([$_{n}$ book])]]**)**]]]]

(The embedded clause Obj *book* raises to CP-initial position by ***selection-driven movement*** ([5]); In (7b''i)), *read* (for the matrix clause) in the *numeration*, acting as a probe & searching for an appropriate n/N-goal to merge with, finds *book* within the syntactic object CP & triggers internal Merge of this n/N, so as to merge with the latter without violating the No Tampering Condition, the raised n/N then checking its probe & structure-building feature with the result of projecting *every* as its Spec ([8] & [29]), while in (7b''ii)), *read'*s complement QP is a Repr-ed structure of nP in (7b''i), [11])

b'''. I read [$_{QP}$ [$_{Q}$ every] [$_{nP}$ [$_{n}$ book] [$_{CP}$ that [$_{TP}$ you did **(**[$_{vP}$ (you) read [$_{VP}$ (read) ([$_{n}$ book])]]**)**]]]]

c. I [every book that you did **(** (you) read (read) (book)**)**] read **t**

(**t** being copy/trace of QP; QP QR-raises covertly into a pre-matrix-verb position, so as to satisfy the interpretive requirement on SQs that they be LF-represented as a ***Q-RC-NuSc structure:*** **[every x] [x a book CP] [(I) read x]/**

[$_{QP}$[$_{Q'}$[$_{Q}$ every][$_{RC/nP}$ book CP]] [$_{NuSc/vP}$ (I) read (every book)]])

c'. [every book that [you **did** <read book>]

[I read book]

(Formation of the *Q-RC-NuSc structure* leads to ACD-resolution, satisfying *Parallelism* (Paral) & avoiding problems arising from the copy theory of movement, based on [7] & specifically on [22], [23]; The '<read book>' portion in the VP-ellipsis site is recruited from the result of the

theta-theoretic merger of *read* & *book* in the vP of the RR, while as for the matrix clause VP read book, specifically book is obtained due to its status as the head of the copy of QR-raised QP's other guise nP (see (7b" i)) above; [31]'s DIT/ CLT))

(8) a. *I read ***two books*** that you did.

(= (5b), [4]'s: 75 (35b))

b. [$_{CP}$ that [$_{TP}$ you did **(**[$_{vP}$ (you) read [$_{VP}$ (read) [$_{n}$ books]]]**)**]]

(vP being theta-domain of RR; Merger of *read* & *book* in VP for theta purposes; *Read* & External Argument *you* raised to v & [Spec, T], respectively; Merger of *that* & TP; *Did* inserted in T; Parenthesized vP being the target of *VP-ellipsis)*

b'. [$_{nP}$ [$_{n}$ books] [$_{CP}$ that [$_{TP}$ you did **(**[$_{vP}$ (you) read [$_{VP}$ (read) [$_{n}$ books]]]**)**]]]

(Raising of *books* to the CP-initial position, *books* categorially taking CP as its complement and projecting up to nP at this stage)

b''. [$_{nP}$ two [$_{n'}$ [$_{n}$ books] [$_{CP}$ that [$_{TP}$ you did **(**[$_{vP}$ (you) read [$_{VP}$ (read) [$_{n}$ books]]]**)**]]]]

(Checking of n's probe & structure-building feature; see (7b") above)

b'''. I read [$_{nP}$ two [$_{n'}$ [$_{n}$ books] [$_{CP}$ that [$_{TP}$ you did **(**[$_{vP}$ (you) read [$_{VP}$ (read) [$_{n}$ books]]]**)**]]]]

(*Two books* is an 'cardinal' IND which does not undergo QR ([4]), & hence, impossibility of obtaining anything like a *Q-RC-NuSc structure* for ACD resolution). Then let us turn to (6a-c), repeated here as (9a-c):

(9) a. *?Oscar read ***books*** that Olga did.

(= [4]'s: 94 (2b))

b. Oscar usually reads ***books*** that Olga does.

(= [4]'s: 94 (2a); 'generic')

c. John reads ***books*** that no one else would.

(= [13]'s: 41 (12))

I take the ungrammatical status of (8a; with *two books*, a cardinal IND) & (9a; with *books*, a bare plural) to be due to the situation where these INDs are *'trapped' in the vP-domain in the absence of any of the following* **'escaping' strategies** (to obtain a [+Sp] from the P-interface) ***via QR/focus-raising for ACD resolution:*** [A] A SQ/GQ (generalized quantifier), such as *every, each, most;* [B] *Two of the books* (a partitive NP) in 'I read ***two of the books*** that you did' (5b cf.), which functions as a strong, or presuppositional NP; [C] ***Generic interpretation*** (see (9b)): available to a bare plural NP in the presence of an adverb of quantification (AdvQ), such as *usually, seldom* (see [4]); [D] *No one else* (a neg NP; = **only he/John (himself)**) in 'John reads ***books*** that noone else would' (9c); & [E] *A car* (a singular IND NP) in 'I want ***a car*** that you do' ((21a)), where the matrix verb *want* is an *intensional* verb. Let us see (9b = 10a), where the presence of an AdvQ such as *usually* makes an otherwise ungrammatical sentence a grammatical one (compare it with (9a)):

(10) a. Oscar usually reads ***books*** that Olga does.

(= (9b), [4]'s: 94 (2a), also 106)

(Paraphrase: Oscar reads *most books* that Olga does. (see [4]))

b. Oscar usually reads [$_{Focus}$ books that Olga does <$_{VP}$ e>]

(The ACD VP-ellipsis site is represented by '<$_{VP}$ e>'; *AdvQs such as* **usually** *LF-identify their associated RC, the Focus-marked portion above, as a 'focus' in its scope/c-command domain* **(see** [21]'s 'focus identification in the scope of *only'*)

b'. Oscar usually [$_{Focus=RC/nP}$ books that Olga does <$_{VP}$ e>] reads **t**

(**t** stands for the copy of the *Focus* that has *focus-raised* to a position adjacent to *usually* so

as to enter a local relation with & to still be c-commanded by the latter; We obtain the requisite ***Q-RC-NuSc structure***, as '**[usually x] [x a book that Olga reads] [(Oscar) reads x]**')

b''. [books that [Olga **does** <reads books >]
[Oscar reads books]

(Formation of the *Q-RC-NuSc structure* leads to ACD-resolution; As for the DIT/CLT of [31], the '<reads books>' portion in VP-ellipsis site is recruited from the result of theta-theoretic merger of *reads* & *books* in vP of the RR (represented by '<$_{VP}$ e>' in (10b, b')), while as for the matrix clause VP reads books, specifically books is obtained due to its status as the head of the copy of QR/FOCUS-raised Focus Phrase (RC/nP marked with *Focus;* (10b, b')). Let us turn to (9c = 11a):

(11) a. John reads ***books*** that no one else would.
(= (9c), [13]'s: 41 (12))

(cf. John reads books that only he (himself) does. (see [21]: 197 (42, 57))

b. John reads books that **[$_{QP}$[$_{Q'}$[$_{Q}$ *Op*$_{\neg}$ [$_{nP}$ one else]] [$_{TP}$ (no one else) would <$_{VP}$ e>]**

(The ACD VP-ellipsis site is represented by '<$_{VP}$ e>'; QP in (11b) is a Repr-ed structure of '*[$_{TP}$ no one else would <$_{VP}$ e>]'* in (11a) ([11]); *The SQ* **no** *(composed of Op*$_{\neg}$ *& some element(s) between the neg operator and n) projects its own projections* (based on '*[$_{TP}$ no one else would <$_{VP}$ e>]'* in (11a)) *taking a vP or TP as target of Repr* ([11]), as indicated by the QP structure with *Op*$_{\neg}$ as its head; [32])

b'. John read **[$_{QP}$ *books* [$_{Q'}$ that [$_{QP}$[$_{Q'}$[$_{Q}$ *Op*$_{\neg}$] [$_{nP}$ one else]] [$_{TP}$ (no one else) would <$_{VP}$ e>]]**

(Further Hornstein & Uriagereka style Repr applies to produce the larger QP, where the Q-hood of C (*that)* is created due to the *C-T connection* of an LF-sort ([2]), & *books* is taken to occupy some [Spec, Q] position of the Q-head *that;* I take the reason for this kind of additional Repr to derive from the connotation of *no one else,* i.e., **'only he/John (himself),'** so as to create a local relation between the matrix Subj *John* & ***no one else/only he/John (himself)), no one else*** counting as head of the entire/larger QP due to a sort of C-T connection ([2]) involving the Q/C-head *that* and its complement head *Op*$_{\neg}$*)*

b''. John **[$_{QP}$ *books* [$_{Q'}$ that [$_{QP}$[$_{Q'}$[$_{Q}$ *Op*$_{\neg}$] [$_{nP}$ one else]] [$_{TP}$ (no one else) would <$_{VP}$ e>]]** reads **t**

(**t** stands for the copy of the larger QP which has QR-raised covertly into a pre-matrix-verb position, so as to satisfy the interpretive requirement on the construction involving the SQ *no* that it be LF-represented as a ***Q-RC- NuSc structure***, as in **[*Op*$_{\neg}$-else x][x a book that someone would read][(John) reads x]**)

b'''.[books that [no one else **would** read books]]
[John reads books]

(Formation of the *Q-RC-NuSc structure* leads to ACD-resolution along with Paral ((7c')); As for the DIT/CLT of [31], the '<reads books>' portion in VP-ellipsis site is recruited from the result of theta-theoretic merger of *reads* & *books* in vP of the RR (represented by '<$_{VP}$ e>' in (11b, b', b'')), while as for the matrix clause VP reads books, specifically books is obtained due to its status as the head of the 'pre-Repr-ed' RR construction [$_{nP}$ ***books*** that no one else would]; (11a))

3.2. *Moulton* (2013): aP with an Event Argument as a Strong Phase

(12) a. Someone seems sick. (= [19]'s: 158
(1a); *someone > seem; *seem > someone*)

b. Someone seems to be sick. (=[19]'s: 158

(1b); *someone > seem; seem > someone*)

Taking issue with Williams (1983; 'Against small clauses' *LI* 14; based on (12a, b)), [19] comes up with examples incompatible with Williams (1983), as follows:

(13) a. A new solution seems necessary. But none presently exists. (*seem > necessary > ∃; (∃ > seem > necessary))*

b. A new solution seems available. #But none presently exists. (* *seem > available > ∃; (∃ > seem > available))*

When the small-clause predicate is a modal adjective (MA) like *necessary* as in (13a), the small-clause Subj can be interpreted in the scope of the adjective, & hence within the scope of the embedding verb *seems.* No such reconstruction is possible with nonmodal adjectives (non-MA), such as *available* & *sick.* To account for this characteristic property of MAs, such as *necessary, likely,* [19] assumes that MAs take a "covert clausal complement (covert CC)," based on such examples as the following ones, (14a, b), involving an independent temporal modifier:

(14) a. Yesterday, a new grill was *necessary* <u>tonight</u>. We no longer need one.
(= [19]'s: 162 (15a))

b. Right now a storm is *likely* <u>tomorrow.</u>
(= [19]'s: 162 (16a))

I explore a possibility of giving the necessary content to the notion of a "MA's covert CC" via a "Davidsonian" *event argument* (D-arg) as elaborated in [3], pointing to *having a 'covert CC' being equated with having a* D-arg *in addition to other arguments,* & also leading to the distinction between *necessary* & *available* due to the presence vs. absence of a D-arg as a lexical property in the former MA vs. the latter non-MA, respectively. The D-arg is assumed to be the highest argument of the (stage-level) predicate. I propose that **MAs such as *necessary* & *likely*** in (14a, b) **project an 'aP'** (a projection with functional head *a* as head & its complement AP) **containing a D-arg in it.** With these assumptions in mind, let us consider the examples (13a, b), repeated here as (15a, b):

(15) a. A new solution seems necessary. But none presently exists.

(*seem >necessary > ∃; (∃ > seem > necessary))*

b. A new solution seems available. #But none presently exists.

(**seem> available >∃; (∃ > seem > available))*

Assuming that *an aP with a D-arg in it counts as a strong phase,* let us see the derivations of the first sentences of (15a, b = 13a, b) with the IND Subj on its narrow scope interpretation:

(16) a. A new solution seems necessary. (*seem > necessary > ∃)*

b. $[_{aP}$ a new solution$_{<-specific>}$ $[_{a'}$ necessary $[_{AP}$ (necessary) (a new solution) *D-arg*]]

(At the completion of the strong aP-phase with a D-arg ([25, 26]), head A, *necessary,* has raised to functional head a & A complement *a new solution* has raised to a [Spec, a] position (for further NS-movement); P-interface invades NS to assign a [–Sp] to the IND in aP (*a new solution),* which sits in the 'current strong-phase-initial EPP-/EF-position (see [28]))

(17) A new solution seems available.
(* *seem > available > ∃)*

(Unavailability of the –Sp reading of *a new solution* in (17) is due to the non-strong-phase status of the aP with *available* as its head)

4. Further Nice Consequences & Implications

4.1. Thematic Focus: [+Affected]: *Suzuki* (1991, 1997)

(18) a. I usually <u>love animals</u> that you do.

(= [4]'s: 114 (45b))

b. *I usually <u>draw animals</u> that you do.

(= [4]'s: 111 (39b))

(19) ***Thematic focus: [+affectd]*** ([26]: 194 (54))

α is a [+affected] element iff

(i) it already exists at the time of 'affecting,' &

(ii) it is 'affected' physically, psychologically,

or in other ways (either directly or indirectly).

Suzuki ([27]) assumes that "a [+affected] element is assigned [+focus]" (thematic focus). Assuming based on (10) containing an AdvQ that "a target of an AdvQ must be *a focus/ focused* in some way or other," *animals (that you do)* in (18a) is a [+affected] element and hence a focus because *love* is 'affecting' (see (19)), while *animals (that you do)* in (18b) is not because *draw* is not 'affecting.'

4.2. "I want a car that you do"

(20) a. I want ***a car*** that you do.

(= [7]'s: 87 (59a))

b. *I read ***two books*** that you did.

(= (5d/8a) above, [4]'s: 75 (35b)

(21) a. I want a car that you do.

(*want:* an **intensional** transitive verb, with a semantically opaque Obj inducing 'failure of extensional substitution' & 'lack of existential import'; [19]: 161)

b. I [$Op_{intensional}$ [want a car that you do]]

(*want*, with an ***intensionality*** operator as part of its semantics)

b'. I [$Op_{intensional}$ [want [$_{focus}$ a car that you do]]

(*a car that you do,* a 'focus element' ((19)), bound by the ***intensionality*** operator)

b". I [$Op_{intensional}$ [$_{focus}$ a car that you do][want **t**]]

(Focus raising to a position adjacent to & c-commanded by the ***intensionality*** operator making it possible to obtain a *Q-RC-NuSc structure* & Paral for ACD resolution of (21)) (Cf. [19]: 161 (13a), **want** *taking a covert CC)* As for the ungrammatical example (20b), see the discussion on (5d/8a) above.

References: [1] Chomsky 2000 Minimalist inquiries/[2] 2007 Approaching UG from below./[3] Chung & Ladusaw 2004 *Restriction & saturation*/[4] Diesing 1992. *Indefinites*/[5] Donati & Cecchetto 2011 Relabeling heads *LI* 42/[6] Fox 2000 *Economy & semantic interpretation*/[7] 2002 ACD & the copy theory of movement *LI* 33/[8] Georgi & Müller 2010 Noun-phrase structure by reprojection *Syntax* 13/[9] Grohmann 2003 Successive cyclicity under (anti-)local considerations *Syntax* 6/[10] Hinzen 2012 Phases & semantics In *Phases*/[11] Hornstein & Uriagereka 2002 Reprojection. In *Derivation & explanation in the MP*/[12] Iatridou & Sichel. 2011 Neg DPs, A-movement, & SD *LI* 42/[13] Jacobson 2008 Direct compositionality & variable-free semantics In *Topics in ellipsis*/[14] Kayne 1994 *The antisymmetry of syntax*/[16] López 2003 Steps for a well-adjusted dislocation *Stud Ling* 57/[17] 2012 *Indefinite objects*/[18] May 1985 *LF*/[19] Moulton 2013 Raising from the dead *LI* 44/[20] Reinhart 1997 Quantifier scope *Ling & Philos* 20/[21] 2006 *Interface strategies*/[22] Sauerland 1998 The meaning of chains Doctoral dissertation MIT/[23] 2001 A contrast to a trace In *WCCFL* 20/[24] Sheehan & Hinzen. 2011 Moving towards the edge *Ling Analy* 37/[25] Suzuki 1991 Focus & conditions on representation *Lingua* 83 (reprinted in [26] Suzuki 1997 *Studies in generative syntax*)/[27] 2007 *Reflections on Chomsky's SMT*/ [28] 2012a *Reflections on Chomsky's SMT II*/[29] 2012b Modification as reprojection *JELS* 29/[31] Uriagereka 2008 *Syntactic anchors*/[32] Zeijlstra 2007 On the lexical status of negative indefinites in Dutch and German.

Japanese EFL Learners' Native-like Parsing of PP Attachment Ambiguity[1]

Toshiyuki YAMADA & Yuki HIROSE
The University of Tokyo

Keywords: PP attachment ambiguity, self-paced reading, parsing strategies/preferences, Japanese EFL learners

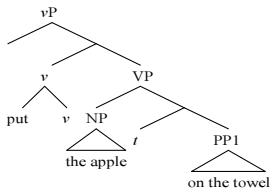
1. INTRODUCTION

The goal of this study is to investigate whether second/non-native language (L2) parsing is similar to first/native language (L1) parsing with respect to the adoption of parsing principles or strategies. We examined Japanese English-as-a-foreign-language (EFL) learners' parsing of prepositional phrase (PP) attachment ambiguity, illustrated as in (1).

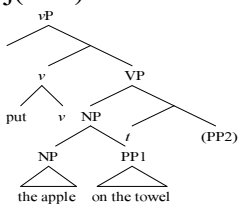
(1) Put the apple on the towel into the bag.

Assuming incremental (i.e., word-by-word) parsing, the sentence in (1) is temporarily ambiguous. The first PP (PP1), *on the towel*, can be interpreted either as an argument of the ditransitive verb, *put*, or as an adjunct to the preceding noun phrase (NP), *the apple*.[2] We call the former Arg(ument)-attachment and the latter Adj(unct)-attachment.[3] The corresponding two structures can be depicted as in (2a-b).

(2) a. Arg(ument)-attachment



b. Adj(unct)-attachment



At the second PP (PP2), *into the bag*, the attachment ambiguity associated with the preceding PP, *on the towel*, is disambiguated toward Adj-attachment as in (2b).

In earlier studies on L1 and L2 parsing, a garden-path effect has been observed for PP attachment ambiguity, given no disambiguating context. Consider (1) and its unambiguous control (3).

(3) Put the apple that's on the towel into the bag.

Compared to (3), processing difficulty has been reported with (1). This is because initially, incorrect Arg-attachment as in (2a) is adopted; however, at PP2, reanalysis to correct Adj-attachment as in (2b) is required. This garden-path effect has been found both in L1 parsing (Ferreira and Clifton 1986; Frazier 1987 for self-paced reading; Tanenhaus, Spivey-Knowlton, Eberhard, and Sedivy 1995 for visual world paradigm (VWP) eye-tracking) and in L2 parsing (Hirose, Goya, and Ofuru (2008) for "easy-difficult" rating and VWP eye-tracking). Interestingly, Hirose, Goya, and Ofuru (2008) found no garden-path effect in the lower-proficiency learners.

Why is Arg-attachment preferred initially? A relevant parsing principle or strategy has been proposed: Argument over Adjunct (Abney 1989; Schütze 1995; Boland and Blodgett 2006; cf. Theta Attachment (Pritchett 1992: 12)).[4] The occurrence of a garden-path effect in (1), not in (3), suggests that other things being equal, the verb's argument structure information is used in real-time parsing.

2. THE PRESENT STUDY

The present study examined whether Argument over Adjunct holds in L2 parsing by different methodology from Hirose, Goya, and Ofuru's (2008) because theirs was not relevant for detecting an Adj-attachment preference if it were really in operation. There are two possibilities for Japanese EFL learners' parsing behavior in the resolution of PP attachment ambiguity:

(4) *Two Possibilities*

a. that L2 learners can use ditransitive argument structure information and show an Arg-attachment preference; and
b. that Japanese speakers initially abide by locality-based Adj-attachment.

For these two possibilities, we adopted self-paced reading as methodology in order (i) to confirm the outcome of Hirose, Goya, and Ofuru (2008) by a different experimental task and (ii) more importantly to find out whether an Adj-attachment preference can be detected as well as an Arg-attachment preference.

2.1. Method

Participants

Seventy-one Japanese EFL learners at the University of Tokyo and Gunma University were paid to participate in the experiment. They were 43 males and 28 females, and their mean age was 19.92 years old (SD = 1.00). Their English proficiency level was estimated by a single TOEFL (Test Of English as a Foreign Language) grammar test (extracted from Sharpe 2001), and their mean score was 13.87 out of 20 points (one point for one question) (SD = 2.99) (69.35% in percentage terms). (Three participants were in fact excluded from further analyses (see *Data treatment* below).)

Materials

Twenty-four sets of the target sentences as in (5a-d) were used ("R" in (5) stands for Region (position) in the sentence; see Appendix A for the list of all target items).

(5) R1 / R2 / R3 / R4 / R5 / R6

a. Susan / put / the candy / in the box / into the paper bag / before the party.
b. Susan / put / the candy / for her son / into the paper bag / before the party.
c. Susan / put / the candy / in the box / right away / before the party.
d. Susan / put / the candy / into the box / right away / before the party.

By 2x2 condition design of forced Attachment (i.e., Arg(ument) versus Adj(unct)) and Ambiguity (i.e., amb(iguous) versus unamb(iguous)), we call the four conditions (5a-d) Adj:amb, Adj:unamb, Arg:amb, and Arg:unamb, respectively, to recall them easily. The forth region (R4) was the source of temporary ambiguity, and the fifth region (R5) the critical disambiguating region. In (5a,c), attachment of the PP in R4 is temporarily ambiguous, but at the subsequent region, R5, Adj-attachment and Arg-attachment are forced, respectively. (5b,d) were the baseline conditions for (5a,c). The PP in R4 is unambiguously attached as an adjunct in (5b) and an argument in (5d). The rationale was as follows: if Arg-attachment is initially adopted, the reading time (RT) for the critical R5 will be longer in Adj-forced (5a) compared to its baseline (5b); on the other hand, if Adj-attachment is initially adopted, the RT for R5 in Arg-forced (5c) will be longer compared to its baseline (5d).

Procedure

A phrase-by-phrase, non-cumulative, moving-window, self-paced reading task was conducted by Linger.[5] After oral and written instructions, eight practice trials were done for the participants' familiarity with self-paced reading on the PC. After confirmation, twenty-four target sentences and forty-eight fillers were administered. They were counterbalanced into four lists so that one participant could never experience more than one condition for each target item. The item presentation was randomized by Linger for each participant. Each sentence was followed by a comprehension question, for example, as in (6) for (5a).

(6) The candy was put into the paper bag.
i) correct ii) incorrect iii) ungrammatical

Given three possible answers, the participant was required to choose one of them, depending on whether the question sentence was correct or incorrect on the basis of the sentence for self-paced reading.[6] For instance, the correct answer for (5a) was (i) *correct* in (6). There were no time limits for the participant's self-paced reading and answering the questions, nor feedback for his/her responses to the questions. After the task, a background questionnaire and a TOFEL grammar test were carried out. It took approximately 45 minutes to finish the experiment.

Data treatment

First, we excluded participants whose accuracy was below 65% for twelve comprehension questions.[7] Three participants were excluded from further analyses. The remaining 68 participants were 41 males and 27 females, and their mean age was 19.86 years old (SD = 0.94). Their mean score on the TOEFL grammar test was 13.89 out of 20 points (SD = 3.03) (69.45% in percentage terms).

Second, the residual RTs of the target items were analyzed by linear mixed-effects modeling (Baayen, Davidson, and Bates 2008)[8], irrespective of the participants' responses to the comprehension questions.[9] Attachment (Arg versus Adj) and Ambiguity (amb versus unamb) were the fixed effects (centered), and participants and items were the random effects. The optimal model was chosen by backward selection from the max model (rt ~ cattachment*cambiguity + (1+cattachment*cambiguity|participant) + (1+cattachment*cambiguity|item)). In what follows, we report the results of coefficient (β), standard error (*SE*), *t*-value (*t*), and *p*-value (*p*).

2.2. Results

The RTs for all regions are presented in Figure 1 (error bars mean standard errors).

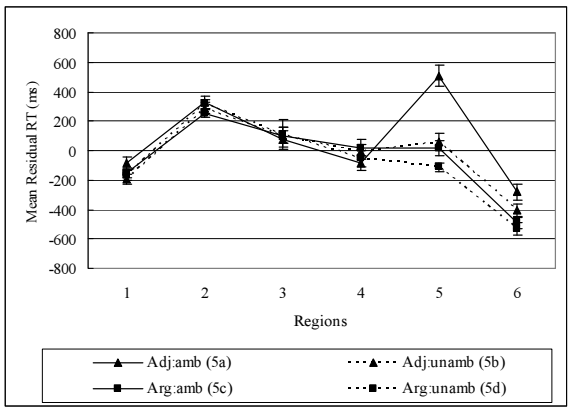


Figure 1: Mean Residual RT by Condition

No main effects of Attachment or Ambiguity, nor their interaction, were found in all regions except for the critical R5.[10]

The mean residual RTs for the critical R5 are shown in Table 1.

Table 1: Mean Residual RT in R5 by Condition

	(5a)	(5b)	(5c)	(5d)
RT (ms)	507	59	17	-112
SE	71	55	49	32

There were main effects of Attachment (β = -166.06, SE = 56.39, t = -2.94, p < .01) and Ambiguity (β = -144.38, SE = 33.32, t = -4.33, p < .001), indicating that RTs in (5a-b) were longer than those in (5c-d) and RTs in (5a,c) longer than those in (5b,d). Their interaction was also significant (β = 79.78, SE = 27.27, t = 2.92, p < .01).[11] Further analyses showed a significant RT difference in Adj-forced (5a-b) (β = -223.95, SE = 50.15, t = -4.465, p < .001), meaning that the RT in (5a) was longer. Although it was marginal, some nonnegligible difference in RT was found in Arg-forced (5c-d) (p = .06), indicating that the RT in (5c) was longer.

2.3. Discussion

The results indicate a garden-path effect in Adj-forced (5a). This suggests that the Japanese EFL learners showed the same parsing behavior for the resolution of PP attachment ambiguity as native speakers of English. In contrast, there was only a marginal RT difference in Arg-forced (5c-d). This cannot be predicted in native speakers of English, leading to a possibility that the Japanese EFL learners might also have shown an Adj-attachment preference or even that they might have been bimodal.

For this possibility, we examined the RT data of each participant. It was found that the RT data of 24 out of 68 participants (35.92% in percentage terms) showed an Adj-attachment preference. Their mean residual RT can be summarized in Table 2.

Table 2: Mean Residual RT in R5 by Condition for the 24 participants

	(5a)	(5b)	(5c)	(5d)
RT (ms)	197	240	199	-129

There were no main effects of Attachment or Ambiguity, but their interaction was significant (β = -91.57, SE = 41.08, t = -2.22, p < .05).[12] Further analyses indicated no difference between Adj-forced (5a-b) and a significant difference between Arg-forced (5c-d) (β = -164.46, SE = 57.00, t = -2.88, p < .01), suggesting an Adj-attachment preference. There are two possible perspectives we can consider for the presented results. One is related to the characteristics of participants. However, since there were no correlations at all between the participant's RT and his/her score on the TOEFL grammar test, at least proficiency levels cannot account for the results. The other perspective is the nature of experimental items. The problem which Arg- or Adj-attachment is preferred is related at least to whether or not the learner can use the ditransitive argument structure information and take the incoming PP as an argument as soon as he/she encounters it.

3. FOLLOW-UP EXPERIMENT

To examine Japanese EFL learners' knowledge of ditransitive argument structure, we conducted a follow-up sentence completion experiment.

3.1. Method

Participants

A new group of 30 Japanese EFL learners at the University of Tokyo were recruited (10 participants were excluded from further analyses because their responses to some items were incomplete). The remaining participants were 14 males and six females, their mean age was 18.65 years old (SD = 0.87).

Materials

The following twelve ditransitive verbs used in the self-paced reading task were prepared for sentence completion (see Appendix B for the list of all target items):

(7) ditransitive verbs examined
put, insert, stuff, pour, jam, lay, place, set, lean, drip, spray, splash

Procedure

The task was a sentence completion questionnaire as in (8).

(8) The woman put _____

The participant was instructed to use as many words as he/she liked to complete the sentence with a period. Besides the twelve ditransitive verbs, twelve fillers were added. After the task, a background questionnaire was carried out. It took about 25 minutes to finish the experiment.

Data treatment

The participants' responses were categorized into ditransitive, monotransitive, and others (e.g., intransitive), and compared with the RT data of the main experiment.

3.2. Results

Out of the twelve ditransitive verbs, *jam*, *set*, and *drip* were used by majority (12, 13, and 11 out of 20 participants, respectively) as monotransitive, i.e., only the direct object was added (for example, *drip coffee*, not *drip coffee on the table*). On the other hand, *stuff*, *pour*, and *place* were used by majority (12, 11, and 16 out of 20 participants, respectively) as ditransitive.[13]

Estimating that the proficiency levels of the participants in the main and follow-up experiments were not considerably different, we compared the results of sentence completion and RT patterns in R5. First, the RTs were analyzed only for two items, namely, *jam* and *set*. Those verbs were preferentially used monotransitive in sentence completion study. As shown in Table 3, the garden-path effect was bigger in Arg-forced (5c-d) than in Adj-forced (5a-b), suggesting an Adj-attachment preference.

Table 3: Mean Residual RT in R5 by Condition for *jam* and *set*[14]

	(5a)	(5b)	(5c)	(5d)
RT (ms)	31	18	-69	-163

Second, the RTs were analyzed for *stuff*, *pour*, and *place*. Those verbs were predominantly understood as ditransitive. As seen in Table 4, the garden-path effect was bigger in Adj-forced (5a-b), indicating an Arg-attachment preference.

Table 4: Mean Residual RT in R5 by Condition for *stuff*, *pour*, and *place*

	(5a)	(5b)	(5c)	(5d)
RT (ms)	656	91	-184	-179

3.3. Discussion

For those verbs that were predominantly used as monotransitive, it is probable that the subsequent PP was analyzed as an adjunct. Thus, the RT pattern in Table 3 would mean a garden-path effect in (5c). Contrastively, the RT pattern in Table 4 indicating an Arg-attachment preference was observed for those verbs that were used mainly as ditransitive. On the assumption of some correlation between the learner's parsing preferences and ditransitive knowledge, whether or not they can use verb's argument structure information will drive their adoption of *Argument over Adjunct* native-like.

4. GENERAL DISCUSSION

The results of self-paced reading showed that a significant RT difference was found in Adj-forced (5a-b) but not in Arg-forced (5c-d). This indicates that the Japanese EFL learners' parsing preference was Arg-attachment and thus native-like. A possible explanation is that regardless of L1 or L2, parsing strategy *Argument over Adjunct* is adopted universally. In other words, in real-time parsing the head (in this case, verbal) information such as argument structure is used rapidly. This means that regardless of the fact that the occurrence timing of the head is late in their native head-final Japanese, Japanese EFL learners can use its information rapidly in the processing of head-initial English. Following ditransitive argument structure, it is reasonable that we observed a garden-path effect in Adj-forced (5a-b) but not in Arg-forced (5c-d).

Although the Arg-attachment preference was robust, an Adj-attachment preference should not be ignored. In fact, we found that the RT data of 24 out of 68 participants suggested an Adj-attachment preference. Since no correlation between the participant's RT and his/her score on the TOEFL grammar test was found, the Adj-attachment preference cannot be accounted for by referring to proficiency levels. This is mysterious and needs further research. On the other hand, the results of follow-up experiment suggest that some ditransitive verbs were used as monotransitive by the Japanese EFL learners. Note that argument drop is allowed in Japanese but not in English (e.g., Kuroda 1965). This L1 property might have affected the Japanese EFL learners' parsing of PP attachment ambiguity. An intriguing open question is to narrow down possible factors producing L2-specific parsing behaviors.

5. CONCLUSION

In sum, the present study confirmed the outcome of Hirose, Goya, and Ofuru (2008) by

self-paced reading. That is, the Japanese EFL learners can show an Arg-attachment preference native-like in the parsing of temporary PP attachment ambiguity. By newly adopting Arg-forced conditions, a possibility remains that depending on the verbs, Japanese EFL learners may be bimodal, i.e., some showing an Arg-attachment preference on the basis of the parsing strategy *Argument over Adjunct*, but the other displaying an Adj-attachment preference possibly motivated by linear locality.

Further studies are needed along the following lines. First, by recruiting the same population, the correlation between their RT patterns and ditransitive knowledge should be investigated. Second, very low-proficiency learners might have difficulty with the rapid use of head information in English and thus they may show an Adj-attachment preference clearly. Third, this time we examined L2 parsing of temporary PP attachment ambiguity with argument/adjunct asymmetry. It is interesting to compare it with L2 parsing of global PP attachment ambiguity with no argument/adjunct asymmetry as in (9).

(9) You can feel the cat with the feather.
(Snedeker and Casserly 2010: 1264)

An intriguing question is which Arg- or Adj-attachment is preferred, given no bias toward either attachment.

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NOTES

[1] The following abbreviations are used in this paper: Adj: Adjunct; amb: ambiguous; Arg: Argument; β: coefficient; EFL: English as a Foreign Language; NP: Noun Phrase (which is used instead of Determiner Phrase for simplicity); L1: First (native) Language; L2: Second (non-native) Language; ms: millisecond; *p*: *p*-value; PP: Prepositional Phrase; R: Region; RT: Reading Time; SD: Standard Deviation; *SE*: Standard Error; *t*: *t*-value; *v*P: light *v*erb Phrase; VP: Verb Phrase.

[2] In this paper, we use the term *ditransitive* as a set of verbs taking a theme NP and a goal PP as two syntactically required internal arguments.

[3] We use the terms *Argument* and *Adjunct* just descriptively, i.e., theory-neutrally.

[4] The Arg-attachment preference can also be captured by Minimal Attachment (fewer syntactic nodes preferred (Frazier 1979: 24)) over Late Closure (more recent attachment preferred (Frazier 1979 20)).

[5] For self-paced reading technique, see Just, Carpenter, and Wolley (1982).

[6] If the sentence for self-paced reading was ill-formed as English, the participant was asked to select the choice *ungrammatical* (this was prepared for other purposes than the current one).

[7] These questions were used because they could be answered without any confusion about three choices.

[8] Analysis of variance (ANOVA) showed the same tendency as the following report.

[9] This was because the accuracy for comprehension questions for the target items was relatively low (around 60%), which was probably attributed to three choices (in particular, *ungrammatical*) leading to the participants' confusion.

[10] A main effect of Attachment was observed in R6 (β = -83.89, *SE* = 22.54, t = -3.72, $p < .001$). This can be considered spill-over from the preceding R5.

[11] The optimal model was (rt ~ cattachment*cambiguity + (1+cattachment*cambiguity|participant) + (1+cattachment+cambiguity|item)).

[12] The optimal model was (rt ~ cattachment*cambiguity + (1+cattachment|participant) + (1+cattachment|item)).

[13] For the other verbs put aside here, *lean* and *splash* were used by a majority as intransitive, and *insert*, *lay*, and *spray* were used as ditransitive by nine out of 20 participants.

[14] *Drip* was excluded because its RT pattern was different from that of *jam* and *set*.

REFERENCES

Abney, Stephen Paul (1989) A computational model of human parsing. *Journal of Psycholinguistic Research*, 18(1), 129-144.

Baayen, R. Harald, Davidson, Douglas, J., and Bates, Douglas M. (2008) Mixed-effects modeling with crossed random effects for subjects and items. *Journal of Memory and Language*, 59, 390-412.

Boland, Julie E. and Blodgett, Allison (2006) Argument status and PP-attachment. *Journal of Psycholinguistic Research*, 35, 385-403.

Ferreira, Fernanda and Clifton, Charles, Jr. (1986) The independence of syntactic processing. *Journal of Memory and Language*, 25, 348-368.

Frazier, Lyn (1979) *On comprehending sentences: Syntactic parsing strategies*. [reproduced unpublished doctoral dissertation, University of Connecticut, in 1978]. Bloomington: Indiana University Linguistics Club.

Frazier, Lyn (1987) Sentence processing: A tutorial review. In: Coltheart, Max (ed.), *Attention and performance XII: The psychology of reading*, pp. 559-586. Hove: Lawrence Erlbaum.

Hirose, Yuki, Goya, Taisuke, and Ofuru, Yukiko (2008) The attachment preference and the role of referential information in second language parsing. In: Ogura, Tamiko, Kobayashi, Harumi, Inagaki, Shunji, Hirakawa, Makiko, Arita, Setsuko, and Terao, Yasushi (eds.), *Studies in Language Sciences, Vol. 7*, pp. 155-168. Tokyo: Kurosio Publishers.

Just, Marcel Adam, Carpenter, Patricia A., and Wolley, Jacqueline D. (1982) Paradigms and processes in reading comprehension. *Journal of Experimental Psychology: General*, 111(2), 228-238.

Kuroda, S.-Y. (1965) *Generative grammatical studies in the Japanese language*. Unpublished doctoral dissertation, MIT.

Pritchett, Bradley L. (1992) *Grammatical competence and parsing performance*. Chicago: Chicago University Press.

Schütze, Carson T. (1995) PP attachment and argumenthood. In: Schütze, Carson T., Gander, Jennifier B., and Broihier, Kevin (eds.), *Papers on language processing and acquisition, MIT Working Papers in Linguistics, 26*, pp. 95-151. Cambridge, MA: MITWPL.

Sharpe, Pamela J. (2001) *How to prepare for the TOEFL test: Test of English as a foreign language, 10th Edition*. Hauppuge: Barron's Educational Series, Inc.

Snedeker, Jesse and Casserly, Elizabeth (2010) Is it all relative?: Effects of prosodic boundaries on the comprehension and production of attachment ambiguities. *Language and Cognitive Processes*, 25(7/8/9), 1234-1264.

Tanenhaus, Michael K., Spivey-Knowlton, Michael J., Eberhard, Kathleen M., and Sedivy, Juli C. (1995) Integration of visual and linguistic information in spoken language comprehension. *Science*, 268(5217), 1632-1634.

APPENDIX A: Target Items in Main Expt.

1. a. Susan put the candy in the box into the paper bag before the party.
   b. Susan put the candy for her son into the paper bag before the party.
   c. Susan put the candy in the box right away before the party.
   d. Susan put the candy into the box right away before the party.
2. a. The woman put the toy in the handbag into the box on Christmas Eve.
   b. The woman put the toy for her daughter into the box on Christmas Eve.
   c. The woman put the toy in the handbag silently on Christmas Eve.
   d. The woman put the toy into the handbag silently on Christmas Eve.
3. a. Annie inserted the key in the small pocket into the lock early in the morning.
   b. Annie inserted the key for the local library into the lock early in the morning.
   c. Annie inserted the key in the small pocket slowly early in the morning.
   d. Annie inserted the key into the small pocket slowly early in the morning.
4. a. The student inserted the card key in the envelope into the door before the meeting.
   b. The student inserted the card key for the room into the door before the meeting.
   c. The student inserted the card key in the envelope properly before the meeting.
   d. The student inserted the card key into the envelope properly before the meeting.
5. a. My grandmother stuffed the beans in the old bag into the pillow before sleeping.
   b. My grandmother stuffed the beans from the old farm into the pillow before sleeping.
   c. My grandmother stuffed the beans in the old bag carefully before sleeping.
   d. My grandmother stuffed the beans into the old bag carefully before sleeping.
6. a. The merchant stuffed the oranges in the bag into the container after the trip.
   b. The merchant stuffed the oranges from the countryside into the container after the trip.
   c. The merchant stuffed the oranges in the bag happily after the trip.
   d. The merchant stuffed the oranges into the bag happily after the trip.
7. a. Jane poured the juice in the big pitcher into the glass after dinner.
   b. Jane poured the juice from the fruit farm into the glass after dinner.
   c. Jane poured the juice in the big pitcher really slowly after dinner.
   d. Jane poured the juice into the big pitcher really slowly after dinner.
8. a. The waitress poured the wine in the bottle into the cup before lunch.
   b. The waitress poured the wine from New Zealand into the cup before lunch.
   c. The waitress poured the wine in the bottle with a smile before lunch.
   d. The waitress poured the wine into the bottle with a smile before lunch.
9. a. My grandfather jammed the rice in the bag into the lunchbox before going out.
   b. My grandfather jammed the rice from the country into the lunchbox before going out.
   c. My grandfather jammed the rice in the bag without hesitation before going out.
   d. My grandfather jammed the rice into the bag without hesitation before going out.
10. a. The servant jammed the vegetables in the box into the bag for the event.
    b. The servant jammed the vegetables from the town into the bag for the event.
    c. The servant jammed the vegetables in the box seriously for the event.
    d. The servant jammed the vegetables into the box seriously for the event.
11. a. Michael laid the book on the shelf onto the desk after lunch.

b. Michael laid the book for the class onto the desk after lunch.
c. Michael laid the book on the shelf quickly after lunch.
d. Michael laid the book onto the shelf quickly after lunch.

12. a. The man laid the newspaper on the office chair onto the table after the meeting.
b. The man laid the newspaper from the delivery office onto the table after the meeting.
c. The man laid the newspaper on the office chair suddenly after the meeting.
d. The man laid the newspaper onto the office chair suddenly after the meeting.

13. a. Mr. Kato placed the CDs on the desk onto the old shelf before dinner.
b. Mr. Kato placed the CDs for his children onto the old shelf before dinner.
c. Mr. Kato placed the CDs on the desk carefully before dinner.
d. Mr. Kato placed the CDs onto the desk carefully before dinner.

14. a. The girl placed the doll on the table onto the showcase after breakfast.
b. The girl placed the doll for her friend onto the showcase after breakfast.
c. The girl placed the doll on the table gently after breakfast.
d. The girl placed the doll onto the table gently after breakfast.

15. a. Ms. Roberts set the dishes on the kitchen counter onto the table at the party.
b. Ms. Roberts set the dishes for her important guests onto the table at the party.
c. Ms. Roberts set the dishes on the kitchen counter very quickly at the party.
d. Ms. Roberts set the dishes onto the kitchen counter very quickly at the party.

16. a. The waiter set the glasses on the tray onto the counter before the evening.
b. The waiter set the glasses for the customers onto the counter before the evening.
c. The waiter set the glasses on the tray very elegantly before the evening.
d. The waiter set the glasses onto the tray very elegantly before the evening.

17. a. The secretary leaned the folder on the shelf onto the wall last night.
b. The secretary leaned the folder from the bookstore onto the wall last night.
c. The secretary leaned the folder on the shelf very carefully last night.
d. The secretary leaned the folder onto the shelf very carefully last night.

18. a. The boy leaned the dictionary on the book onto the box yesterday.
b. The boy leaned the dictionary from the library onto the box yesterday.
c. The boy leaned the dictionary on the book secretly yesterday.
d. The boy leaned the dictionary onto the book secretly yesterday.

19. a. My sister dripped the mineral water on the tray onto the floor while cooking.
b. My sister dripped the mineral water from the refrigerator onto the floor while cooking.
c. My sister dripped the mineral water on the tray accidently while cooking.
d. My sister dripped the mineral water onto the tray accidently while cooking.

20. a. The manager dripped the bottled alcohol on the box onto the table last night.
b. The manager dripped the bottled alcohol for home cleaning onto the table last night.
c. The manager dripped the bottled alcohol on the box intentionally last night.
d. The manager dripped the bottled alcohol onto the box intentionally last night.

21. a. Yoko sprayed the cleaner on the cabinet onto the oven before using.
b. Yoko sprayed the cleaner for the kitchen onto the oven before using.
c. Yoko sprayed the cleaner on the cabinet with care before using.
d. Yoko sprayed the cleaner onto the cabinet with care before using.

22. a. The designer sprayed the paint inside the can onto the container for the event.
b. The designer sprayed the paint for the handicrafts onto the container for the event.
c. The designer sprayed the paint inside the can enjoyably for the event.
d. The designer sprayed the paint onto the can enjoyably for the event.

23. a. The little girl splashed the water on the cabinet onto the floor before breakfast.
b. The little girl splashed the water from the pot onto the floor before breakfast.
c. The little girl splashed the water on the cabinet unintentionally before breakfast.
d. The little girl splashed the water onto the cabinet unintentionally before breakfast.

24. a. The children splashed the mud on the tray onto their clothes yesterday.
b. The children splashed the mud from the river onto their clothes yesterday.
c. The children splashed the mud on the tray again and again yesterday.
d. The children splashed the mud onto the tray again and again yesterday.

APPENDIX B: Target Items in Follow-up Expt.

1. The woman put _____
2. The student inserted _____
3. The merchant stuffed _____
4. The waitress poured _____
5. The servant jammed _____
6. The man laid _____
7. The girl placed _____
8. The waiter set _____
9. The boy leaned _____
10. The manager dripped _____
11. The designer sprayed _____
12. The children splashed _____

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