Papers from the Forty-First Conference
November 4-5, 2023
and from
the Sixteenth International Spring Forum
May 13-14, 2023
of
The English Linguistic Society of Japan

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本論集は、2023年5月13日、14日にオンラインにて開催された日本英語学会第16回国際春季フォーラム、および同年11月4日、5日に東京大学にて開催された日本英語学会第41回大会における研究発表論文、Symposium Reports、Workshop ReportsおよびSpecial Lecture Reportsを収録しています（投稿辞退分は除く）。投稿受理日は以下のとおりです。

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CONTENTS

I. Papers from the Forty-First Conference

Labeling by Agree
Satoru Kanno ····· 2
Decategorialization of Parenthetical *I Mean* and Typology of Grammaticalization
Siyu Li and Hiromune Oda ····· 12
日本語における Pred の異形態選択と形容詞類の範疇について
秋本 隆之（Takayuki Akimoto） ····· 19
‘may certainly’の認可条件－「たしかに～かもしれない」との比較－
森　貞（Sadashi Mori）····· 29
Walk as a Lexical Causative －Where Does Accompaniment Come from?－
Tetsuya Nakamura ····· 39
If 節内の be to に関する意味論的・語用論的研究
岡　麟太郎（Rintaro Oka） ····· 48
埋め込み節のムードとトコロ節の意味論
山田彬尭（Akitaka Yamada） ····· 58
descend と ascend の語彙意味論
出水孝典（Takanori Demizu）····· 68
L2 Acquisition of Reciprocal Pronouns in Japanese Ellipsis by English and Spanish Speakers
Kazumi Yamada, Nobuo Ignacio López-Sako, Mika Kizu, and Cristóbal Lozano····· 78
Linearization of Postposed Subjects and Heaviness Constraint
Mizuki Sakamoto ····· 88
Andrews Amalgam as a Relative Clause
Tetsuro Hiratsuka ····· 98
Get 受動文における by 句と Theta System
森　敏郎（Toshiro Mori）·····108
The Syntax of *Die*
Takahiro Honda ·····118
Adnominal Partitive Absolute Constructions: A Dynamic Approach
Ryu Takamatsu·····128
A Semantic Analysis of *teiru* Form in Japanese
Takahiro Shimizuno ·····138
不変化詞 *out* を伴って生じる「除去」および「獲得」を表す句動詞構文
岩宮　努（Tsutomu Iwamiya）·····148
同語反復表現における粒度
山本尚子（Naoko Yamamoto）·····158
英語の直喩の典型的構文とジャンルによる選好性
小松原哲太（Tetsuta Komatsubara） ·····168
On the Historical Development of *So*-Inversion Constructions
Ryoya Kobayashi ····· 176

On the Reduction of the Clause Structure of Reduced Relative Clauses Showing OV Word Order in Old English
Katsuya Sugiura……186
古英語における与格前置受動文の派生について
飯田昇汰（Shota Iida）……196
A Covert Head-Movement Approach to Binding Phenomena
Toshifusa Oka……206

<Symposium Reports>
語を味わい尽くす——「多面的な理解」の実践——
平沢 慎也（Shinya Hirasawa）・鈴木 亨（Toru Suzuki）・柴田 元幸（Motoyuki Shibata）・堀田 隆一（Ryuichi Hotta）・関山 健治（Kenji Sekiyama）……216
深層学習時代の言語研究
大谷 直輝（Naoki Otani）・永田 亮（Ryo Nagata）・高村 大也（Hiroya Takamura）・川崎 義史（Yoshifumi Kawasaki）・持橋 大地（Daichi Mochihashi）・大関 洋平（Yohei Oseki）・堀川 友慈（Tomoyasu Horikawa）……221
Comparative Constructions in English and Other Languages
Duk-Ho An・Toshiko Oda・Linmin Zhang・Osamu Sawada……226

<Workshop Reports>
New Emerging Prospects in the Generative Tradition
Yosuke Sato・Hiromune Oda・Yuta Tatsumi・Yusuke Yagi……231
Language Variation in Noun Phrases and Its Theoretical Considerations
Jun Kawamitsu・Yuya Sakumoto・Nozomi Moritake……234

II. Papers from the Sixteenth International Spring Forum

The Reconstruction Effects in the Restrictive Relative Clauses in NP/DP Languages
Takato Yamamoto……238
Polarity Item Licensing in Vector Model: Negative, Positive and Bipolar Items
Sumiyo Nishiguchi……248
The Overt Focus Movement to vP Periphery in English
Satoru Kanno・Tomonori Otsuka・Ryoichi Kondo・Yuta Tanaka……255
Labeling and Selection: A Case Study of *Wh*-Associated *Exactly*
Maya Suzuki……265
The Unique Scope Property of Japanese Negative Imperatives
Kaito Ozawa……275

<Special Lecture Reports>
Japanese Noun Classes and Numerals
Akira Watanabe……285

書式規定……290

[I]

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Labeling by Agree*

Satoru Kanno
Tokyo University of Science

Keywords：feature inheritance, labeling, Agree, ECM constructions, vP structure

1. Introduction

The purpose of this paper is to argue that feature inheritance (FI) is not necessary as a theoretical apparatus, and that this elimination of FI is logically derivable from the proposal that weak heads are rendered projectable through the Agree relation with strong heads. This research is conducted under the labeling framework proposed by Chomsky (2013, 2015), who argues that labels of syntactic objects are necessary at interfaces. However, several points remain unclear regarding labeling theory. For example, we need to carefully examine the labels of structures with no overt syntactic item filling a specifier (or Spec) of a weak head, and structures in which an overt head is missing. Another issue to be addressed for clarifying the labeling theory is how to capture the optionality of raising found in ECM constructions. Finally, syntactic structures concerning various types of verbs remain to be fully discussed within the labeling framework. This study discusses these issues and clarifies how labeling works. Moreover, the current paper shows that the proposed analysis theoretically brings fruitful consequences: (i) that the current idea can capture CP structures and vP structures in a uniform way and (ii) that both Case valuation and φ-feature (or [φ]) valuation can be reduced to labeling.

2. Theoretical Background and Proposal

2. 1. Theoretical Background

Regarding the FI, which I focus on in this paper, previous studies have shown that FI and Transfer should occur at the same point of derivation (see Chomsky (2008) and Richards (2007) among others). FI then guarantees that [φ]-valuation must be done within the Transfer domain. However, under the labeling framework in Chomsky (2013, 2015), it is not always the case that valued φ-features are in Transfer domains. Specifically suppose that FI applies in the v*P domain and then the φ-features of v* are passed down onto the lower head R. At this point in the derivation, Transfer applies to the complement of the R. As a result, the Transfer domain does not correspond to the [φ]-valuation domain. Therefore, the conceptual support that underlies FI in the earlier framework has dissipated. However, FI itself is still assumed in the labeling theory in relation to weak heads. Weak heads are heads that cannot project on their own. Syntax requires a way to make them projectable. It is FI that works for this purpose. Therefore, FI is assumed to have labeling effects on weak heads (and I refer to the putative labeling

effects of FI on weak heads as the FI effects for labeling).

2. 2. Proposal

In this section, I will present the current proposal that uses Agree for the projectability of weak heads. Before showing this, I will clarify Minimalist desiderate, one of which is that every theoretical apparatus has a logical necessity backed up from the third factor principles (Chomsky (2013, 2015, 2021) among others). It is important to note that Agree, which the current paper relies upon, is a logical consequence of the third factor principles (Chomsky (2013)). Specifically, Agree is considered an instance of minimal search, which, in turn, derives from the third factor principles. The Agree relation is a natural consequence of the third factor principles. Therefore, it is theoretically desirable to derive the FI effects for labeling from Agree.

The problem here, then, is how the FI effects for labeling can be derived from the Agree relations. I propose (1), which is the central idea of the current paper, and consider (2) to understand how the current proposal works.

(1) A weak head projects on its own when entering into an Agree relation with a strong head.

(2) a. $\{H_s \ldots \{_{\alpha} H_w, XP\} \ldots$ $\alpha=H_wP$

b. $\{H_s \ldots \{_{\gamma} \{_{\beta=YP} Y \ldots\} \{_{\alpha=HwP} H_w, XP\} \ldots$ $\gamma=H_wP$

First, consider (2a). Suppose that the strong head H_s Agrees with the weak head H_w. This Agree relation makes H_w projectable and the label α is determined as H_wP. As the derivation proceeds, we reach the derivational stage in (2b), where YP is Merged with H_wP consisting of H_w and XP. In this case, H_w continues to be the target of the minimal search. This is because H_w has been in the Agree relation with H_s. As a result, the label γ is judged as H_wP at the interfaces.

At this point, I clarify what distinguishes strong heads from weak heads. First, following Chomsky (2015), I assume that strong heads are phase heads, that is, heads with φ-features. Consequently, C and v* are strong heads. Given this, it is a null hypothesis to assume that every head other than C and v* is a weak head. For expository purpose, this paper will use **outline letters** for weak heads.

Furthermore, let me discuss Case valuation. For ease of discussion, the current paper uses the term head-Agree to indicate the Agree relation between strong heads and weak heads for labeling, to distinguish it from conventional Agree relations for Case valuation. The conventional idea is that when DP (precisely, D in DP) enters into an Agree relation with a head, such as T or R, the Case feature of the DP is valued. However, departing from the conventional idea, the current paper incorporates Case valuation into head-Agree relations between strong heads and weak heads. Therefore, I assume (3).

(3) The Case of DP is valued when the DP is in the search domain of a head-Agree relation.

When a strong head starts to Agree, it sets up a search domain (see Ke (2019, to appear) for the notion of search domains concerning Agree). For the purpose of this paper, it suffices to understand that when α is in a search domain, α is structurally lower than a strong head and higher than a weak head, that is,

a structural position between a strong head and a weak head. Given this, I assume that when the DP is structurally within the search domain of C, a nominative Case value is assigned to the DP; when it is in the search domain of v*, an accusative Case value is assigned. Moreover, following the idea that Case valuation is a reflection of [φ]-valuation (Chomsky (2000)), I also assume that the DP within a search domain determines the [φ]-value of a strong head.[1]

Let me summarize Case valuation and [φ] valuation as follows:

(4) a. The DP within a search domain receives the Case value from a strong head.
b. The DP within a search domain assigns the [φ]-value of a strong head.

(4) has conceptual advantage over the conventional idea because we can attribute Agree for Case/[φ] to Agree for labeling. We no longer need to assume different Agree relations for Case/[φ] and for labeling.[2]

3. CP Domain

I have shown the conceptual discussion of the attribution of projectability to Agree relations, a relation emerging naturally from the third factor principles. Recall that previous studies have shown that Agree is possible with more than one syntactic object (see Hiraiwa (2005) among others). Given this, it is expected that multiple Agree can be used for labeling. This expected derivation can be found in (5).

(5) a. John is driving a car.
b. $\{_{CP}\ C_{[u\text{-}\varphi]}\ \{_{TP}$ John $\mathbb{T}\ \{_{ProgP}\ \mathbb{Prog}\ \{_{vP}$ ~~John~~ drive a car$\}\}\}\}$

In the structure in (5b), the strong head C enters into a multiple Agree relationship with the weak heads, $\mathbb{T}$ and $\mathbb{Prog}$. Consequently, $\mathbb{T}$ and $\mathbb{Prog}$ project TP and ProgP, respectively. In addition, *John* moves to TP for Case-valuation. Specifically, the DP comes into the search domain of C and is assigned a nominative Case value. At the same time, the [φ]-value of the strong head C is determined by *John*.[3]

Thus, given multiple Agree relations, (6a) occurs naturally, and we can account for the projections of TP and ProgP without recourse to FI. Furthermore, (6b) follows as a natural consequence of (6a).[4]

(6) a. A strong head can Agree with multiple weak heads.
b. DP moves to the Spec of the highest weak head.

Let me turn to another sentence involving a multiple Agree relation. Consider the sentence with a small clause in (7a) and its structure in (7b).

(7) a. There is a fireman available.
b. $\{_{CP}\ C_{[u\text{-}\varphi]}\ \{_{TP}$ there $\mathbb{T}\ \{_{vP}\ \mathbb{v}\ \{_{SC(=AP)}$ a fireman $\mathbb{A}_{available}\}\}\}\}$

In (7b), the strong head C enters into an Agree relation with $\mathbb{T}$, $\mathbb{v}$ and $\mathbb{A}$. Moreover, the expletive *there* is inserted into the Spec of the highest weak head $\mathbb{T}$. The insertion of *there* is one of the prominent

features of *there* constructions, and (6b) is satisfied by *there*. However, the associate DP *a fireman* does not move because it is already within the search domain of C (see Matushansky (2019) for the structures of small clauses)). While staying in-situ, the DP receives the Case value and assigns the [φ]-value to C.[5]

4. Verbal Domain

In this section, I will discuss the optionality of DP-raising in ECM constructions like (8). To account for the optionality, I assume that, in principle, the following two derivations are possible for transitive verb structures:

(8) John believes Mary to be smart.

(9) a. $\{_{v^*P}$ R-v*$_{[u\text{-}\varphi]}$ $\{_{RP}$ R Obj $\}\}$ (Chomsky (2015))

b. $\{_{v^*P}$ v*-R$_{[u\text{-}\varphi]}$ $\{_{\alpha}$ R Obj $\}\}$ (cf. Otsuka (2017))

(9a) is the structure assumed in Chomsky (2015), where v* becomes invisible in the final stage of the derivation. In contrast, the current paper adopts the insight shown in Otsuka (2017), who argues that it is logically plausible to assume that either head can be invisible. I follow this insight and assume that the derivation in (9b), in which ℝ is invisible, is one of the possible derivations.

Now, I consider two derivations of the sentence in (8), using the structures in (10):

(10) a. $\{_{v^*P}$ ℝ-v*$_{[u\text{-}\varphi]}$ $\{_{RP}$ DP$_{Mary}$ ℝ $\{_{TP}$ $\mathbb{T}_{to}$ $\{_{AP}$ ~~DP~~ 𝔸 $\}\}\}\}$ (cf. (9a))

b. $\{_{v^*P}$ v*-ℝ$_{[u\text{-}\varphi]}$ $\{_{\alpha(=TP)}$ ℝ $\{_{TP}$ DP$_{Mary}$ $\mathbb{T}_{to}$ $\{_{AP}$ ~~DP~~ 𝔸 $\}\}\}\}$ (cf. (9b))

(10a) is the derivation in which DP is raised. In this structure, the strong head v* Agrees with both ℝ and 𝕋, rendering them projectable. Simultaneously, the DP raising takes place. The DP must move to the Spec of the highest weak head. The highest one is ℝ, and the DP moves to [Spec, RP]. In the final stage of the derivation, as Chomsky argues, v* ends up being invisible.

The other possible derivational structure is shown in (10b), where the DP remains in the lower position. It is important to note that ℝ eventually becomes invisible, which leads to the head-Agree relationship only between v* and the infinitival 𝕋, excluding the invisible head ℝ.[6] Moreover, the DP only raises to [Spec, TP] because of the invisibility of ℝ, which cannot be the target of DP-raising; the highest weak head is turned out to be $\mathbb{T}_{to}$.

Another thing to discuss here is the label α in (10b). Chomsky (2015) assumes that when no syntactic object is eligible to become a label in a projection, its label is taken over from the next lower label. Given Chomsky's assumption, α in (10b) becomes TP. Noticeably, Chomsky's assumptions can be derived from the current proposal. The infinitival $\mathbb{T}_{to}$ is in a head-Agree relation with v* and continues to be the target of the minimal search. Therefore, when ℝ is invisible, 𝕋 is entitled to assign the label to the set of α.

Finally, let me confirm the positional differences of DP$_{Mary}$ in (10a) and (10b). In the former, the DP is judged to be moved into the matrix clause because it reaches [Spec, RP]. In contrast, in the latter, the DP is in the embedded [Spec, TP] and it is considered as staying in the embedded clause. Thus, the

optionality of raising in ECM constructions can be reduced to the difference of whether v* is invisible or not.

5. On vP structure

In the framework of this paper, the only strong heads are C and v*, that is, heads with φ-features. When a head does not have φ-features, it is not eligible to be a strong head. Given that the presence of φ-features is correlated with the presence of an object, unaccusative verbs are structured out of a weak head $\mathbb{v}$ because unaccusative $\mathbb{v}$ does not have any object for φ-features to Agree with.

As a specific example, consider the sentence in (11a) and its structure in (11b). In the clausal structure, the only strong head (or a head with [φ]) is C, which searches for and Agrees with all weak heads ($\mathbb{T}$, $\mathbb{v}$, and $\mathbb{R}$), making them project on their own.

(11) a. The train arrived (at the station).

b. $\{_{CP}\ C_{[u\text{-}\varphi]}\ \{_{TP}\ \ DP_{\text{the train}}\ \ \mathbb{T}\ \ \{_{vP}\ \ \mathbb{v}_{unacc}\ \ \{_{RP}\ \ \mathbb{R}\ \ \cancel{DP}\ \}\}\}\}$

A similar analysis is applied to unergative verbs such as (12) since unergative verbs do not take any object either; and hence, they do not have φ-features. Thus, in (12), the strong head C enters into a multiple Agre relationship, and the two weak heads $\mathbb{T}$ and $\mathbb{R}$ are rendered projectable. However, an important characteristic of unergative verbs is that an object may appear in some cases, as shown in (13).

(12) a. The man lived (in London).

b. $\{_{CP}\ C_{[u\text{-}\varphi]}\ \{_{TP}\ \ DP_{\text{the man}}\ \ \mathbb{T}\ \ \{_{vP}\ \ \cancel{DP}\ \ \mathbb{v}_{unerg}\ \ \{_{RP}\ \ \mathbb{R}\ \ \text{in London}\}\}\}\}$

(13) a. The man lived a happy life.

b. $\{_{CP}\ C_{[u\text{-}\varphi]}\ \{_{TP}\ \ DP_{j/\text{the man}}\ \ \mathbb{T}\ \ \{_{vP}\ \ \cancel{DP_j}\ \ v^*_{[u\text{-}\varphi]}\ \ \{_{RP}\ \ DP_i\ \ \mathbb{R}\ \ \cancel{DP_i}\ \}\}\}\}$

The fact that unergative verbs sometimes take an object indicates that they are capable of assigning accusative Case, which, in turn, indicates that the verbal structure in this case is headed by v*, that is, a verbal head with φ-features, i.e., a strong head. Therefore, in (13b), two instances of head-Agree are observed; v* Agrees with $\mathbb{R}$ and C Agrees with $\mathbb{T}$.

(12) and (13) show the necessity of following assumption to capture the contrast between the two:

(14) Unergative verbs are optionally introduced with φ-features into the derivation.

When φ-features are assigned, the unergative verbal structure is headed by the strong head v*.

Finally, let us discuss sentences with *that*-complement clauses like (15) (see Chomsky (2015) and Epstein, Kitahara and Seely (EKS) (2019) for a discussion under the labeling framework).

(15) a. John thinks that Mary is running. (cf. Chomsky (2015), EKS (2019))

b. $\{_{CP}\ C_{[u\text{-}\varphi]}\ \{_{TP}\ DP_{John}\ \ \mathbb{T}\ \ \{_{vP}\ \cancel{DP}\ \ \mathbb{v}_{unerg}\ \ \{_{RP}\ \ \mathbb{R}_{think}\ \ \{_{CP}\ \text{that Mary is running}\}\}\}\}\}$

In this case, the verb *think* does not have the ability to assign an accusative value. For this reason, $\mathbb{v}$ does not have φ-features. Thus, $\mathbb{v}$ in (15b) has in common with unergative $\mathbb{v}$ that it takes an external argument but does not have [φ].

6. *That*-Trace Effects in English

This paper has focused on strong and weak heads, and the concept of the strength of verbs comes from the discussion of *that*-trace effects. Therefore, it is necessary to show that the current analysis accounts for *that*-trace effects. First of all, let me discuss the ungrammaticality of (16). To account for this ungrammaticality, I adopt Spec-to-Spec Anti-locality in (17).[7]

(16) *who do you think that read the book (cf. Chomsky (2015: 10))

(17) A'-movement of a phrase in the Specifier of XP must cross a maximal projection other than XP. (Erlewine (2014: 154))

(17) prohibits the derivation with A'-movement from [Spec, TP] to [Spec, CP]. Thus, (18) is illegitimate due to the movement of *who* from TP to CP inducing violation of Anti-locality in (17).

(18) *who do you $\{_{RP}$ $\mathbb{R}_{think}$ $\{_{CP}$ who that$_{[u\text{-}\varphi]}$ $\{_{TP}$ ~~who~~ $\mathbb{T}$ $\{_{vP}$ ~~who~~ read the book $\}\}\}\}$

However, this does not fully account for *that*-trace effects. We must consider the other structure in (19), where *who* moves directly out of the verb phrase to the CP, as in the traditional analysis of *that*-trace effects in Italian (see Rizzi (1982)).

(19) *who do you $\{_{RP}$ $\mathbb{R}_{think}$ $\{_{CP}$ who that$_{[u\text{-}\varphi]}$ $\{_{TP}$ $\mathbb{T}$ $\{_{vP}$ ~~who~~ read the book $\}\}\}\}$

Note that the structure does not violate Anti-locality in (17) but it does not produce a legitimate derivation. This is because there is no DP of any kind within the search domain of the strong head C. For the derivation to be legitimate, the structure requires a DP in a structural position between C and $\mathbb{T}$. In the absence of such DP, the [φ] of C cannot be valued, and the derivation results in an ungrammatical sentence. Therefore, the non-specification of φ-features of C leads to the ungrammatical derivation.[8]

Next, let me discuss the grammatical sentence in (20).

(20) a. Who left?

b. $\{_{CP}$ who $C_{[Q][u\text{-}\varphi]}$ $\{_{TP}$ $\mathbb{T}$ $\{_{vP}$ ~~who~~ leave $\}\}\}$ CP = <Q, Q>/<φ, φ> (cf. Messick (2020))

I follow Messick's (2020) analysis, which argues that the direct movement of *who* takes place without stopping at [Spec, TP] as an intermediate position. Under this analysis, the important point is that C has a [Q]-feature. He argues that in dependence on the valuation of this [Q]-feature, the [φ]-valuation is successfully accomplished. Thus, I follow Erlewine and Messick's arguments and, with the help of these assumptions, the current study accounts for *that*-trace effects in English.[9]

One consequence of the current analysis is found in relation to the sentences in (21).

(21) a. We feed children who(m) we think are hungry.
b. I met a man who(m) I thought was a lunatic. (cf. Lasnik and Sobin (2000: 356))

(21a), for example, shows that either *who* or *whom* is acceptable when the embedded *wh*-subject moves. Quite a few native speakers agree that both forms of a *wh*-phrase are grammatical (see Jespersen (1927) for many other examples). To account for the optionality, we use (14), repeated here as (22).

(22) Unergative verbs are optionally introduced with φ-features into the derivation.

I argue below that the optionality comes from (22). Recall here that the verb *think* behaves the same as unergative verbs in that it only takes external arguments and does not have φ-features. As a result, the optionality of [φ]-assignment in (22) can apply to the verb *think*. With this in mind, let me first discuss the structure with *who*, as in (23). Importantly, in (23), the verb *think* does not have φ-features because it does not assign accusative Case.[10]

(23) a. who do you think read the book (cf. Chomsky (2015: 10))
b. $\{_{CP}$ who $C_{[u\text{-}\varphi][Q]}$ $\{_{TP}$ you $\mathbb{T}$ $\{_{vP}$ ~~you~~ $\mathbb{v}_{unerg}$ $\{_{RP}$ $\mathbb{R}_{think}$ $\{_{TP}$ $\mathbb{T}$ $\{_{vP}$ ~~who~~ v* read …$\}\}\}\}\}\}$

In this structure, C enters into the multiple Agree relation with $\mathbb{T}$, $\mathbb{v}_{unerg}$, $\mathbb{R}_{think}$ and $\mathbb{T}$. *Who* moves directly from [Spec, v*P] to [Spec, CP]. Since the matrix C has the [Q]-feature, both [φ] and [Case] of *who* are valued, depending on [Q]-valuation.

The other derivation to consider is where the verb *think* possesses φ-features, as in (24).

(24) $\{_{CP}$ whom $C_{[u\text{-}\varphi][Q]}$ $\{_{TP}$ you $\mathbb{T}$ $\{_{vP}$ ~~you~~ $v^*_{[u\text{-}\varphi]}$ $\{_{RP}$ whom $\mathbb{R}_{think}$ $\{_{TP}$ $\mathbb{T}$ $\{_{vP}$ ~~whom~~ v* read …$\}\}\}\}\}\}$

The head v* is a strong head by definition and it Agrees with $\mathbb{R}$ and $\mathbb{T}$, making them projectable. In this Agree relationship, the DP must move to the highest weak head (see (6b)). *Whom* then moves to [Spec, RP]. Notice that this position is in the search domain of v*, and *whom* is capable of determining the [φ]value of v*, and in turn, the Case value of *whom* is determined as accusative. As the derivation proceeds, *whom* moves up to [Spec, CP]. At this position, the [Q]-valuation and [φ]-valuation that C needs are accomplished.

Importantly, the derivations of (23) and (24) produce legitimate structures. Therefore, we can observe the optionality between *who* and *whom* in sentences such as (21).

Note that Lasnik and Sobin (2000) argue that the optionality between *who* and *whom* does not lie in the central computational system of language. However, contrary to their claim, I show that the optionality is related to another syntactic issue, which may indicate that the optionality is related to more general principles of language.

With this in mind, consider (25), in which movement applies in an across-the-board fashion.[11]

(25) a. *This is the man who John saw ___ and ___ kissed Mary. (Obj-Subj)
b. This is the man who John saw ___ and Mary thinks ___ is hand-some. (Obj-EmSubj)
(Goodall (1987: 68,69))

(25a) contains two gaps; one is in the object position and the other is in the subject position. It is reasonable to assume that the ungrammaticality of this sentence comes from the mismatch of the two Case values: the first gap requires *wh*-phrase to be valued as accusative, while the second gap demands that its Case value be nominative. These contradictory requirements cannot be satisfied simultaneously; hence, the sentence is ungrammatical. On the other hand, (25b) shows that when the second gap is embedded in the complement clause of the verb *think*, the sentence becomes grammatical. The grammatical status of (25b) needs explanation, considering the ungrammatical status of (25a). Recall again that the optionality of [φ]-assignment in (22) is relevant to the verb *think*. Specifically, the verb *think* can be headed by v* (that is, a verbal head with φ-features). Under this derivation, the *wh*-phrase in the second gap is assigned an accusative value, which avoids inducing the Case-mismatch.

7. Conclusion

This paper has argued that weak heads become projectable through Agree with strong heads and that this idea can account for the projectability of weak heads without recourse to FI. Finally, I briefly make comments on the assumption in Chomsky (2021, 2023). Specifically, Chomsky remarks: "..., A-movement must be in 'one fell swoop.'" (Chomsky (2021: 29)) and "There appears to be no need for successive-cyclic A-movement (GK)" (Chomsky (2023: 14)). An immediate problem concerning these remarks is how weak heads are made projectable without having any Spec filled. Given that the idea of non-successive cyclicity of A-movement is on the right track, we cannot appeal to Spec-Head relations for projectability of weak heads, as in Chomsky (2013, 2015). I suggest that Agree relations are responsible for the projectability of weak heads, as argued in the current paper. Therefore, the current analysis is compatible with Chomsky's most recent claim regarding A-movement.

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NOTES

[1.] Ryoichi Kondo (personal communication) has raised a question of whether a head needs to have some feature for head-Agree because features are usually a driving force for conventional Agree relations. I assume that the status of head (or headness) is responsible for head-Agree relation with no need to assume some additional feature for heads, either strong or weak ones. That said, this issue is worth examining carefully and I leave this for further research.

[2.] Labeling of weak heads is not the only function that FI is assumed to have in the labeling framework. Besides labeling, FI is assumed to be related to (i) the appearance of φ-features on T and (ii) the lowering of the phasehood status to R. (i) does not constitute strong evidence for FI because there are many

languages in the world that show no agreement morphemes on T and because R, which is assumed to inherit φ-features from v*, does not show any agreement morphemes in the majority of the world languages. (ii) does not offer any convincing evidence either. The lowering of phasehood is only relevant to the v*P domain. This indicates that another principle is responsible for the shift of phasehood. I assume that the most plausible candidate is head movement. This is because it is widely assumed that head movement takes place in the vP domain and because we can find similar analyses arguing for the relation between head movement and the shift of phasehood (see den Dikken (2007) and Gallego (2006)). Therefore, we can attribute the shift of the phasehood to head movement of R to v*. Note, however, that under Chomsky's assumption, the shift takes place downward while for den Dikken and Gallego, phasehood is shifted upward. It is true that the difference may bring interesting empirical consequences, but I do not discuss the issue in this paper. Rather, the important point to the current analysis is that we do not need to assume FI to account for the phasehood shift.

[3.] Asako Uchibori (personal communication) has pointed out that in Agree relations assumed in Chomsky (2013, 2015), a search stops when it finds a target, and this assumption is not compatible with multiple Agree assumed in this paper. I tentatively assume that it depends on a target if the search stops when it finds out one. I leave this topic for further research.

[4.] If we consider that DP moves each time a weak head is introduced to the derivation, A-movement takes place successive-cyclically. However, the successive cyclic nature of A-movement is under debate (see Chomsky (2021, 2023)). I will make a brief remark about this issue in Section 7.

[5.] Precisely speaking, C enters into split Agree: its [person]-feature Agrees with *there* and its [number]-feature Agrees with the associate DP. As a result, the associate DP cannot be valued as nominative. See Kanno (2020) for relevant discussion.

[6.] Here, we face a delicate timing issue. It is true that when v* starts to search for a weak head, $\mathbb{R}$ is actually visible. However, as the derivation proceeds, head movement applies. Consequently, when the structure is Transferred to the interfaces, $\mathbb{R}$ has already become invisible. Therefore, the information that is sent to the interfaces is tantamount to showing the relation of head-Agree between v* and $\mathbb{T}_{to}$.

[7.] See Erlewine (2020) for a summary of studies of *that*-trace effects.

[8.] See EKS (2010) and den Dikken (2014) for the relationship between the non-specification of features and ungrammaticality.

[9.] One important consequence is that $\mathbb{T}$ in all language is weak just like $\mathbb{R}$ in the strength of projectability.

[10.] In (23) and (24), the shades indicate the Transfer domains at the relevant stage of the derivation.

[11.] I thank Shogo Saito (personal communication) for bringing this possibility to my attention. I owe to him the relevant data and the presented analysis of ATB.

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Decategorialization of Parenthetical *I Mean* and Typology of Grammaticalization*

Siyu Li and Hiromune Oda
The University of Tokyo

Keywords: parenthetical expression, syntax-pragmatics interface, External Pair-Merge, categorial feature, decatogorialization

1. Introduction

A group of verbs which are considered as parenthetical verbs is first defined by Urmson (1952). According to Urmson, "parenthetical" verb means that in some contexts, the interpretation is not affected whether the verb occurs at the beginning, middle, or end of the sentence. Besides, Urmson suggests that the verbs themselves do not have any descriptive sense but rather function as signals guiding the hearer to a proper appreciation of the statement in its context, social, logical, or evidential. In this study, we discuss the parenthetical use of *I mean*, which is exemplified in (1)-(3).

(1) I don't mind it. *I mean* I mind, of course I mind, but I'm not squeamish. (1992 Block, A Walk among the Tombstones 19; FROWN).

(2) I just want to look at the stuff, *I mean*, examine it physically, not experience it emotionally. (1986 Corish, Greenwich Apartments 1; ACE).

(3) It could be embarrassing, you see. Politically, *I mean*. (1991 Pearce, The Mamm Zapt and the Girl in the Nile 62; FLOB).

The parenthetical *I mean* in Modern English has received a fair amount of attention in the pragmatic literature (see, for example, Crystal and Davy 1975; James 1983; Schourup 1985; Erman 1987; Schiffrin 1987; Stenström 1995). It has been pointed out that the use of *I mean* as a parenthetical expression is becoming particularly common and has many pragmatic functions in speech; i.e., *I mean* has been undergoing grammaticalization into a parenthetical expression.

Specifically, Brinton (2007) extensively discusses grammaticalization of the parenthetical expression *I mean*, whose meanings and functions are becoming (more) subjective and intersubjective in that it signals the speaker's modification of his or her expressions or intentions. The original meaning of *mean* as 'to intend' is bleached while the meaning 'to signify' (partly) remains and has taken on various pragmatic functions such as explicitness, exemplification, reformulation, and cause. The

parenthetical *I mean* can also be used to express hesitation, to manifest speaker's attitude such as compromise, and to signal politeness by, e.g., softening complaint.[1]

Interestingly, Brinton suggests that the parenthetical *I mean* has (partly) lost its complex internal structure in this grammaticalization process, and this should correlate with the acquisition of the pragmatic functions, although she does not elaborate the exact formal mechanism. In this study, we propose a formal analysis of grammaticalization of *I mean* under the recent generative linguistic theory; specifically, the structure of *I mean* is reduced via External Pair-Merge (Epstein et al. 2016), in a similar fashion to grammaticalization of indefinite and definite articles proposed by Wang (2019) and Oda (2022), respectively. In addition, we propose that the categorial features of the elements in the complex head created by External Pair-Merge are "bleached" if there is a mismatch of the feature specifications of the two elements, which leads to the loss of their lexical status; this amounts to decategorialization in Hopper and Traugott's (2003) sense. We further suggest a typology of feature bleaching (or retention) under this framework, offering a more fine-grained view of grammaticalization from the generative perspective.

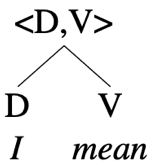
This paper is organized as follows: Section 2 offers a formal syntactic analysis of grammaticalization of the parenthetical *I mean*, in which *I* and *mean* form a complex head via External Pair-Merge in the sense of Epstein et al. (2016). Section 3 proposes a typology of grammaticalization from the perspective of categorial features contained in the complex head; the categorial features in the complex head are retained if there is a match of the feature specifications, but deleted if there is a mismatch of the feature specifications. Section 4 concludes the paper.

2. Structure reduction via External Pair-Merge

What is remarkable regarding the parenthetical *I mean* in the current context is its impoverished morpho-syntax in comparison with that of its nonparenthetical counterpart: for example, the lack of the nominal and clausal complement, the constraint on person, number, and tense (i.e., first person singular and present tense only), freedom to insert in a sentence, and having no influence on the syntactic structure of the whole sentence. As Brinton (2007) points out, all this can be taken as indicating that the structure of the parenthetical *I mean* is smaller than that of the non-parenthetical use.

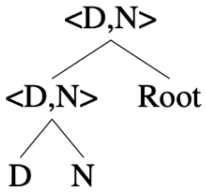
To formally implement this, we propose, following Epstein et al. (2016), that *I* is base-generated as adjoined (i.e., Externally Pair-Merged) to *mean*, forming the amalgam without projecting VP or TP, as schematized in (4).

(4)



This is parallel with Oda's (2022) proposal that the definite articles in Italian are the same elements as the 3rd person accusative clitics (cf. Laenzlinger 1993) and can be adjoined to N via base-generation without projecting DP, as schematized in (5) (see Oda 2022, 2023 for empirical arguments for this).

(5)



Note here that the pronunciation of *I* in the parenthetical *I mean* is reduced, which can be taken as indicating that *I* in this case is a clitic just like the definite articles in Italian. *I mean* as the amalgam is essentially a single complex head which is a minimal-maximal projection (i.e., a head and a phrase at the same time; see Chomsky 1995), so it does not take a complement unlike the non-parenthetical *I mean* and can be inserted (relatively) freely in a sentence similarly to, e.g., the interjection *well*, which is also a minimal-maximal projection.

We add here that the grammaticalization process of the parenthetical *I mean* proposed here is essentially similar to that of indefinite and definite articles proposed by Wang (2019) and Oda (2022), respectively. These authors propose that at an intermediate stage of grammaticalization into indefinite and definite articles, the numeral *yi* ('one') in Chinese and the non-proximal demonstrative, which are originally at the edge of a nominal phrase, undergo External Pair-Merge with a nominal head, whereby the <Num, CL> and <Dem, N> amalgams are created, respectively. Thus, in all these cases, the Edge-Head structure, which is a non-minimal projection, is reduced to the Head-Head structure, which is a minimal projection.

3. Loss and retention of categorial features

A remaining question is how the structure reduction of *I mean* by External Pair-Merge leads to grammaticalization into a functional element with the lexical semantics bleached. We propose that this is due to mismatch of categorial features in the <D, V> amalgam. Note that D and V in the <D, V> amalgam have mismatched categorial features in Chomsky's (1970) sense; D has [+N, -V] (as a functional element in the extended projections of the nominal domain; see Grimshaw 2000), while V has [-N, +V]. However, the <D, V> amalgam as a single (complex) head cannot retain the mismatched categorial features. In order for this feature mismatch to be resolved, the categorial features of both D and V are deleted, whereby the amalgam is "categorially bleached." The loss of the nominal and verbal nature by this feature deletion can be considered as a formal implementation of decategorialization in the sense of Hopper and Traugott (2003), who argue that loss of the lexical status correlates with acquisition of grammatical functions. Thus, the deletion of the mismatch categorial features of *I mean* that results from External Pair-Merge leads to the loss of the lexical meanings and acquisition of the grammatical/communicative functions.

We would like here to position this change process of *I mean* in the whole picture of language development and clarify why we could call the change as decategorialization. Decategorialization is defined as loss of the morphological and syntactic characteristics of the full categories in Hopper (1991). Brinton (2007) points out that the verb *mean* in parenthetical *I mean* is decategorialized, losing verbal characteristics such as the ability to be modified by adverbials and to take phrasal or clausal

complements. Thus, as Brinton states, *I mean* evolves from a full complement-taking verb to a pragmatic parenthetical and gains "adverbialized" discourse functions.

However, what we want to emphasize here is that although parenthetical *I mean* is "adverbialized" to some extent, often functions "adverbially" and has experienced the structure reduction, it does not mean that we can conclude that *I mean*, as an integrated whole, has become a genuine adverb, i.e., a lexical item. Traugott (1995) earlier points out that pragmatic markers do not behave like lexical items (such as nouns, adjectives, etc.). Brinton (2007) further suggests that the change which happened in parenthetical *I mean* is best understood not as a creation of a lexical category, which is called lexicalization in Brinton and Traugott (2005), but as a creation of a functional category, though she does not elaborate on this.

We suggest that Brinton's argument can be supported by considering *I mean*'s at-issueness. As mentioned before, the parenthetical *I mean* has many functions and can be interpreted as having various implicatures, such as reformulation like (6) and cause like (7). The meaning of *I mean* in the two sentences is not-at-issue, since even if the two sentences are negated, the implicatures of *I mean* would not change; i.e. reformulating the speaker's opinion and elaborating the cause, respectively. Although the meaning carried by *I mean* in the two sentences is not-at-issue, these sentences are still acceptable.

(6) ... but I can't remember when anyone spoke so many words to me in such a short time. *I mean* gave me so much attention. (1992 Stanley, "The stranger's surprise", Saturday Evening Post 56; FROWN).

(7) Don't you think it's time you put that thing away. *I mean*, look at it, it's antique; you could hurt yourself with it. (1991 Royce, The Proving Ground 31; FLOB).

Thus, the parenthetical *I mean*'s meaning is usually not relevant to the truth-value of the whole sentence. This indicates that parenthetical *I mean* is a discourse marker, which need not convey an at-issue meaning (hence not a lexical category, which generally carries an at-issue meaning). Therefore, we conclude that the change of parenthetical *I mean* is at the level of functional categories (in the form of a discourse marker) rather than on the lexical category level.

Note now that the categorial features are lost only in the case of feature mismatch; when the categorial features are identical in a Head-Head amalgam, they can be retained. This happens in the grammaticalization process of the numeral *yi* 'one' in Chinese into an indefinite and that of the non-proximal demonstrative into definite articles. The numeral 'one' and the demonstrative have [+N, -V], just like the nominal heads they adjoin to (cf. Grimshaw 2000). Thus, the categorial features of the ingredients of the <Num, CL> and <Dem, N> amalgams are retained. As a result, the indefinite and definite articles become functional elements in the nominal domain that have [+N, -V], hence their distribution is much more restricted (i.e., can only occur in the nominal phrase) than that of the parenthetical *I mean*, which has lost the categorial features and can be inserted (relatively) freely in a sentence.

The External-Pair Merge analysis can also be extended to grammaticalization of the complementizer *that*. It was originally at the edge of CP and underwent head-adjunction to C via External Pair-Merge

(cf. Roberts and Roussou 2003), whereby the <Dem, C> amalgam was created. Assuming that C has [-N, +V] as an element in the clausal spine (cf. Grimshaw 2000), there is a feature mismatch in this amalgam, i.e., [+N, -V] of Dem and [-N, +V] of C. Note here that the demonstrative has phonological content, i.e., phonological features, while C does not. We suggest that in such cases the one with phonological features retains the phonological features but loses its categorial feature, whereas the one that is phonologically null retains its categorial feature; in other words, the elements in the amalgam "equally" contribute to the grammaticalized form, either with phonological features or formal features (including categorial features). Thus, Dem loses its categorial feature, while C retains its categorial feature in the <Dem, C> amalgam, as a result of which the demonstrative is grammaticalized into C and loses its nominal nature. Note that in the case of the parenthetical *I mean*, both *I* and *mean* in the amalgam have phonological features; thus, they equally contribute the phonological content, and equally lose their categorial features. Thus, in a bigger picture, the current proposal offers a typology of grammaticalization from a generative perspective. Specifically, the categorial features of the amalgam created by External Pair-Merge are (i) symmetrically deleted if the features are mismatched and both items have the phonological features (e.g., *I mean*), (ii) retained if the features are identical (e.g., (in)definite articles), and (iii) asymmetrically deleted if the features are mismatched and one of the two items lack phonological features (e.g., complementizer *that*).

4. Conclusion

To summarize, our study has offered three proposals of the grammaticalization process of parenthetical *I mean* from a formal perspective. First, to formally implement the impoverished morpho-syntax in comparison with that of non-parenthetical counterpart, we have proposed structure reduction via External pair-merge in the internal structure of parenthetical *I mean*. *I* is base-generated as adjoined to *mean*, forming the <D, V> amalgam which is a single complex head. Second, regarding how the structure reduction of *I mean* leads to grammaticalization into a functional element with the lexical semantics bleached, we have proposed that this is due to mismatch of categorial features in the <D, V> amalgam. The mismatch of categorial features in a single complex head needs to be resolved, and the resolution is the loss of the nominal and verbal nature by feature deletion. This loss of lexical status can be considered as a formal implementation of decategorialization, which has been discussed in the literature of grammaticalization (e.g., Hopper and Traugott 2003). Third, under this framework, we have further suggested a typology of feature bleaching (or retention), proposing that the categorial and phonological features of the ingredients in the amalgams can be symmetrical deleted, retained, or asymmetrical deleted. Thus, our study offered a more fine-grained view of grammaticalization from the generative perspective.

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NOTES

[1] See Li and Oda (2023) for a discussion of these properties.

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CORPORA

Australian Corpus of English (ACE)

Freiburg-LOB Corpus British English (FLOB)

Freiburg-Brown Corpus of American English (FROWN)

日本語における Pred の異形態選択と形容詞類の範疇について*

（Allomorph Selection of Pred and the Category of Adjectives in Japanese）

秋本 隆之（Takayuki Akimoto）
工学院大学（Kogakuin University）

キーワード：形容詞, Pred, 異形態, 統語的範疇, 形態的範疇

1. はじめに

1.1. ２種類の形容詞と Nishiyama(1999)の異形態分析

日本語の形容詞はその活用体系の違いにより Canonical Adjectives (CA)と Nominal Adjectives (NA)に大別される。(1)の CA は明示的なコピュラを伴わずに活用するが、(2)の NA は明示的なコピュラ「だ」を伴って活用する。

(1) a. 山が美しい。　　b. 山が美しかった。
(2) a. 山が綺麗だ 。　　b. 山が綺麗だった。

しかし、CA と NA の違いはある構文においては「く」と「で」の違いのみとなる。(3a,b)はそれぞれ(1a)と(2a)の形容詞述語にとりたて詞「も」を後続させた例であるが、表面上の違いは形容詞語幹と「も」の間の形態（すなわち、「く」と「で」）のみとなる。

(3) a. 山が美しくもある。　(cf. *山が美しいもある)　[CA]
　 b. 山が綺麗でもある。　(cf. *山が綺麗だもある)　[NA]

同じ対立は(4a,b)のように「べき(だ)」が後続する場合でも観察される。

(4) a. 山は美しくあるべきだ。　(cf. *美しいべきだ)　[CA]
　 b. 山は綺麗であるべきだ。　(cf. *綺麗だべきだ)　[NA]

(4a,b)に示す通り、「べきだ」は「美しい/綺麗だ」に直接後続することはできず、「美しくある/綺麗である」に後続しなければならない。

これらの事実に注目し、Nishiyama (1999)は分散形態論（Distributed Morphology, DM: Halle and Marantz (1993)）の枠組みから CA と NA は同じ句構造を有していると提案する。それによれば、CA と NA はそれぞれ(5a,b)のように分析される。

(5) a. $[_{TP}$ yama $[_{VP}$ $[_{PredP}$ $[_{AP}$ *utukusi*$_{CA}$] Pred (***ku***)] V (*-ar*)] $T_{[Pres]}$(*-u*)]
b. $[_{TP}$ yama $[_{VP}$ $[_{PredP}$ $[_{AP}$ *kirei*$_{NA}$] Pred (***de***)] V (*-ar*)] $T_{[Pres]}$(*-u*)]

(5a,b)からわかるように、CA と NA の統語構造は平行的である。すなわち、形容詞述語は A(P)、Pred(P) (Bowers (1993))、V(P)、T(P)から構成される。AP には形容詞述語の語根が、V には dummy copula の *-ar* が、そして $T_{[Pres]}$には現在時制辞の *-u* が生起する。この分析の注目すべき点は、CA と NA の違いは Nishiyama (1999)が predicative copula と呼ぶ Pred の形態的具現の違いのみとなることである。つまり、CA と NA の活用体系の違いは、CA では *ku* が具現するのに対し、NA では *de* が具現するという Pred の異形態として捉えられる。さらに、Nishiyama (1999) は Pred の語彙挿入規則 (vocabulary insertion rule) として(6)を提案する。

(6) a. Pred ↔ *ku* / CA_
b. Pred ↔ *de*

(6)によれば、*ku* は Pred が CA に後続する場合に具現される形態であり、*de* は「それ以外」の場合に具現する非該当異形態 (elsewhere allomorph) となる。つまり、Nishiyama 分析では、Pred が *ku* として具現されるか、*de* として具現されるかは形容詞述語が CA かどうかを参照していることになる。

1.2. 問題の所在と本研究の目的

近年の DM で一般的に採用されている Root 仮説では、V、N、A といった語彙範疇はもともと指定されているのではなく、範疇未指定の語根(Root)と *v*, *n*, *a* のような範疇化辞(Categorizer)が統語的に併合することで派生される (Marantz (1997), Arad (2003)など)。例えば、globalization のような名詞は N として指定されて統語演算に導入されるわけではなく、(7)のように語根√glob と範疇化辞 *a*, *v*, *n* が順次併合されることで派生される(範疇化辞はそれぞれ-*al*, *-ize*, *-ation* として具現される)。

(7) $[_{nP}$ $[_{aP}$ √glob *a* (*-al*)] *v* (*-ize*)] *n* (*-ation*)]

したがって、(5)の AP は(8)のように語根と範疇化辞 *a* の併合によって派生される。

(8) $[_{PredP}$ $[_{aP}$ √utukusi *a*] Pred (*ku*)]

(6)の語彙挿入規則に従えば、(8)において Pred は語根√utukusi か範疇化辞 *a* のどちらかを CA として参照することで *ku* として具現されるが、それはどちらかという疑問が生じる。また、Pred がどちらかを CA として参照するとして、そもそも CA とはどのような情報なのかという疑問が残る。

そこで、本稿では(a) Pred は語根と範疇化辞 *a* のどちらを CA (もしくは NA)と見なすのか、(b) CA とはどのような情報を持つ要素なのか、またその情報は NA とはどう異なるのか、という問いを追及することで Nishiyama (1999)の異形態分析を発展させることを目的とする。

本稿の構成は以下の通りである。2 節では、形態的に複雑な形容詞述語である複合形容詞、重複形容詞、派生形容詞の品詞的振る舞いを整理することで Pred は語根ではなく範疇化辞 *a* を CA として参照することを示す。3 節では、CA と NA を弁別する素性として統語的範疇と形態的範疇という 2 種類の範疇素性を提案し、独立した根拠として否定辞「ない」の形態的性質と統語的性質が一致しないことを示す(3.1 節)。3.2 節では CA と NA は統語的範疇の値は同じだが、形態的範疇の値が異なると主張し、これにより統語的な類似性と形態的な違いが導かれることを示す。さらに、NA と名詞述語のコピュラの特性を整理し NA という形態素性は必要ないことを論じる。3.3 節では本提案が V と VN の違いにも敷衍できることを示し、4 節で日本語の語彙範疇を再考しまとめる。

2. 複雑形容詞述語の品詞的性質

本節では、Nishiyama (1999)では扱われなかった形態的に複雑な形容詞述語の品詞的性質を整理することで、形容詞述語が CA として振る舞うか NA として振る舞うかは語根レベルではなく範疇化辞レベルで決定されることを示す。

2.1. 複合形容詞

日本語には(9a,b)に示すように名詞と形容詞からつくられる N-A 型複合形容詞が数多く存在する。(9a)は主要部である右側の形容詞述語が CA の複合形容詞であり、(9b)は主要部が NA の複合形容詞である。

(9) a. 幅広い、きめ細かい、数少ない、計算高い　　$[N + CA]_{CA}$
　　b. もの静かな、意味不明な、経験豊富な　　$[N + NA]_{NA}$

(9a,b)に示されるように、複合形容詞は基本的に主要部である右側の形容詞述語の品詞的性質を受け継ぐ。つまり、主要部が CA であれば派生される複合形容詞も CA として機能し、主要部が NA であれば複合形容詞も NA として機能する。

しかし、(10)に示すように、主要部が CA であるにも関わらず、全体としては NA として振る舞う複合形容詞もある。

(10)　骨太な、尻軽な、気弱な、声高な　　$[N + CA]_{NA}$　　(由本 (2009: 220))

もし、CA としての情報が語根に備わっており、Pred がその情報を参照しているとすれば、(10)にあげる複合形容詞も CA としての活用を示すはずであるが、実際はそうではない（*骨太い、*尻軽い、*気弱い、*声高い)。[1] また、(10)の主要部はそれ自体では NA としては機能しない（例 : *太な、*軽な、*弱な、*高な）ことを踏まえると、語根に NA という情報が備わっているわけでもない。したがって、形容詞述語が CA か NA かという情報は語根に備わっているわけではないと考えられる。

2.2. 重複形容詞と派生形容詞

重複形容詞はある要素 X が反復することで「XX し(い)」という形式を持つ。(11a-c)は反復

される要素 X がそれぞれ CA、NA、N となっている。

(11) a. 若々しい、寒々しい、弱々しい　　[X = CA (若い、寒い、弱い)]
　　b. 馬鹿馬鹿しい、まめまめしい　　[X = NA (馬鹿な、まめな)]
　　c. 毒々しい、華々しい、物々しい　　[X = N (毒、華、物)]

ここで注目したいのは、「XX し(い)」型の重複形容詞は反復される要素の品詞的性質に関わらず CA として振る舞うということである。したがって、反復される要素 X が「馬鹿だ、まめだ」のような NA であっても「*馬鹿馬鹿しだ、*まめまめしだ」にはならない。これは、形容詞述部が CA かどうかは少なくとも X の語根に備わっているものではないことを示唆する。

「XX し(い)」が CA として振る舞うのは、接辞「し」によるものだと考えられる。この接辞は重複形容詞だけでなく、(12)のように、動詞を形容詞化する際にも使われる。

(12)　羨ましい（羨む)、望ましい（望む)、喜ばしい（喜ぶ)、悩ましい（悩む）

これらの事実を踏まえると、接辞「し」は形容詞をつくる派生接尾辞であり、これに CA という情報が備わっていると考えるのが自然であろう。「し」が CA としての情報を持っていることによって、重複された要素や動詞要素を CA として機能させるのである。(7)でみたように、Root 仮説では派生接尾辞は範疇化辞に具現される形態であるため、派生接尾辞「し」は範疇化辞 *a* の具現形であると推定できる（同様の分析は Kudo and Shimamura (to appear)も参照のこと)。したがって、重複形容詞「馬鹿馬鹿しく」、派生形容詞「羨ましく」はそれぞれ(13a)、(13b)のような構造を持つ（baka-baka および urayam の内部構造については本稿では触れないでおく)。

(13) a. 馬鹿馬鹿しく：$[_{\text{PredP}}\ [_{a\text{P}}$ baka-baka *a* (-*si*)] Pred (*ku*)]
　　b. 羨ましく：　$[_{\text{PredP}}\ [_{a\text{P}}$ urayam *a* (-*si*)] Pred (*ku*)]

CA としての情報が派生接尾辞「し」に備わっているとすれば、(13)において Pred が *ku* として具現されるのは、Pred が範疇化辞 *a* を CA として参照しているからだと結論づけられる。

以上、本節では複合形容詞、重複形容詞、派生形容詞といった形態的に複雑な形容詞述語の品詞的性質を整理することで、述語が CA か NA かという情報は語根ではなく範疇化辞 *a* に備わっていることを示した。

3. 統語的範疇と形態的範疇

本節では、1.2 節で提示した問いのうち、CA とはどのような情報を持つ要素なのか、またその情報は NA とはどう異なるのか、という問題を検討していく。1 つの可能性は Nishiyama (1999)が提案するように形態素性として[CA]素性と[NA]素性を仮定することである。Nishiyama (1999:204) はこの 2 つの形態素性を仮定する動機づけとして、NA は借用語もしくは形態的に複雑なのに対して、CA は和語もしくは形態的に単一であることを指摘するが、前節でみたように形態的に複雑な形容詞述語であっても CA として機能するものがある。さら

に、(6)で示した Pred の語彙挿入規則では少なくとも *ku* の具現のためには[CA]素性のみが指定されていればよいため、[NA]素性を仮定する理論的必然性はない。[2] したがって、CA と NA を判別する形態素性として[CA]素性と[NA]素性を仮定することは経験的にも理論的にも妥当ではないと言える。そこで、本稿では新たな仮説を追求する。

新たな仮説のために重要な視座を与えてくれるのが Spencer (2008)の示唆である。Spencer (2008:998) は通言語的な語の品詞と活用の不一致をもとに、言語理論は「語彙範疇」を「形態的範疇」と「統語的範疇」という２つの異なる範疇素性に分割する必要があると結論づけている。本稿では、この示唆に基づき以下を提案する。

(14) a. 語彙範疇は統語的な範疇素性[S-Cat]と形態的な範疇素性[M-Cat]にわけられる。
b. [S-Cat]と[M-Cat]の値は必ずしも一致しない。

本節では本提案によって CA と NA が統語的には自然類を成す一方で形態的には異なる活用を示すことが導かれることを示すが、その前に日本語において２つの範疇素性を仮定する必要がある独立した根拠として日本語の否定辞「ない」の形態統語特性をみていく。

3.1. 否定辞「ない」

日本語の否定辞「ない」は動詞や形容詞に後続し、形態的には CA と同じ活用を示すが（例：食べ{ない/なかった}、安く{ない/なかった}）、Kishimoto (2007) は、否定辞「ない」は統語的には CA としての性質を失っていると主張する。その根拠として Kishimoto が提示しているのが「(て)ほしい」が取る補部節の選択制限である。

「(て)ほしい」は補部となる従属節の品詞が動詞でなければならないという選択制限を示す。したがって、(15a)のように動詞節は「ほしい」の補部になれるが、(15b)のように形容詞節は「ほしい」の補部にはなれない。

(15) a. ジョンは[メアリーに{来て/ここにいて}]ほしかった。
b. *ジョンは[メアリーが美しくて]ほしかった。 (Kishimoto (2007:259)に基づく)

興味深いことに、この文法性の差は否定辞「ない」を含む場合も変わらない。(16a,b)はそれぞれ(15a,b)の補部節を否定したものである。もし、否定辞「ない」が統語的にも CA として機能するとすれば、(16a)も(15b)や(16b)と同様に非文法性を示すはずだが、実際はそうではない。

(16) a. ジョンは[メアリーに{来<u>ないで</u>/ここに<u>いないで</u>}]ほしかった。
b. *ジョンは[メアリーが美しく<u>なく</u>て]ほしかった。 (同上)

これらの事実をもとに、Kishimoto (2007) は否定辞「ない」の統語的範疇はその内部の述語の品詞によって決定されると述べる。つまり、内部述語の品詞が動詞であれば、否定節は動詞として機能し、形容詞であれば否定節は形容詞として機能する。

以上の議論を踏まえると、否定辞「ない」は補部の品詞に関わらず形態的には CA として機能する一方で、統語的には動詞句を補部に取るときは動詞として機能すると言える。した

がって、動詞句を取る否定辞「ない」の形態統語特性を説明するためには統語的範疇と形態的範疇の２つを仮定する必要がある。本提案に従えば、否定辞「ない」の範疇素性は(17)のように定式化できる（動詞句を補部に取る場合を Neg(VP)、形容詞句を補部に取る場合を Neg(AP)と表記する。）。

(17)

	Neg(VP)	Neg(AP)
S-Cat	V	A
M-Cat	A	A

以上、本節では動詞句を補部にとる否定辞「ない」の形態的・統語的特性を説明するためには、統語的範疇と形態的範疇の２つを想定する必要があること、そしてそれらの値は一致しないことを示した。これを踏まえ、次節では CA と NA の範疇特性を追求する。

3.2. CA と NA の範疇素性

本節では、いわゆる語彙範疇を統語情報に必要な範疇素性[S-Cat]と形態情報に必要な範疇素性[M-Cat]の２つに分別することで、CA とはどのような情報を持つ要素なのか、またその情報は NA とはどう異なるのかという問いを追求する。結論から言えば、CA と NA は(18)に定式化される範疇素性の値によって弁別される（説明の都合上、名詞述語 N も加える）。

(18)

	CA	NA	N
S-Cat	A	A	N
M-Cat	A	N	N

2 節で提示した結論を踏まえると、CA とは範疇化辞 *a* が[S-Cat: A, M-Cat: A]の素性を持つ述語であるのに対し、NA とは範疇化辞 *a* が[S-Cat: A, M-Cat: N]の素性を持つ述語であると定義される。これにより、CA と NA の統語的な類似点と形態的な相違点が正しく導かれる。

まず、Nishiyama (1999) が指摘するように CA と NA は自然類を成す。(19a,b)に示すように、CA と NA はいずれも接辞「-さ」、「-そう」の付加を許す (cf. Kageyama (1982), Miyagawa (1987))。

(19) a. {高/広}$_{CA}$さ　　{静か/綺麗}$_{NA}$さ　　*{男/学生}$_{N}$さ
　　b. {高/広}$_{CA}$そう　{静か/綺麗}$_{NA}$そう　*{男/学生}$_{N}$そう

これは、CA と NA の[S-Cat]の値が A であることから説明される。一方、N はいずれの接辞の付加を許さないが、これは本分析では[S-Cat]の値が N であることに起因する。

CA と NA は自然類を成す一方で、Pred の形態的具現が異なる。(20)に示すように CA は Pred が *ku* として具現されるが、NA は N と同じように Pred が *de* として具現される。

(20) a. メアリーは [$_{PredP}$ [$_{AP}$美し] *ku*] もある。　　[CA (M-Cat: A)]
　　b. メアリーは [$_{PredP}$ [$_{AP}$綺麗] *de*] もある。　　[NA (M-Cat: N)]
　　c. メアリーは [$_{PredP}$ [$_{NP}$医者] *de*] もある。　　[N　(M-Cat: N)]

Nishiyama (1999) は[CA]素性を前提として、Pred の異形態選択を「Pred が CA に後続する場合は *ku* として具現され、それ以外の場合は *de* として具現される」という語彙挿入規則(6)によって導いたが、それを前提としない本分析では CA と NA/N における Pred の異形態選択は(21)の語彙挿入規則から説明される。

(21) a. Pred ↔ *ku* / [M-Cat: A]_
b. Pred ↔ *de*

すなわち、Pred が *ku* として具現されるか、*de* として具現されるかは範疇化辞 *a* に備わっている[M-Cat]の値によって決定される。

本提案の帰結としては、NA と N は[M-Cat]の値がどちらも N であるため、形態構造においては NA と N の区別はないということになる。しかし、名詞修飾(連体形)の場合、NA と N は形態的に区別される。

(22) a. 有名{な / *の}人 (有名である人) [NA]
b. 医者{の / *な}人 (医者である人) [N]

(22a,b)に示すように、名詞修飾では NA は「な」で表示されるのに対して、N は「の」で表示される。この事実を捉えるために、Nishiyama (1999:197) は「な」と「の」を「である」の短縮形異形態とする語彙挿入規則を提案する。それによれば、「な」は[NA]素性に後続する場合に具現される形態であり、「の」は非該当異形態となる。

Nishiyama (1999)の分析が正しいとすれば、[NA]素性を仮定しない本提案にとって問題となるが、「な」を[NA]素性に後続する場合に具現される形態であるとする分析では説明できない事実がある。N は NA と同様に「な」が後続する場合もある。例えば、(23a,b)のように「のだ/のかもしれない/のか?」などが後続する環境では NA も N も「な」で表示される。

(23) a. 太郎は有名{な/*の}{のだ/のかもしれない/のか?} [NA]
b. 太郎は医者{な/*の}{のだ/のかもしれない/のか?} [N]

ただし、(23b)で「な」が表示されるのは、Nishiyama (1999:218)も指摘するように「の」連続を回避するためという可能性もある。しかし、「の」が続く環境ではなくても N が「な」で表示される場合もある。

(24) a. 太郎は有名{な/*の}わけ(が)ない。 [NA]
b. 太郎は医者{な/の}わけ(が)ない。 [N]
(25) a. 太郎は有名{な/*の}だけだ。 [NA]
b. 太郎は医者{な/*の}だけだ。 [N]

(24a,b)のように「わけがない」が後続する場合は、NA は「な」で表示されるが、N は「の」だけでなく「な」でも表示される。さらに、「だけだ」が続く環境では、NA も N も「な」で

表示される（岸本 (2022)）。「な」を[NA]素性に後続する場合に具現される短縮形であるとする分析では、(24a, 24a)において NA に「な」が表示する事実は正しく予測されるが、(24b, 25b)において N に「な」が後続できる事実を予測できないことになる。したがって、これらの事実を捉えるためには[NA]素性を用いない説明が必要となる。

この点において、岸本 (2022) は 「な」はコピュラの活用形である一方で、名詞修飾で用いられる「の」はコピュラの活用形ではなく属格助詞であると主張する。そして、N の名詞修飾において「な」が表示されないのは脱落によるものだと提案する。岸本 (2022)の提案に従えば、(22)-(25)の事実を[NA]素性を仮定することなく説明できる。(26)は名詞修飾の場合、(27)は述語が続く場合をそれぞれ岸本(2022)の提案に従って分析したものである。

(26) a. [[$_{AP}$ 有名] (COP+T ⇒ <u>な</u>)] 人
　　b. [[$_{NP}$ 医者] (COP+T ⇒ <u>Ø</u>)] の人
(27) a. [[$_{AP}$ 有名] (COP+T ⇒ <u>な</u>)]{のだ/だけだ}
　　c. [[$_{NP}$ 医者] (COP+T ⇒ <u>な</u>)]{のだ/だけだ}

NA の名詞修飾の場合(26a)は属格助詞「の」は現れず、コピュラは「な」として活用するが、N の名詞修飾の場合(26b)は属格助詞「の」が出現するためコピュラは脱落する。一方、名詞修飾でない場合(27a,b)は NA の場合も N の場合も属格助詞「の」が出現しない（つまり、「のだ」の「の」は属格助詞ではない）ため、どちらもコピュラは「な」として活用する。

このように、N の名詞修飾で表示される「の」をコピュラの活用形ではなく属格助詞であると考えることで、[NA]素性を仮定せずに (22)-(25)の事実を説明できるだけでなく、形態構造においては NA と N の区別はないという本提案の帰結に経験的な支持を与える。

以上、本節では統語的範疇素性[S-Cat]と形態的範疇素性[M-Cat]の２つに分別することで、CA と NA という２つの形容詞類の統語的・形態的振る舞いが説明されることを示した。

3.3. 拡張：V と VN

日本語には、CA と NA という２つの形容詞類に加えて、V（例：食べる）と Verbal Noun (VN)（例：食事する）という２つの動詞類が存在するが、本稿で提案する[S-Cat]と[M-Cat]という２つの範疇素性を用いれば V と VN は以下のように定式化できる。

(28)

	V	VN
S-Cat	V	V
M-Cat	V	N

V は[S-Cat: V, M-Cat: V]の値を持つ動詞述語であるのに対し、VN は[S-Cat: V, M-Cat: N]の値を持つ動詞述語である。V はそれ自体で活用するのに対して VN はそれ自体では活用せず軽動詞「する」を伴うが、この形態的相違が[M-Cat]の値に関わっていると仮定すれば、V と VN の形態的相違は[M-Cat]の値の違いから導くことができる。

この点において Akimoto (2023) は軽動詞「する」は Voice の非該当異形態であると提案するが、[M-Cat]のシステムを用いれば以下のような語彙挿入規則として定式化される。

(29) a. Voice ↔ *Ø* / [M-Cat: V]_
b. Voice ↔ *su*

(29)の語彙挿入規則は Voice が[M-Cat: V]の値を持つ述語に後続する場合はゼロ形態として具現され、それ以外の場合は *su* として具現されるというものである。これは形容詞述語において Pred が[M-Cat]の値を参照するのと平行的である。この語彙挿入規則の妥当性については検討の余地があるが、本稿の射程を超えるため稿を改めて論じることにしたい。

4. 結論と日本語の語彙範疇再考

本稿では、Nishiyama (1999)では扱われなかった形態的に複雑な形容詞に焦点を当て、CA か NA かの情報は範疇化辞 *a* に備わっていることを示した。また、語彙範疇を統語情報に関わる範疇素性[S-Cat]と形態情報に関わる範疇素性 [M-Cat]に分けることにより、CA と NA の形態的相違を[M-Cat]の値の違いから導いた。さらに同様の分析が V と VN にも敷衍できることを示した。

これまでの議論を踏まえると、日本語の語彙範疇の体系は(30)のようにまとめられる。[3]

(30) 日本語の語彙範疇

	V	**VN**	**N**	**NA**	**A**
S-Cat	V		N	A	
M-Cat	V	N			A

(30)の体系は通言語的な語彙範疇研究に重要な示唆を与える。日本語の語彙範疇をめぐっては、これまで Kageyama (1982) や Miyagawa (1987) が日本語には V、N、A だけでなく VN と NA を含む５種類の語彙範疇があるという前提のもと Chomsky (1970) の語彙素性システムを用いて定式化を試みてきた。しかし、(30)の体系は VN や NA といった語彙範疇を独立して想定する必要はないことを示している。統語情報に関わる範疇素性と形態情報に関わる範疇素性を分離する体系では、日本語も英語や他のヨーロッパ言語と同様に V、N、A という３つの語彙範疇のみを仮定すれば良い。言い換えれば、言語において統語上、形態上必要なのは V、N、A のみということになる。日本語を特徴づける語彙範疇とされてきた VN と NA は、統語的範疇素性[S-Cat]と形態的範疇素性[M-Cat]の不一致から起こる、いわば「見せかけ」の範疇にすぎない。以上のように、語彙範疇を統語情報に必要な素性と形態情報に必要な素性に分割することで、少なくとも言語理論として VN や NA といった語彙範疇を想定する必要はなくなり、日本語に存在する語彙範疇はヨーロッパ言語と同様、V、N、A のみとなる。

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注

[1]「意地悪い／意地悪な、欲深い／欲深な」のように同じ複合形容詞でも CA と NA の間で揺れがあるものもある（西山・長野 (2020: 145)）。

[2] 3.2 節で論じるように、Nishiyama (1999)は名詞修飾の際にコピュラが「な」で表示されることを導くための規則として[NA]素性を用いている。

[3] [S-Cat]と[M-Cat]の値として V、N、A を仮定すると論理的には９通りの組み合わせがある（この点について指摘してくださった瀧田健介氏、坂本瑞生氏に感謝申し上げる）。このうち、[S-Cat: V, M-Cat: A]については日本語では動詞句を補部とする否定辞「ない」が持つ範疇素性であると言える。また、ロシア語では形容詞活用を示す名詞（[S-Cat: N, M-Cat: A]）があることが報告されている（Spencer (2005)）。他の組み合わせ（つまり、[S-Cat: N, M-Cat: V]、[S-Cat: A, M-Cat: V]）を持つ語が通言語的に観察されるか、また観察されないとすればなぜか、については今後の課題としたい。

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‘may certainly’の認可条件
ー「たしかに～かもしれない」との比較ー

(On the Licensing Conditions for the Occurrence of ‘may certainly’:
A Comparison with its Japanese Counterpart ‘*tashikani V-kamoshirenai*’)

森　貞 (Sadashi Mori)
福井工業高等専門学校 (The National Institute of Technology, Fukui College)

キーワード：認識的用法, 対人関係調整的用法, 心理的抵抗, I モード認知, D モード認知

１．はじめに

‘may certainly’の生起（may と certainly の共起）は許されないという指摘がある。

(1) The toy may {*certainly / *probably / possibly} be dangerous.　　(安井（編）(1997: 206))

(2) *He might/may certainly be at home.
　*He must possibly bet here.
possibility を意味する助動詞は、certainty を表す副詞によって修飾されることはなく、certainty の助動詞と possibility の副詞は共に修飾一非修飾関係になることはできない。それぞれの助動詞はその蓋然性と法的に調和するような意味をもつ副詞としか通常共起できない。　　（高橋 (2007: 77-78)）

しかし、(3)に示すように、【may [＋E], certainly [＋E]】（その日本語相当表現であれば、【たしかに [＋E], かもしれない [＋E]】）以外の組み合わせであれば、生起可能と予想される。

(3) a. “S may certainly V …”　*【may [＋E], certainly [＋E]】
　[＋E] は認識的(epistemic)用法（ [－E] は epistemic 用法以外の用法）
　b.「たしかに～かもしれない」*【たしかに [＋E], かもしれない [＋E]】
　○ 予想：日英語ともに上記の組み合わせ以外であれば、認可（生起）可能

したがって、本稿の目的は以下の 3 点である。

(4) [1]‘may certainly’の認可条件を明らかにする。
　[2]「たしかに～かもしれない」の認可条件を明らかにする
　[3]‘may certainly’と「たしかに～かもしれない」の生起環境に違いが生じている場合、それをもたらしている要因を明らかにする。

２．‘may certainly’ 生起の認可条件

2.1 【義務的 may [－E], certainly (≒without hesitation: 聞き手に対する配慮) [－E]】

(5) If you aren’t able to use the online applications, you may certainly submit documents by email to undergradadmission@virginia.edu or … https://admission.virginia.edu/i-am/counselors

2.2 【ヘッジ用法の may [－E], certainly [＋E]】

(6) Modal verbs are the most prototypical realization of hedges in English, which are rhetorical strategies used by writers to tone down the force of the proposition,（中略）The modal verbs expressing hedges are: “may”, “would”, “can”, “might”, and “could”. (Vázquez (2010: 88))

(7) **Undoubtedly**, fuel efficient vehicles may certainly save you a lot of cash on regular fill-ups in the long run.（中略）Driving a fuel efficient vehicle will certainly save you money and favorably benefit the environment.
https://www.toyotaofanaheim.com/what-to-know-about-fuel-economy-cars/

2.3 “P, but Q / Although P, Q”（「是認－反論」構文 [澤田(2006)の用語]）の P に出現する場合

2.3.1【心理的抵抗を表す may [－E], 対人関係調整的 certainly [－E]】

2.3.1.1 先行研究の検討

(8) …there is a tendency for main clauses containing may to have a concessive force preceding *but: We may have our differences from time to time, but basically we trust one another’s judgment*. [8] The modal loses something of its ‘possibility’ sense here, as shown by the paraphrase: *I admit that we have our differences…but…* ie the proposition expressed by the first clause of [8] is presumed to be true but (perhaps out of politeness) the modal construction is preferred to the alternative construction with the simple present. (Quirk et.al (1986: 224)：下線は著者による)

(9) たとえば，法助動詞 may の共通のイメージスキーマとは「妨げるものがない」ことを示す図式である．

(3) a. John may go. (ジョンは行ってもいい．) (許可) (現実世界領域)
b. John may be there. (ジョンはそこにいるのかもしれない．) (可能性) (認識領域)
c. He may be a university professor, but he sure is dumb.
(なるほど彼は大学教授かもしれないが、愚鈍だ.) (譲歩) (言語行為領域)

（中略）そして，(3c) の may (=「譲歩」)は彼が大学教授であると(あなたが)主張することを妨げるものがないことを，表している． （澤田 (2000: iv-v)）

(8)(9)の内容を勘案すると、言語行為的 may と認識的 certainly の共起は不可である。というのも、言語行為的用法の may は消極的な賛同・同意を含意する (concede ≒ admit unwillingly) のに対して、認識的用法の certainly は積極的な賛同・同意を含意するからである。

また、(10)に示すように、P, but Q の P 中の may には２種類あることに留意すべきである。

(10) Sweetser（1990）は、「是認」の may を言語行為的 may と称し、認識的 may と区別し

ている。(64) にあるように、是認を表す may は I admit that で言い換え可能であり、(65) にあるように、認識的 may は It is possible that で言い換え可能であるとしている。

（64）He may be a university professor, but he sure is dumb.
= I admit that he's a university professor,... （Sweetser 1990: 70）

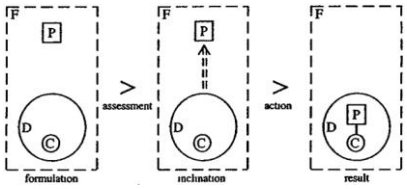
（65）He may be a university professor, but I doubt it because he's so dumb.
= It is possible that he is a university professor,... （Sweetser 1990: 70）（長友 (2018: 183)）

(11) … occurred in the former clause in P but Q expresses superficial agreement with what has preceded while at the same time hinting at a fundamental disagreement. … Other adverbials that can convey such implications include … *certainly* …

(Quirk et al. (1986: 1469))

(11)を勘案すると、(12)の①②には、それぞれ、**certainly**, **certainly** を加筆するのが妥当である（詳細は後述する）。

(12) **談話標識の機能**（抜粋）〈発話態度的機能〉－③ 確信・明白性明示機能 … certainly …
〈対人関係調整的機能〉－① 敬意・配慮機能 … **certainly** …
《「是認－反論」構文使用時に反論の相手が眼前にいる場合 [＋H]》
② 自己防衛機能 … **certainly** …
《「是認－反論」構文使用時に反論の相手が眼前にいない場合 [－H]》
（廣瀬 (2020:6) : 色付きの certainly および《 》内の記述は筆者による加筆)



C= conceptualizer　P= process/proposition　D= epistemic dominion

Figure 1: Epistemic Control Cycle (Langacker (2004: 542))

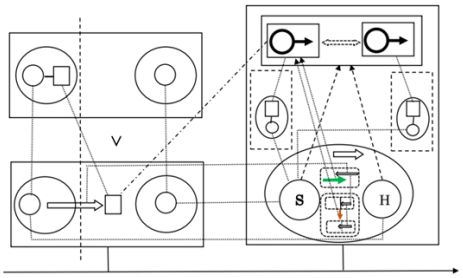


Figure 2: [＋H] の意味構造図（暫定版）

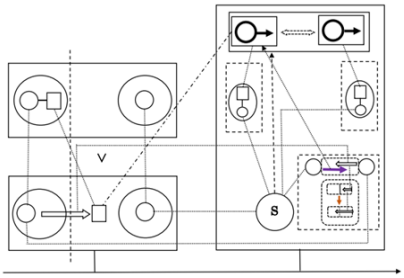


Figure 3: [－H] の意味構造図（暫定版）

Figure 2-3 では、時間軸（→）上の左の２つの長方形（内の構成要素の動き）は、S の発話時以前に S に対して他者が【P が「真」である】(Figure 1 を参照のこと) ことを主張していることを表している。右の長方形（発話時にアンカー）では、S が P および Q（⇔は逆接）を「真」

と認識している状態で、Figure 2 では、S が H の（【P は「真」である】という）**主張**を「**是認**」（**certainly** は《**見かけ上の是認**》[H に対する配慮]、**may** は《**H の主張を阻止しない形での是認**》[H に対する配慮] ）していることを表しており、Figure 3 では、反論の相手（主張者）が眼前にいない状況で、発話時以前に S になされた**主張**を「**是認**」（**certainly** は《**(是認することで他者からの非難を回避する）自己防衛**》、**may** は《**主張を阻止しない形での是認**》[誰に対する配慮?]）していることを表している。ただし、先行研究における may の捉え方（(8)(9)）では、[－H]（配慮の対象が不在）の場合の説明がつかないため、本稿では、Figure2-3 は採用せず、その代わりに、(13)で示されている考え方を援用して、Figure 4-5 を提案する。

(13) 本論は、認識的 may から may [FC]（事実的譲歩の may）への発達が前者の前提とされた命題に対する刷新的な適用によるものと主張した。この適用は事実を事実でないかのように提示する効果をもち、譲歩というコンテクストでは、話者が事実の是認に対して強い心理的抵抗を感じているという含意として理解される。（前田 (1995: 89)）

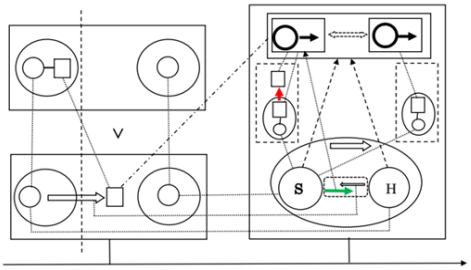


Figure 4: [＋H] (14)の意味構造図

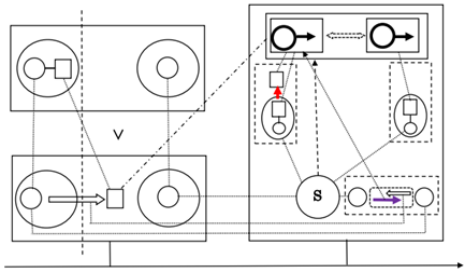


Figure 5: [－H](15)の意味構造図

Figure 4-5 では、「**may** に事実を事実でないかのように提示する効果がある」ことを〔P を D 領域外に押し出す形〕（Figure 1 を参照のこと）で図示することで、〈**P を「真」と認めることに対する(S の)心理的抵抗**〉を表している。

(14) A: He is a university professor, so he is a great source of knowledge.
B: He **may** **certainly** be a university professor, **but** he sure is dumb. （筆者による作例）

(15) One common mistake is using the term “teacher” when referring to a rabbi. **While** a rabbi **may** **certainly** be a teacher, the term “rabbi” has a specific meaning in the Jewish faith. A rabbi is a religious leader who has been ordained and is authorized to lead religious services, perform weddings and funerals, and provide spiritual guidance to their congregation. Using the term “teacher” instead of “rabbi” diminishes the importance and authority of the rabbi’s role in the community. https://thecontentauthority.com/blog/teacher-vs-rabbi

2.3.2【認識的 may [＋E], 対人関係調整的 certainly [－E]】

(16) JONE DOE [名前不明)]: …I'm quite disturbed that you know we have somebody here saying that it was mean-spirited to question whether or not that is an appropriate thing for a family of limited means to do. Yes, I understand the whole community is rallying, and thank goodness for

that. But still, I think it is fair to question that.

SNOW: OK. Let's give Bishop McHugh one more crack at that. Bishop McHugh, your reaction?

MCHUGH: It may **certainly** be fair to question the whole range of infertility drugs and structures that we have before us today, **but** the pure and simple fact is that people are being encouraged to try to overcome their infertility by medical or technological means.

(Fox News Sunday 1998/11/23)

(17) CHRIS BURY: (voice-over) Judge Wright also rejected an argument that Governor Clinton's conduct was criminal, so outrageous that Paula Jones' suffered emotional distress. "**Although** the governor's alleged conduct, if true, may **certainly** be characterized as boorish and offensive, even a most charitable reading of the record in this case fails to reveal a basis for a claim of criminal sexual assault... " (ABC Nightline, 1998/04/01)

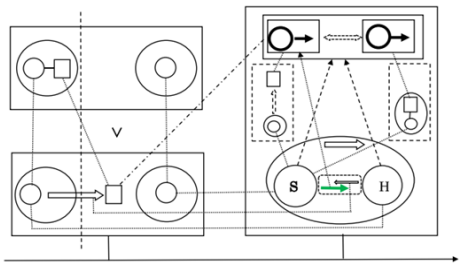


Figure 6: (16)の意味構造図

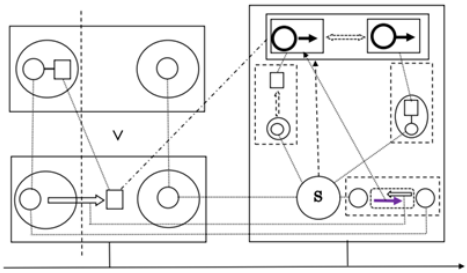


Figure 7: (17)の意味構造図

2.4 会話における応答文（(「是認－反論」構文を除く）に出現する場合

(18) In fact, I would argue that in a sentence-initial position, certainly (*certainly*$_1$) is not an epistemic adverb at all (i.e., a device qualifying one's "commitment" to what one is saying) but rather that its function is conversational; in this position, certainly is used to agree, or to partially agree, with what has been said before.（中略）The conversational character of the sentence-initial *certainly* distances it from epistemic adverbs and links it with interactive "particles," …

(Wierzbicka (2006: 285))

(19) Our interpretation differs in that Wierzbicka identifies this use only in sentence-initial position, whereas our data show that this meaning may occur with clause-internal *certainly*.

(Maíz and Arús (2008:21))

(19)から、'may certainly'における certainly にも、(18)に示されているような機能が付与されていると考えることができる。

(20) KING: I think he's the longest head of state probably…

D. CHENEY: He may **certainly** well be. He may well be. (CNN Larry King Live, 2001/01/19)

(20)では、may は認識的 may であり、**certainly** の使用には「賛同」を通した〈**(話し相手との)**

ラポール形成〉が意図されていると想定することができる。

(21) KING: When dogs are barking, are they talking to each other?
SHANOR: They may be talking to each other, and they may be talking to us. They could certainly understand most of what we're saying. They just don't have the mechanism to talk back. They may be **certainly** sending out signals and saying stay away or I'm agitated, or I'm – or I'm very anxious about all of this. (CNN Larry King Live, 2010/11/07)

(21)において、may は認識的 may であり、**certainly** は〈**(純粋な) 賛同**〉を表している。

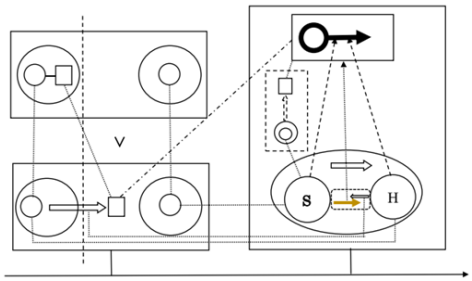


Figure 8: (20)の意味構造図

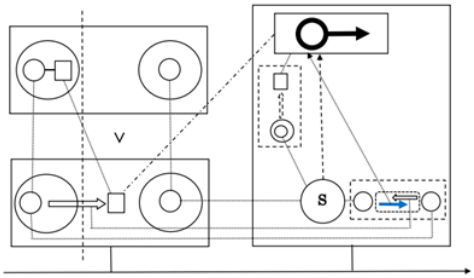


Figure 9: (21)の意味構造図

３．「たしかに～かもしれない」の認可条件

3.1「P だが Q（「是認－反論」構文)」の P に出現する場合

3.1.1 【対人関係調整的*たしかに* [－E], 心理的抵抗を表す*かもしれない* [－E]】

(22)【文型 2】A「おかげさまで昨日の試合に勝ちました」
B「たしかにあなたは試合には〔勝ちましたが／勝ったかもしれませんが〕、実力はまだまだだと思ったほうがいいですよ」

【説明 2】A の意見に B が反論したいときに、反論の前に「たしかに」を用いて部分的賛同を表すことによって反論の強さが和らぐ。この場合、「たしかに」のあとに「かもしれない」をあわせて用いることも多い。⑧＜考察＞（前略）【文型 2】では、《反論》を表明するにあたり、その前置きとしての部分的な賛同を示して譲歩する機能が示されている。このように、聴者のポジティブフェイスに配慮することによって、《反論》によって生じる FTA を緩和させるためのストラテジーとして使用される。このような場合、「かもしれない」をセットで用いて《反論》を誘導することも少なくない。この場合の「かもしれない」もまた、可能性の原義は喪失しており、緩和の意味に特化された配慮表現である。 山岡 (2020: 83-84)：下線・色付けは著者による）

(22)において、「たしかに」は〈**見せかけの賛同**〉を表し、「かもしれない」は〈**心理的抵抗**〉を表している（A にとって P が unpreferable な事柄（A「昨日の試合、負けてしまいました。」B「試合には負けたかもしれないが、しょげることはない。力は十分についているよ。」）であれば、「かもしれない」には hedge の読みが可能であるが、「試合に勝った」ことは A にとって preferable な事柄であるので、緩和的な表現を使用する必要はなく、語用論的には、むしろ、

不適切である。したがって、(22)の「かもしれない」に hedge の読みは生じない)。

(23)「山は逃げない」ってよく耳にするけど、自分はこの言葉が嫌いです。たしかに山は逃げないかもしれませんが、病気や怪我、仕事や家族の事情で二度と山に登れなくなるかもしれない。 https://yamap.com/moments/409795

(23)において、「たしかに」は〈自己防衛〉を表しており、「かもしれない」は〈心理的抵抗〉を表している。

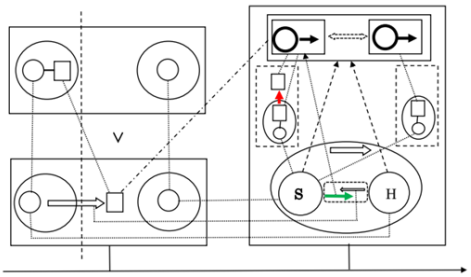


Figure 10: (22)の意味構造図

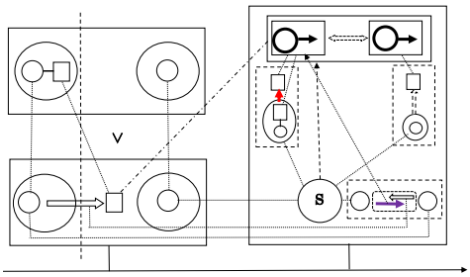


Figure 11: (23)の意味構造図

3.1.2【対人関係調整的*たしかに* [－E], 認識的*かもしれない* [＋E]】

(24) 吉野：(小原が集合郵便 Post を覗き見しているのを見て) 泥棒？いやヤクザか暴力団？
小原：初対面の人間つかまえていきなり犯罪者扱いとは？（中略）
吉野：でも　すごく犯罪者っぽかったから…（中略）
小原：確かに、ちょっとは、怪しく見えたかもしれない。でも、これは私の大事な仕事なんです。　（『シッコウ!!～犬と私と執行官～』第 1 話　2023/07/04 放送）

(25) ユネスコの話については、教育というものは提供する側と受け手の側の色々な相談で行われるべきであるということは、確かにそういうことであるかもしれない。しかし、我々は、大学教育について、教育を提供する側の教育責任、「どういう人材を受け入れて、どういう教育を行い、どういう学生になって社会に責任を持って送り出すのか」ということを責任として感じているので、入学の方針や入学生への教育の方針、学位に対する承認の仕方といったことについての責任は、学生の意見を踏まえて練り上げるのではなく、教育の責任をもつ大学が主体的に考えるべきであると考えている。
https://www.osaka-cu.ac.jp/ja/news/2009/files/20090616-1.pdf

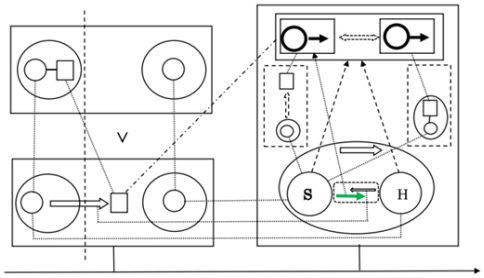


Figure 12: (24)の意味構造図

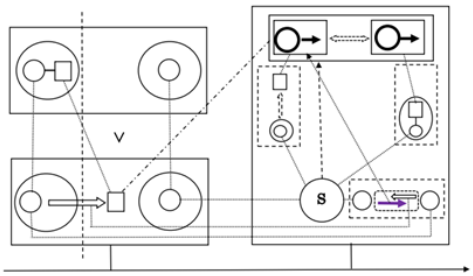


Figure 13: (25)の意味構造図

3.2 会話における応答文（記憶を含む）（(「是認－反論」構文を除く）に出現する場合

3.2.1【対人関係調整的*たしかに* [－E], 認識的*かもしれない* [＋E]】

(26)「妖怪は、言ってみれば幻想であって、実在しないからこそ妖怪なのです。だって、本当に存在したら、ただの珍しい動物じゃないですか」
－たしかに、そうかもしれませんね。
https://www.asahi.com/articles/ASR873GZ0R84UPQJ00J.html

(26)において、「かもしれない」は認識的「かもしれない」であり、「たしかに」の使用には「賛同」を通した〈**(話し相手との）ラポール形成**〉が意図されていると想定することができる。

(27) 食事中の雑談のなかで、どうしてフランス人と日本人は芸術に熱心なのかという質問を受けた。特にそんなことを思ったことはなかったものの、いわれてみると確かにそうかもしれない。 https://magazine.air-u.kyoto-art.ac.jp/essay/242/

(27)において、「確かに」は〈**(純粋な）賛同**〉を表しており、「かもしれない」は認識的「かもしれない」である。

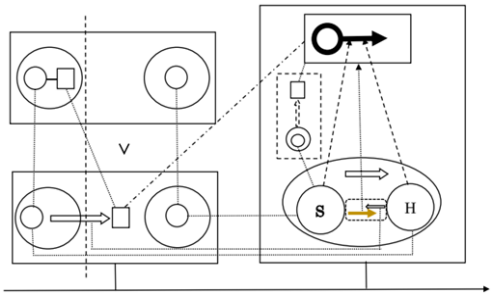


Figure 14: (26)の意味構造図

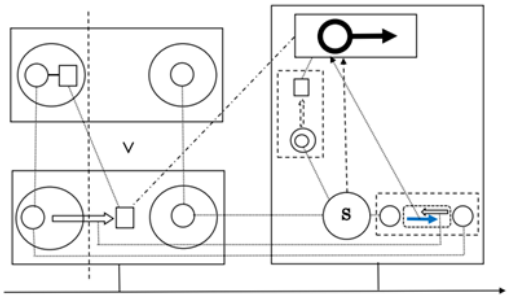


Figure 15: (27)の意味構造図

3.2.2【対人関係調整的*たしかに* [－E], ヘッジ用法の*かもしれない* [－E]】

(28)〔C は A と B との口論を聞いており、A の意見の方を支持する気持ちを持っている〕
A：（C に向かって）僕の意見の方が正しいだろ？
C：確かに君の言い分の方が正しいかもしれないね。
（筆者による作例）

(28)において、「確かに」の使用には、A に対する配慮（「**賛同**」）が意図されており、「かもしれない」の使用には、 B に対する配慮（**hedge 用法**－(29)を参照のこと）が意図されている。

(29) ごめん。君のイヤホンの音、大きいかもしれない。
〔発話機能〕《改善要求》
〔配慮〕相手を傷つけるおそれのある発話をぼかし表現としての「～かもしれない」で緩和する配慮表現 （山岡・牧原・小野 (2010: 206))

４．発話の参与者間での interaction が希薄な状況での「たしかに～かもしれない」の生起

「たしかに～かもしれない」は、(30)(31)に見られるように、発話の参与者間（典型的には S と H との間）での interaction が希薄な状況においても、生起可能である（これまでのところ、‘may certainly’に関しては、同状況下での実例は見つかっていない）。これはある意味、特殊なことである。というのも、３節までの考察を踏まえると、一般的に言って、当該表現における「たしかに」の使用には interaction の関与が不可欠だからである。

(30) 先日興味深い文章に当たりました。「学力低下というけれども、（中略）道具を自由に駆使し友達と協力してもいいから答えを出すということに関しては、今の学生の方が能力が高い」（平野啓一郎・梅田望夫『ウェブ人間論』新潮社，2006）。たしかにそうかもしれないなと思う節はあります。　https://www.nul.nagoya-u.ac.jp/tokai/kyogikaishi/53all.pdf

(31) 突然ですが、最近確かにそうかもしれないと思った言葉をご紹介させて頂きたいと思います。1.性格は「顔」に出る　2.生活は「体型」に出る　3.本音は「仕草」に出る（中略）雑に過ごすと細部に現れる。　https://www.umekawa-mc.co.jp/blog.php?y=2022&m=1

本稿では、I モード認知（中村 2009）－日本語は I モード認知寄りの言語。他方、英語は D モード認知寄りの言語とされる―が、「たしかに」の生起を可能にしていると主張する。というのも、D モード認知（中村 2009）の場合とは異なり、I モード認知では、Figure 18 で示すような interaction が可能だからである。

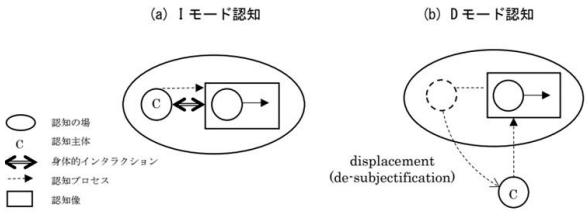


Figure 16: I モード認知 / D モード認知（中村 (2009: 359, 363)）

(32) a. 雨が降った。【D モードの捉え方】
　　b. 雨に降られた。【I モードの捉え方】
（Figure 17: 左向き矢印〈事象からの働きかけ〈**影響**〉〉、右向き黄色矢印〈**迷惑感**〉）

(33) a. ～かもしれない。【D モードの捉え方】
　　b. たしかに～かもしれない。【I モードの捉え方】
（Figure 18: 左向き矢印〈言語表現からの働きかけ〈**主張**〉〉、右向き青色矢印〈**純粋な賛同**〉〉

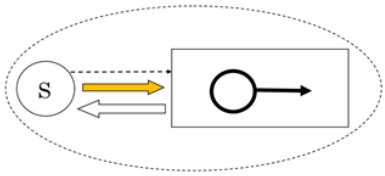


Figure 17: (32b)の意味構造図

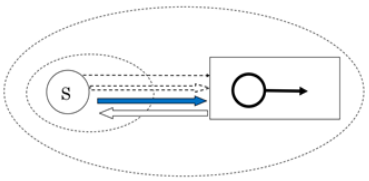


Figure 18: (33b)の意味構造図

５．おわりに

本稿では、まず、2 節において、‘may certainly’の認可条件を明らかにした。次に、3 節において、「たしかに～かもしれない」の認可条件を明らかにした。最後に、4 節において、「たしかに～かもしれない」は、発話の参与者間（典型的には S と H との間）での interaction が希薄な状況においても生起可能であることを確認し、I モード認知がそうした状況における「たしかに～かもしれない」（より正確には、「たしかに」）の生起を可能にしていることを主張した。

残された問題としては、今回の調査では、発話の参与者間での interaction が希薄な状況での ‘may certainly’の実例は発見できなかったが、これが筆者のリサーチ不足の結果であるのか、それとも、そもそも、I モード認知が発動しないために、同状況下での ‘may certainly’の生起が阻止されているのかが判然としていない点である。その問題の解決を今後の課題としたい。

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Walk as a Lexical Causative－Where Does Accompaniment Come from?－*

Tetsuya Nakamura
Kansai University

Keywords：walk, lexical causative, accompaniment, sociative causation

1. Introduction

In English (and many other languages), some of the verbs can have both the intransitive use and the transitive use, as shown in (1) and (2).

(1) a. The window broke.
b. Pat broke the window.
(2) a. The door opened.
b. Antonia opened the door. (all from Levin and Rappaport Hovav (1995: 79))

In the literature, this is called *a causative alternation* (cf. Levin and Rappaport Hovav (1995); Pinker (1989), among others), because the transitive use is semantically a causative of the intransitive use. Thus, the transitive *break* in (1b) can be paraphrased with "to cause to break." Similarly with the transitive *open* in (2b). For this reason, the transitive use will be called a *lexical causative* below.

One of the most influential works on this phenomenon is Levin and Rappaport Hovav (1995). They argue that unaccusative verbs (e.g., *break*, *open*, *sink*) can participate in the causative alternation and so have a lexical causative, but unergative verbs (e.g., *play*, *speak*, *walk*) cannot, as shown in (3) and (4).

(3) a. The children played.
b. * The teacher played the children.
(4) a. The actor spoke.
b. * The director spoke the actor. (all from Levin and Rappaport Hovav (1995: 80))

Contrary to their prediction, however, *walk*, which is generally taken to belong to the unergative class, is found to appear transitively, as in (5).

(5) I walked her home. (Pinker (1989: 227))

The existence of the transitive use of *walk*, as in (5), poses a serious problem for Levin and Rappaport

Hovav's (1995) hypothesis. Then, how are we to accommodate the fact? There have been numerous discussions on this question. In this paper, contrary to Levin and Rappaport Hovav (1995), we argue that the transitive *walk* in question is an instance of the lexical causative, just like the transitive uses of change-of-state verbs, as in (1) and (2). Moreover, the proposed analysis can account for an apparently idiosyncratic characteristic 'accompaniment' of *walk*, which previous analyses have not accommodated adequately.

This paper is organized as follows: Section 2 reviews three previous analyses and points out their problems. Section 3 offers defining characteristics of the lexical causative. Based on these characteristics, section 4 argues that the transitive use of *walk* in question is a lexical causative, and at the same time explains the origin of a seemingly idiosyncratic characteristic of the verb. Section 5 demonstrates that the transitive *walk* is also an instance of sociative causation in Shibatani and Pardeshi (2002). Section 6 gives a conclusion.

2. Previous Analyses

2.1. Three Approaches

Previous analyses can be classified into at least three types. Let us consider them in turn: Levin and Rappaport Hovav (1995), Davidse and Geyskens (1998), and Goldberg (1995).

In the first place, Levin and Rappaport Hovav (1995) admit that there are transitive uses of manner-of-motion verbs like *walk*, indeed. But they argue that the transitive use of manner-of-motion verbs like *walk* must have directional phrases, as shown in (6) to (8).

(6) a. The general marched the soldiers to the tents.
b. ? The general marched the soldiers.
(7) a. The rider jumped the horse over the fence.
b. ?? The rider jumped the horse.
(8) a. We ran the mouse through the maze.
b. * We ran the mouse. (all from Levin and Rappaport Hovav (1995: 111))

On the basis of this observation, they argue that when manner-of-motion verbs occur with directional phrases, they are turned into *directed motion verbs* via a meaning shift. Directed motion verbs are taken to belong to the unaccusative class, so the resulting lexical causatives do not violate the Unaccusative Hypothesis. In short, this approach is tantamount to claiming that the transitive verbs in (6) to (8) are not strictly lexical causatives of manner-of-motion verbs in their original, unergative meanings.

Next, unlike Levin and Rappaport Hovav (1995), Davidse and Geyskens (1998) argue that manner-of-motion verbs like *walk* can have a transitive use, which they call *ergative causativization of an intransitive* (henceforth, ECI). According to them, ECIs have different subtypes, each of which is associated with a different meaning (cf. Davidse and Geyskens (1998)). For example, TYPE 1 is associated with the meaning 'instigating manner-of-motion by escorting.' They cite the transitive use of *walk* in (9) as an instance of TYPE 1.

(9) "What a nice gentleman you are, to walk Hilary home," her mother said.

(Davidse and Geyskens (1998: 162))

As noted by Levin (1993: 31) and Pinker (1989: 131), in the transitive uses of manner-of-motion verbs like *walk*, the subject referent often accompanies the direct object referent. This characteristic will be called *accompaniment* below. By positing TYPE 1 among other subtypes, Davidse and Geyskens (1998) have an account of the fact that the transitive use of *walk* often has 'accompaniment.'

Finally, Goldberg (1995) cites (10) among the instances of the Caused-Motion Construction. In her analysis, then, *walk* fuses with one of the extensions of the Caused-Motion Construction to express the bulk of the meaning of (10), which can be paraphrased with "Sam helped him to move to the car by walking" (see Goldberg (1995: Ch 7) for detail).

(10) Sam walked him to the car. (Goldberg (1995: 162))

Thus, Goldberg (1995) regards the transitive verb in (10) as a caused-motion expression, rather than as a lexical causative.

2.2 Problems

While the previous analyses may appear to be plausible in some respects, each of them has some problems. First, Levin and Rappaport Hovav (1995) predict that there should be no transitive uses of manner-of-motion verbs like *walk* without directional phrases. As already pointed out by some researchers (e.g., Davidse and Geyskens (1998); Erteschik-Shir and Rapoport (2005)), however, there are instances of transitive uses of manner-of-motion verbs without directional phrases, as evidenced in (11).

(11) a. Are there any places close to home where you could walk the dog and get out into the country-side?

b. No American commander then in uniform had ever marched an entire division, much less a corps.

c. ... you do not gallop a horse when approaching settlements ...

(all from Davidse and Geyskens (1998: 170-171))

Thus, Levin and Rappaport Hovav's (1995) approach is clearly untenable.

Next, Davidse and Geyskens (1998) can accommodate transitive uses of manner-of-motion verbs like *walk* without directional phrases, unlike Levin and Rappaport Hovav (1995). In addition, this approach appears to accommodate 'accompaniment' by positing TYPE 1 among other subtypes. But this begs the question: Where does 'accompaniment' come from? That is, they say nothing about why the transitive use of *walk* often has this characteristic.

Finally, Goldberg's (1995) Caused-Motion analysis can capture 'accompaniment' in (10) naturally, as suggested by the paraphrase "Sam helps him to move to the car by walking." But there are transitive

uses of *walk* without 'accompaniment,' as shown in (12). The sentence in (12) is incompatible with the paraphrase "X helps Y to move Z by walking" suggested by the Caused-Motion analysis. Then, the Caused-Motion analysis has to handle (10) and (12) differently, and so fails to capture a generalization.

(12) … he hardly ever walks a batter. (COCA)

To make matters worse, there is a more serious problem in the Caused-Motion analysis. An intransitive verb can take an unsubcategorized object in the caused-motion expression. For example, *laugh* is ordinarily an intransitive verb, but it takes an unsubcategorized object in the caused-motion expression, as shown in (13a). As pointed out by Rivière (1982), however, the verb in the caused-motion expression cannot take the unsubcategorized object without the directional phrase, as exemplified in (13b)

(13) a. The audience laughed the actors out/off the stage.
b. * The audience laughed the actors. (Rivière (1982: 686))

Accordingly, the Caused-Motion analysis predicts that there is no instance of *walk* without a directional phrase, but such sentences are attested, as shown in (11a) and (12). These sentences are clearly counter-examples to the Caused-Motion analysis. If one wanted to stick to the Caused-Motion analysis, one would have to explain why the directional phrase may be absent for *walk*.[1]

3. The Characteristics of the Lexical Causative

In this section, we offer defining characteristics of the lexical causative so that we can decide what should count as a lexical causative. Note that there are two defining characteristics of the lexical causative. The first characteristic is that as long as the causee ends up undergoing (or performing) the lexically-specified process (or action), the action of the causer is left completely unspecified (henceforth, Characteristic 1). Consider (14) for illustration. In both of the sentences, the lexical causative of *break* is used. But because the lexical causative *break* does not specify how to break the causee *the window* at all, different kinds of actions may be specified in their by-clauses.

(14) a. I broke the window by hitting it with a rock. (Talmy (2000: 273))
b. I broke the window by leaning against it. (Talmy (2000: 326))

It should be noted that this characteristic is observable with the periphrastic causative (e.g., *cause*, *make*, *have*) as well as the lexical causative. Thus, in (15), the causer *Jason* does not exert a strong force onto the causee *the balloon*.

(15) At noon, Jason caused my balloon to break some time later by setting it on the hot sand under the blazing sun. (Langacker (1991: 299, note 11))

Rather, he just put *the balloon* on the hot sand, but that was sufficient to cause the causee to break in this situation. Thus, it can be said that Characteristic 1 applies to causatives in general.

Next, the second characteristic of the lexical causative (but not the periphrastic causative) is that the causer must be conceptualized as controlling the causee's change of state and/or location (henceforth, Characteristic 2). This can be illustrated by comparing the transitive use with the intransitive use. In the intransitive use, the event denoted by the verb must be taken to be relatively autonomous, as noted by Matsumoto (2000). For example, in (16a), only *the ball* can, but not *the square box*, appear as the subject of this sentence. This is because a ball can be easily construed as rolling on its own due to its round configuration. By contrast, it is difficult to construe a square box as rolling on its own because it cannot roll without external continuous impingement due to its configuration. Hence the contrast between *the ball* and *the square box* in (16a).

(16) a. {The ball/*The square box} rolled across the floor.
b. John rolled {the ball/ the square box} across the floor. (Matsumoto (2000: 186))

But this contrast is neutralized when the two entities appear as the direct object argument of transitive *roll* as in (16b). This can be taken to indicate that in (16b) the square box's movement is entirely under John's control. Note further that the same can be said of the ball in (16a). While a ball can be construed as rolling on its own as in (16a), in (16b) its rolling is entirely controlled by John. Contrary to appearances, then, the direct object referents in (16b) function differently from the subject referents in (16a).

4. Lexical Causative Analysis

In the previous section, we identified the defining characteristics of the lexical causative (i.e. Characteristic 1 and Characteristic 2). Now, we are in a position to consider whether the transitive use of *walk* is a lexical causative. Let us begin with the examination of the scene denoted by the transitive *walk* in question. Consider (17), repeated from (5). In this sentence, the subject referent accompanies the direct object referent to the destination. Prototypically, in our society, this kind of activity is performed so that a man can keep a woman from being attacked by a stranger. In other words, he "guards" her from an external risk by accompaniment. Thus, accompaniment gives her a sense of security and enables her to walk comfortably even at night.

(17) I walked her home. (= (5))

To be sure, she walks volitionally. In this situation, however, social convention requires her to walk in accordance with the subject referent's pace. She can't move at her own will, as when she walks home alone. So, her movement is under his control. In this sense, then, the subject referent can be said to control the direct object referent while leading her to the destination. Thus, accompaniment can count as the means of controlling the direct object referent's movement.

Some people might wonder why the subject referent controls the direct object referent in (17). But

the answer is quite simple: because the transitive use of *walk* in (17) is a lexical causative. That is, the transitive use of *walk* has Characteristic 2, so the subject referent controls the direct object referent, just like other lexical causatives. Moreover, the transitive use of *walk* also has Characteristic 1, so the action of the subject referent is left completely unspecified. Then, nothing prevents us from treating accompaniment as the means of controlling the direct object referent. Thus, the apparently idiosyncratic characteristic of 'accompaniment' can be regarded as coming from Characteristic 1 and Characteristic 2.

Given that 'accompaniment' of the transitive *walk* follows from Characteristic 1 and Characteristic 2, we are led to expect that one can walk someone else by means other than accompaniment, just like other lexical causatives like *break*. In fact, this prediction is borne out. Consider (18).

(18) My father and Yasser grabbed him by the arms and walked him to the door. (COCA)

Here, the subject referent forces the direct object referent to walk to the door. The direct object referent refuses to go, so the subject referent moves the direct object referent by physical force. Thus, physical force can count as the means of controlling the direct object referent.

Things are different in (19), where a man is taking his dog for a walk.

(19) The gentleman is walking a toy poodle on a leash. (COCA)

The subject referent is the owner of the direct object referent, which is willing to walk around for exercise. Thus, the example in (19) is different from that in (18), in that the direct object referent is not forced, but enabled to walk. Nevertheless, it cannot walk around on its own will. In order to prevent the dog from going astray, the owner must control the movement of it by using a leash. Using a leash, then, can count as the means of controlling the direct object referent.

Next, consider (20), where the airline staff had the customers pass through a metal detector to make sure that they did not have dangerous metal objects such as guns.

(20) The Abbasses say airline staff walked them through metal detector… (COCA)

Here, the direct object referent is not reluctant to obey the direction to walk through the metal detector. So, again, the direct object referent is not forced to walk. To go on board, however, one must walk through a metal detector in accordance with the direction of an airport staff, even if they do not want to. In this situation, then, an airline staff can be regarded as controlling the movement of the customer by giving a direction. Thus, a direction can count as the means of controlling the direct object referent.

Finally, let us consider (21), repeated from (12), which is in a baseball setting.

(21) … he hardly ever walks a batter. (= (12))

In baseball, a batter is caused to walk to the first base when he gets four pitches that are outside of the

strike zone (the pitch is called *ball*). Regardless of his will, the batter has to move to the first base because he must follow the rule of baseball. In this sense, it can be said that the subject referent who throws four balls controls the movement of the direct object referent by use of the rule of baseball. Throwing four balls together with the rule of baseball, then, can count as the means of controlling the direct object referent's movement.

We have just seen that the transitive use of *walk* has different kinds of means of controlling the direct object referent (e.g., accompaniment, physical force, using a lead, and so on). As mentioned above, this is predicted in our account. After all, the transitive *walk* is a lexical causative (i.e. it has Characteristic 1 and Characteristic 2). In this section, thus, it is concluded that the transitive use of *walk* should be seen as a lexical causative and accompaniment is just one of many different means of controlling the direct object referent.

5. Sociative Causation

As noted above, some researchers such as Levin and Rappaport Hovav (1995) argue that *walk* does not have a lexical causative. In this sense, then, that transitive *walk* is a lexical causative might appear to be a totally new finding. It should be noted, however, that the lexical causative of *walk* is not a totally new type of causative that has never been discussed in the literature.

As shown in the previous section, the causee of the lexical causative of *walk* is controlled by the causer (i.e. Characteristic 2), just like the lexical causative of *break* in (14). In this sense, the lexical causative of *walk* can be said to have a property of direct causation.

It should be noted, however, that the causee of the lexical causative of *walk* functions differently from those of lexical causatives of change-of-state verbs like *break*. Specifically, the causee of the lexical causative of *walk* has to perform the lexically-specified action volitionally, whereas in lexical causatives of change-of-state verbs like *break*, the actualization of the caused event is totally dependent on the causing event. In (17), thus, the causee walks of one's own volition, although the causee's movement is controlled by the causer's accompaniment. Then, the causee has a certain degree of autonomy and plays an agentive role, just like indirect causation (e.g., *John had his son write a letter*). So, in this sense, the lexical causative of *walk* can be said to have a property of indirect causation as well.

This might create the impression that the lexical causative of *walk* is a totally new type of causative. As a matter of fact, however, it has already been suggested in Shibatani and Pardeshi (2002) that there are verbs with this intermediate status. They argue that the category of causative forms a continuum, as in Figure 1. At the two ends of the continuum lie direct causation and indirect causation, respectively. But they argue further that there should be *sociative causation* between direct causation and indirect causation.

Figure 1. causative continuum (cf. Shibatani and Pardeshi (2002))

As it is located between them in the continuum, sociative causation has properties of both direct

causation and indirect causation. The same is true of the lexical causative of *walk*. Thus, it can be concluded that the lexical causative of *walk* should be seen as an instance of sociative causation, although Shibatani and Pardeshi (2002) assume that sociative causation is only associated with periphrastic causatives in English.

6. Conclusion

In this paper, we have defined the notion 'control' as a defining characteristic of the lexical causative and have argued that the apparently idiosyncratic characteristic 'accompaniment' is one manifestation of controlling the causee in the lexical causative. So, the characteristic 'accompaniment' can be explained away without any stipulation.

Moreover, the notion 'control' enables us to argue further that manner-of-motion verbs like *walk* are no different from change-of-state verbs like *break* in having lexical causatives, contrary to the argument in Levin and Rappaport Hovav (1995).

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NOTES

[1] Goldberg (1995) does not clarify whether the verb *walk* that fuses with one of the extensions of the Caused-Motion Construction is an originally intransitive or transitive verb. If she thinks that *walk* is an originally transitive verb, the resulting meaning is "X helps Y to move Z by walking Y."

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If 節内の be to に関する意味論的・語用論的研究*

（*Be To* in *If*-Clauses）

岡 麟太郎（Rintaro Oka）
日本大学（Nihon University）

キーワード：be to, 未来予測型条件文, 意志未来, 形態的特徴, 語用論的意味

1. はじめに

be 動詞 ＋to 不定詞が if 節内で用いられた場合（以下、「if＋be to」と略記）、判で押したように、「目的・意図」を表わすとされる (cf. 鈴木・安井 (1994: 210); 安藤 (2005: 108f.); 江川 (1991[3]: 321f.); Huddleston and Pullum (2002: 206f.); Leech (2004[3]: 104); Declerck (2010: 285ff.); 安井・安井 (2022: 323))。（以下、強調は筆者による。）

(1) a. If you ***are to*** pass the exam, you must study hard.［目的・意図］
b. If you ***are to*** get promoted, you need to keep advice in mind.［目的・意図］
(a-b: 安井・安井 (2022: 323))

しかし、「if＋be to」が表わす意味は「目的・意図」に限られるわけではない。次の例のように、「運命」の意味を表わすこともある。

(2) ‘And, Margaret, if I ***am to*** die—if I am one of those appointed to die before many weeks are over—I must see my child first.’［運命］ (Elizabeth Gaskell, *North and South*)

現代英語の be to は「運命」「予定」「命令・義務」「可能」とさまざまな意味を表わす。be to という形態を共有する以上、if 節内で用いられた be to が（2）のように「運命」の意味で用いられることは自然といえる。では、なぜ if 節内の be to は「目的・意図」の意味でもっぱら用いられるのであろうか。また、be to の仮定法用法としての「if＋were (was) to」には「目的・意図」を表わすことがないことも興味深い。

本稿は、①直説法用法としての「if＋be to」、ならびに②仮定法用法としての「if＋were (was) to」について、形態的特徴と談話分析の観点から、その意味論的・語用論的特徴について考察するものである。その考察過程において、①については、 if 節内には話し手の推量（認識的要素）は入り込みにくいという言語事実が援用できること、②については、語用論的な観点から、「限りなくゼロに近い可能性」を表わす were (was) to と意志（「目的・意図」）とは相性が悪いことの 2 つが検証される。

2. if 節内の be to :「目的・意図」

Leech (2004[3]: 104) や Huddleston and Pullum (2002: 206) は、if 節内の be to は「特別な用法」(‘a special use’) であるとみなし、主語の「目的」や「目標」(‘purpose or goal’) を表わすという。[1] 次の (3) がその典型例である。

(3) a. If we ***are to*** win the competition, we must start training now. (Leech (2004[3]: 104))
b. If we ***are to*** get there on time we must leave immediately. (Huddleston and Pullum (2002: 206))
c. If you ***are to*** learn more about it, you must ask Mr. Broth for details. (Declerck (2010: 286))

if 節内の be to が「目的・意図」を表わすことは、次の例を見るように、‘be going to’ , ‘intend to’ や ‘in order to’ でパラフレーズされることからも理解される。

(4) a. If we ***are to*** win the competition, we must start training now.
= If we ***are going to*** (i.e ***intend to***) win the competition, we must start training now.
(Leech (2004[3]: 104))
b. You'll have to hurry if you***'re to*** be there on time.
= You'll have to hurry if you***'re going to*** be there on time. (Huddleston and Pullum (2002: 211))
c. If we ***are to*** make progress at all, we must set about finding a solution to this problem.
= (***In order to*** make / If we ***are going to*** make) progress at all, we must set about finding a solution to this problem. (Declerck (2010: 286))

付言すると、if 節内の be to が「目的・意図」を表わす場合、その if 節には達成すべき目標 (goal) や願望 (desirability) が示され、その帰結節では、(3) や (4) に見るように、通例、義務的表現 (must, shall など) が用いられる。また、次に示すように、義務を表わす助動詞の代わりに、重要性を表わす表現 (important, essential など) が用いられることもある。

(5) a. ‘While the Elixir of Life does indeed extend life, it <u>must</u> be drunk regularly, for all eternity, if the drinker ***is to*** maintain his immortality.’
(J. K. Rowling, *Harry Potter and the Half-Blood Prince*)
b. I tried to make a few notes, but we <u>shall have to</u> go over it all again together some time, if I ***am to*** write it up. (J. R. R. Tolkien, *The Fellowship of The Ring*)
c. It is <u>important</u> that your lips are soft and well moisture if your lipstick ***is to*** adhere successfully.
(Declerck (2010: 286f.))
d. This is <u>vital</u> if we ***are to*** continue to lose weight and inches at a satisfactory rate, and <u>essential</u> if we ***are not to*** return to our previous shape. (BNC, C9Y 1501)

上で挙げたように、if 節内の be to は「目的・意図」を表わすが、それはなぜであろうか。この問題の結論を先取りすると、if 節内には、話し手の推量（認識的要素）は入り込みにくいためと考えられる。すなわち、if 節内には、話し手の「推量」は入り込みにくいのに対して、「意志」は無条件で用いることができるという言語事実からの類推である。

3. if 節内の未来表現

3.1. if 節内の「推量」と「意志」

if 節内には、話し手の推量（認識的要素）は入り込みにくいという言語事実が存在する。よく知られた言語事実である。次の (6) のように、未来予測型条件文では、「推量」を表わす will は用いられず、それに代わり単純現在形が用いられる。一方、「意志」を表わす will はそのまま用いることができる。[2]

(6) a. If it {***rains*** /****will rain***} tomorrow, the match will be canceled.
b. If John ***will come***, Mary will leave. (a-b: Palmer (1990[2]: 171))

(6a) の will rain の非容認性について、吉良 (2018: 68) は「推量 (will rain) に基づく推量 (will be canceled) には語用論的な意味はない」と述べる。語用論的な意味を保証するために、実際に雨が降るかどうかは別として if 節内の出来事は断定のかたちで条件設定されなければならない (cf. Dancygier (1998: 47))。その一方で、(6b) の意志を表わす will が容認されるのは、意志 (volition) とは発話時における断定的な決意表明であり、if 節の条件設定として問題ないためである。if 節内では意志は無条件で用いることができ、話し手の推量は入り込みにくい。つまり、if 節内の will は「意志」の解釈を受けやすいといえる。

また、if 節内の be going to も「意志」を表わす。

(7) a. You ought to lock your doors if you'***re going to*** stay here. (Declerck and Reed (2001: 150))
b. If John ***is going to*** come, Mary will leave. (Palmer (1990[2]: 179))

if 節内の will や be going to が「意志未来」を表わすことを考えれば、be to が「意志」の意味を表わすことは自然といえる。すなわち、「if + be to」が「目的・意図」を表わすのは、if 節内の未来表現が意志を表わすという言語事実の類推である。実際、2.節でも述べたように、Leech (2004[3]: 104) らは「if + be to」と「if + be going to」とのパラフレーズを認めている。be to と be going to は、同じ形態的特徴 (be, to) を共有するため、その表わす意味も近いものとなることは想像に難くない。次節では、両者の意味的相違について述べることにする。

3.2.「if + be to」が表わす意志未来の意味特徴

3.1.節において、if 節内の be to が「目的・意図」の意味で用いられるのは、if 節内では、「推量」ではなく、「意志」を表わすという言語事実の類推であるとした。本節では、「if + be to」が意志未来を表わす場合の意味特徴について、「if + be going to」と比較・対照し考察する。次の既出例 (= (4a)) を見られたい。

(8) a. If we ***are to*** win the competition, we must start training now.
b. If we ***are going to*** win the competition, we must start training now. (a-b: Leech (2004[3]: 104))

(8a, b) における意味的相違はどのようなものであろうか。結論として、客観的な要因が含まれているか否かである。「if + be to」(= (8a)) は、主語の「目的・意図」を表わすが、その根本には、「どうしてもその試合に勝たなくてはならない」という必要性（もしくは、必然性）を形成する何か（客観的な要因）が多かれ少なかれ含まれている。[3] なぜなら、be to とは本来、客観的な視点を取り入れるために重宝される表現だからである。Curme (1931: 435) は、be to の使用について、「主語以外の第三者の意志 ('the will of someone other than the subject') を伝えるためによく使われる」と述べている。be to の各用法（「運命」「予定」「義務」「可能」）に第三者の関与が含まれることを考慮すると、if 節内の be to が表わす「目的・意図」にも同様に客観的な要因が含まれているものと考えられる。この含みが、主語だけの意志を表わす be going to との意味的相違となる。「if + be going to」(= (8b)) には客観的要素の含みはなく、純粋に主語の意図として解釈される。小説の例を引いてみよう。

(9) '– I DON'T CARE WHAT YOU'VE GOT TO SAY!' Harry roared. 'I don't want to hear anything you've got to say!' 'You will,' said Dumbledore steadily. 'Because you are not nearly as angry with me as you ought to be. If you ***are to*** attack me, as I know you are close to doing, I would like to have thoroughly earned it.' 'What are you talking –?' 'It is my fault that Sirius died,' said Dumbledore clearly. (J. K. Rowling, *Harry Potter and the Order of the Phoenix*)

(9) はシリウスの死によって自暴自棄に陥ったハリーが怒りに駆られ、ダンブルドアを攻撃しようとしている場面である。ダンブルドアは、「もし儂を攻撃するつもりなら、それを受け入れたい」とハリーに伝える。しかしながら、物語を通したハリーとダンブルドアの親密な関係性から、ハリーが本心でダンブルドアを攻撃しようとする意志を抱くとは考えにくい。したがって、「if + be to」が表わす「目的・意図」は、ハリーの純粋な意志というより、自分では制御できない「怒り」が彼をダンブルドアを攻撃するという行動へと駆り立てていると解釈するほうが自然といえる。(9) の文脈から、ハリー自身の意志も確かに伺える。しかし、ここで重要なのは、自暴自棄になった状態から生じる「怒り」という第三者的な要因がハリーの行動に影響を与えているという含みである。この含みは be going to では表わすことができない be to の意味特徴であり、(9) の文脈に適している意味であることがわかる。もう一例、小説から引いてみよう。

(10) 'M. Poirot, he's explained to you how it was.' She broke from French into English. 'I was scared—absolutely dead scared, you understand. It had been so awful—that time—and to have it all raked up again. And to be suspected and perhaps thrown into prison. I was just scared stiff, M. Poirot. Can't you understand at all?' … Poirot looked gravely at her. 'If I ***am to*** believe you, Madame—and I do not say that I will not believe you—then you must help me.' 'Help you?'
(Agatha Christie, *Murder on the Orient Express*)

(10) は、エレナ夫人が探偵ポアロによってかけられた殺人の疑惑を晴らすために潔白であることを懸命に説明する場面である。その返答として、ポアロは「私があなた方を信じるためには、捜査に協力していただかねばなりません」と伝える。(10) には興味深い点が 2 つある。

1 つは、「if + be to」が一人称単数主語 (I) をとっていることである。この「if + be to」を主語の純粋な意志として解釈すると語用論的に不自然であろう。なぜなら、自分が真に何かをしたいと望むのなら、条件化することもなく直ぐに行動に移すことが一般的であるためである。2 つ目は、if 節内の主語 (I) と帰結節での主語 (you) が不一致なことである。(10) の例では、主語 (I) であるポアロが「信じるためには」と自らの意志を条件化しているにもかかわらず、その帰結節では他者であるエレナ夫人ら (you) に「協力していただかねばなりません」と義務を課している。もしポアロが真に彼女らを信じたいと望むのなら、その帰結節で他者に義務を課す必要はない。そのため、「if + be to」が表わす「目的・意図」には、ポアロの意志以外に他の要因（ここでは、エレナ夫人らが自らの潔白を信じてほしいという（ポアロにとっての）第三者の意志）が関与していると考えるのが自然である。そのように解釈すれば、自らの意志を条件設定し、その帰結節で他者に義務を課すことに語用論的な情報伝達価値が生まれるからである。

以上の考察から、「if + be to」が表わす「目的・意図」とは、主語の意志として解釈されるのが一般的であるが、その根幹には第三者の関与による未来の状況や出来事へと主語が導かれることを前提とした目的・意図である。そのため、「if + be to」で表わされる意志は、100% 純粋に主語の持つ意志とは限らない場合がある。もちろん、主語と第三者の意志が一致することによって純粋に主語の意志を表わすこともある。このような意志の所在における解釈の余地は、「if + be going to」や他の類似表現（in order to, intend to など）には含意されない「if + be to」の占有的な意味特徴といえる。

4. if 節内の未来表現：単純未来

これまで「if + be to」が表わす意志未来について考察したが、ことはそれほど単純なものではない。なぜなら、if 節内の be to は「目的・意図」以外の意味も表わすからである。Close (1975[3]: 259) は、「be to は現在の「計画」などを強調する場合には、if 節で自由に用いることができる」と説明し、「if + be to」が「予定」を表わす次の例を挙げている。

(11) If the Prime Minister ***is to*** speak on the television tonight, I suppose that means there's another crisis.［予定］ (Close (1975[3]: 259))

なぜ、will とは異なり、if 節内で be to が単純未来を表わすことができるのであろうか。その理由は be to の原義に求められる。be to の原義とは「…の方向に向かって（TO）存在する（BE）」である。したがって、be to は、その形態から、「存在（be）」を断定的に述べる（つまり、モーダルが指標されていない）ため、if 節内の出来事を事実になるものとして条件設定することができる。これは、「推量」を表わす be going to が if 節内で用いられることとパラレルである。次の (12) を見られたい。

(12) a. If I ***am going to*** be late, I'll call you. (Coates (1983: 202))

b. "If it'***s going to*** happen, it'll happen. Fate will find you."

(Sidney Sheldon, *A Stranger in the Mirror*)

c. If they'***re going to*** be pushed around on England's put-in to the scrum they're going to have a very uncomfortable afternoon. (Collins (2009: 146))

Collins (2009: 145) は、will とは異なり、認識的（つまり、推量を表わす）be going to が if 節でも自由に用いられるとしている。その説明原理は、be going to の形態的特徴（「…の方向に向かって（TO）何か事が進行している（GOING）」）に求められるとしている。Coates (1983: 202) は、be going to はその形態（「進行形（going）」）が示すように「顕在する兆候」を断定的に述べるため、認識的用法を if 節でも自由に用いることができると説明する。Wada (2019: 199) も「be going to が表わす推量のニュアンスは顕在する兆候から由来するものであり、あくまで be going to が表わすのは現状に対する断定的な表明である」とする。要するに、形態的な観点から be going to は断定表現であり、if 節内の出来事を事実になるものとして条件設定できるため、意志未来だけでなく単純未来も表わすことができると説明される。この説明原理は be to にも適応されるものである。なぜなら be to と be going to とはともにモーダルを指標しない形態的特徴を共有しているからである。

しかし、共通項はあるものの「if + be going to」と異なり、「if + be to」は単純未来を表わしにくい表現形式といえる。[4] 実際、BNC を調査した結果、「if + be to」の用例 1633 例のうち、明らかに「目的・意図」を表わす用例の割合は 7 割以上 (1180 例) を占める。一方で「予定」などの意味を表わすのは 2 割以下であった。J. R. R. Tolkien の長編小説 The Lord of The Rings 全 3 作品でも、同様に単純未来を表わす用例は約 2 割 (3 /13 例) である。また、J. K. Rowling の Harry Potter 全 7 作品では、用例総数 4 例のうち、「予定」などの意味を表わす用例は確認できなかった。では、単純素朴な疑問として、「if + be to」が「if + be going to」と比べて、単純未来を表わしにくいのはなぜであろうか。この問題は be going to と be to との形態的な違いから説明できる。というのも、be to は「…の方向に向かって存在する」ことを表わすにすぎないが、be going to は「…の方向に向かって何か事が進行している」と発話時以前から顕在する兆候を表わす。その分、if 節内の発話時における生起可能性を表わすのは be going to の方が適しているといえる。[5]「if + be to」が「予定」などの意味より「目的・意図」を表わす傾向にあるのはこのためでもある。

4.1. if 節内の be to :「運命」「命令・義務」「可能」

be to の振る舞いは主語や動詞、共起する副詞語句、および文脈などの要素が加わることにより導き出される語用論的な意味である (cf. 佐藤 (2020: 20f.))。「if + be to」は文脈に応じて、「予定」をはじめ、さまざまな意味を表わすことができる。実例を見てみよう。

(13) a. Blore said deliberately: ‘It wouldn’t be the first you’ve made—if that gramophone record ***is to*** be believed!’［可能］ (Agatha Christie, *And Then There Were None*)

b. “Whether you like it or not, I will examine your symptoms and treat you for them.” He looked at me with venomous eyes. “If I ***am to*** have a doctor whether I will or not, let me at least have someone in whom I have confidence,” said he.［命令・義務］ (Arthur Conan Doyle, *His Last Bow*)

c. ‘Margaret, if I can get better, —if God lets me have a chance of recovery, it must be through seeing my son Frederick once more.’ ... ‘And, Margaret, if I ***am to*** die—if I am one of those appointed to die before many weeks are over—I must see my child first.’［運命］ (Elizabeth Gaskell, *North and South*)

(13a) はある事件について、元警官のブロアが（「よもやあのレコードが信じられるものなら、あなたは初犯ではないということではないか」）とアームストロング医師に疑念を抱く場面である。(13b) は医師であるワトスンに（「僕の意志と関係なく、診察を受けなければならないのなら、僕が信用できる者を頼む」）とホームズが皮肉を言う場面である。そして、(13c) は余命いくばくもない母が（マーガレット、もし私が死ぬ運命にあるのなら、最後に一目息子に会いたいわ）と切なる想いを口にする場面である。[6] (13a) のように無生主語をとる場合、(13b) のように意志の否定を表わす副詞相当語句と共起する場合、そして、(13c) のように一般に人間が制御できない動詞と共起する場合は、基本的に意志として解釈されない。この場合、(13) のように、その文脈に適した be to の各用法（「運命」など）が用いられる。

しかしながら、念押しておくと、「if + be to」は「目的・意図」を表わすことが圧倒的に多い。この傾向は、形態的観点から be to は断定表現ではあるが、意味的観点から「運命」「予定」「命令・義務」「可能」は未来性（事態生起の見込み）のニュアンスを含むものとして解釈されることが原因であると考えられる。これは be going to が形態的には断定表現であるにもかかわらず、意味的には「推量」として解釈されるメカニズムと軌を一にするものである。この未来性のニュアンスは、be to が表わす「目的・意図」にも含まれる。しかし、if 節内では、未来性（つまり、認識的要素）を帯びるものは用いられにくい一方で、意志は無条件で用いられる。意味の観点から「if + be to」は意志未来（「目的・意図」）に傾斜しやすいといえる。

以上、「if + be to」は「目的・意図」をはじめとして「運命」「予定」「命令・義務」「可能」というさまざまな意味で用いられることを確認した。「if + be to」の表わす意味は、be 自体がモーダルを指標するものではないという「be to の形態的特徴」と「if 節内には話し手の推量（認識的要素）は入り込みにくい」という観点から統一的に説明されるものである。

5. 仮定法用法としての「if + were (was) to」

仮定法用法としての「if + were (was) to」には、直説法用法としての「if + be to」の場合とは異なり、「目的・意図」を表わす例が一般的な文法書には見られない。次の例が「if + were to」の典型例である。

(14) a. What would happen if we ***were to*** lose the secret of making fire?
b. If all the Antarctic ice ***were to*** melt, the level of the seas would rise to drown most of the seaports of our planet. (a-b: 江川 (1991[3]: 257))

上の例に見るように、仮定法用法としての「if + were to」は未来の仮定としてその実現性が「限りなくゼロに近い（がゼロではない）」とする話者の査定を表わす (cf. 吉良 (2023: 5))。Jespersen (1933: 203) も同様に「if + were to」に対して、本来 be to の持つ「予定」や「義務」などの意味が消失しており、未来に対するわずかな可能性 (‘a vague possibility’) を表わすとしている。Declerck (2010: 288) も仮定法過去の文に ‘were to’ を挿入することで、事態生起が不可能というわけではないが、かなり起きそうもない (‘as not impossible but rather unlikely’) という含みをもつとコメントしている。このことから「if + were to」が表わす話し手の査定はゼロではないが限りなく低いものであるといえる。この査定の低さは、同じく未来についての仮定を表わす「if + should」と比較・対照をすることでより明らかなものとなる。

(15) a. If I ***should*** fail, I {*will /would*} try again.
b. If I ***were to*** fail, I {**will /would*} try again. (a-b: 江川 (1991[3]: 258))

(15) からわかる通り、「if + should」(= (15a)) の帰結節では '*will /would*' のどちらも容認されるのに対して、「if + were to」(= (15b)) の帰結節には '*would*' しか容認されない。さらに、「if + were to」は通例、「命令文」を続けることはない (cf. 江川 (1991[3]: 258))。これは、自らが限りなく起こらないという内容を仮定しておきながら、「もしそれが起こったら、何かしろ」と命令をすることはふつうしないためであろう。この言語事実は、仮定法用法の中でも「if + were to」が表わす話し手の査定は極めて低いことの証左といえる。このことから、仮定法用法としての「if + were (was) to」が「目的・意図」を表わしにくい理由が理解されよう。つまり、その理由は、「if + were to」が表わす「査定の低さ」にある。話し手本人がありえない（ほぼゼロ）と捉える仮定に意志（「目的・意図」）を含ませたりすることはしないためである。また、仮に意志を含ませたとしても、事態実現に対する意志が限りなく低い仮定に基づく帰結節での主張に、語用論的な情報伝達価値はないためともいえる。次の (16) を見られたい。

(16) a. Perhaps it would be helpful if I ***were to*** say something. (Leech (2004[3]: 123))
b. If I ***were to*** let you know about it, you'd be amazed. (杉山 (2022: 299))

(16a) の場合、「何かを言う意志が限りなく無い」('were to say') のであれば、「その発言が役に立つだろう」('would be help') と発話すること自体が意味を成さない。そのため、(16a) は意志を含まない純粋な仮定を表わしていると解釈されるものであろう。(16b) のように、「if + were to」が意志を表わすことはごく稀にあるが、それは「査定の低さ」を利用した礼を失する表現といえる。話し手本人が「知らせるつもりは毛頭ない」('were to let you know') にもかかわらず、「それを知ったら驚くだろう」('you'd be amazed') という発話は、「言う気がないのなら、そのような発言などしなくてもよいではないか」というような聞き手にとっては好ましくない、不愉快な発言となるからである。談話の観点から、「if + were (was) to」は、ふつう、意志を表わさないと結論づけられる。とりわけて、一人称主語の場合にはその傾向にある。

6. 結論

「if + be to」が「目的・意図」を表わすのは、if 節内には、話し手の推量は入り込みにくいという規則に求められる。すなわち、if 節内の未来表現 (will, be going to) が意志を表わすという言語事実の類推であると結論づけた。また、「if + were (was) to」が「目的・意図」を表わしにくいのは、「限りなくゼロに近い可能性」といった話し手の「査定の低さ」に求められる。意志（「目的・意図」）が限りなく無いと自らが捉える仮定に基づく帰結節の主張には語用論的な情報伝達価値はないためとした。

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注

[1] Declerck (2010: 286f.) は「if + be to」が必ずしも有生主語をとるわけではないことから、「願望」(‘Desirability’) という用語を用いてその意味特徴を説明している。

[2] Comrie (1982: 148) は次のようにコメントし、if 節内での認識的 will 使用を容認している。いわゆる、‘オウム返し条件文’である。

(i) If he *won't* arrive before nine, there's no point in ordering for him. If the proposition ‘He won't arrive before nine’ had not been contextually given, then the Future Indicative would have been impossible.

[3] Declerck (2010: 271) は、be to は ‘necessity’（「必然性」もしくは「必要性」）を表わす表現としている ‘*be to* is primarily a modal auxiliary expressing the necessity of future actualization of the residue-situation’。

[4] be to が表わす未来は、be going to とは異なり、人間が自制可能 (self-contrable) な出来事でなくてはならないという使用上の制約がある (cf. Close (1975[3]: 259))。

(i) a. The happy couple *are to* spend their honeymoon in New Zealand. (江川 (1991[3]: 320))
b. *It *is to* rain tomorrow. (柏野 (2019: 79))

しかし、この制約は主に be to が「予定」や「義務」を表わす場合に適応されるものとされている (cf. 柏野 (2019: 79))。これは語用論的な情報伝達価値を保つためであろう。「予定」であれ「義務」であれ人間が自制可能な出来事でなければ、それを発話すること自体が意味を成さないからである。「運命」のような神が関与する場合は、この制約が適応されないことがその証左となる。

(ii) ‘It *is to* rain tomorrow’ said the fortune teller.［運命］ (Goldberg and Auwera (2012: 114))

[5] この傾向は、if 節内の推量を表わす will と be going to でも同様の傾向が見られる。Quirk et al (1985: 1009) は the simple present（つまり、推量を表わす will）よりも be going to を用いる方がふつうであると述べ、次のような例を挙げている。

(i) a. If the game {*won't* /*is not going to*} be finished until ten, I'll spend the night at your place.
b. If we definitely {*won't* /*aren't going to*} win, should we bother you play?

Declerck (1991: 426) も「そのような if 節では、一般に be going to の方が will よりも好まれる」(‘*be going to* is generally preferred to *will*’) としている。要するに、if 節内の発話時における生起可能性について言及する場合、すべての未来表現の中でも、発話時以前から顕在する兆候を表わす be going to がその本来的な持ち場であるといえる。

[6] 本来、be to が「運命」を表わす場合は、主に過去時制（いわゆる、過去から見た未来）で用いられる (cf. Quirk et al. (1985: 59)。これは過去の事実とは異なり、自己制御できない未来の事態生起をふつうは知り得ない（be to を用いて、断定的に表明できない）からである。

(i) He *was* eventually *to* end up in the bankruptcy court. (Quirk et al. (1985: 59))

とはいえ、「未来の出来事が確実に起こる」と話し手が確信しているのであれば、現在時制での *be to* が「運命」を表わすことに問題はない (cf. 柏野 (2019: 79))。

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コーパス

British National Corpus (BNC)

埋め込み節のムードとトコロ節の意味論*

（Embedded Moods and the Semantics of *Tokoro*-Clauses）

山田 彬尭（Akitaka Yamada）
大阪大学（Osaka University）

キーワード：Embedded Mood, 形式意味論, コーパス分析, Grammatical Replication

1. はじめに

近年の意味論の研究では、接続法／直説法の選択を代表に、埋め込み節のムードの研究が進み、その選択条件についての個別言語間変異に注目が集まっている（Farkas 1992; Villalta 2000, 2006, 2008; Giannakidou 2009; Portner 2018; Faulkner 2022）。日本語は、動詞の屈折ではなく、ト／コト／ノといった補文標識によって、埋め込み節のムードがマークされ、どのような主節動詞がどの埋め込み節を選択するのかについて研究が蓄積されている。とりわけ、研究者の関心を集めてきたのが、コト／ノ節の確率的な交替である。ノ節が具体的な事象を、コト節が抽象的な命題を指すという傾向が指摘され、この一般化から、(1)に示すような知覚動詞でコト節の容認度が低いという事実が説明されてきた（Josephs 1976; Kuno 1973; 橋本 1990; 野田 1995; Yamada 2018; Yamada and Kubota 2018; *cf.* Sode and Sugawara 2023）。

(1) 彼女が宝物を隠した｛の／?*こと｝を目撃した。

一方で、ノ節同様、知覚動詞との親和性の強いトコロ節が、どのようにノ節と使い分けられているのかという点については詳細な検討がなされておらず、(2)の差異については未解明な点が多い（*cf.* Ikawa et al. 2022）。

(2) 彼女が宝物を隠した｛の／ところ｝を目撃した。

そこで、本研究では、第一に、言語テストを用いた定性的な検証から補文の位置に生起するトコロ節の意味論についての仮説を提示し、続いて、第二に、BCCWJ を用いたコーパスの調査から、ト、コト、ノ、トコロがどのような動詞と結びついているのかという大局的な選択傾向を明らかにし、第三に、提示された仮説がデータと整合的であることを指摘した上で、最後に、少数の特異的なトコロ節の使用を指摘する。

なお、トコロを用いる構文には「私がいたところでどうにもならない」「ちょうど今着いたところだ」のようなものも存在するが、補文節を作らないこれらの用例については、本稿では扱わない（寺村 1978; 田窪・笹栗 2002; 田窪 2006, 2018; Takubo 2011）。

2. データ

2.1. 二種類のトコロ節

ここまでトコロを用いた節を「トコロ節」と一括りに言及してきたが、トコロ節と呼ぶべき構文には（少なくとも）二つのタイプが存在する（その他のタイプについては後述）。場所を指すもの（= (3)）とそうでないもの（=(4)）である。両者は、「場所」などの名詞で置き換えができるかに違いがあり、本研究では、前者をタイプ A、後者をタイプ B と呼ぶ。

(3) [彼女が宝物を隠した｛ところ/場所｝]を突き止めた。 タイプ A
(4) [彼女が宝物を隠した｛ところ/*場所｝]を目撃した。 タイプ B

この二つのトコロ節の違いは以下のような事実からも浮かび上がる。第一は、ノ節との交替が起きるのかどうか、である。(6)に示すようにタイプ B の「目撃する」の補部に来るトコロ節は、ノ節に置き換えてもそれほど意味に差が生じない。このため、(7)に示すように、P∧¬Q の形式に(6)の文を埋め込むと矛盾した文が成立する。これに対し、タイプ A ではこの特徴は見られない。確かに、(5)の「突き止める」という動詞においても、ノ節の生起自体は可能である。しかし、(5)のノにアスタリスクがついているのは、このノがトコロの意味で使うことができないためである。すなわち、(7)と同じように P∧¬Q という形式を作成しても、文全体は矛盾したものにはならない。これを示したものが(8)である。

(5) [彼女が宝物を隠した｛ところ/*の｝]を突き止めた。 タイプ A
(6) [彼女が宝物を隠した｛ところ/の｝]を目撃した。 タイプ B
(7) *[$_P$ 彼女が宝物を隠した<u>の</u>は目撃した]が、[$_Q$ 彼女が宝物を隠した<u>ところ</u>は目撃してい]ない。
(8) [$_P$ 彼女が宝物を隠した<u>の</u>は突き止めた]が、[$_Q$ 彼女が宝物を隠した<u>ところ</u>は突き止め（られ）てい]ない。

これは、P と Q が指す意味内容が異なることを示している。「突き止める」に共起するノは(9)が矛盾律となることから「場所」ではなく「事実」を表すものだと考えられる。一方「突き止める」と共起するトコロは「事実」の意味で使えない。これは、(10)の文から示される。

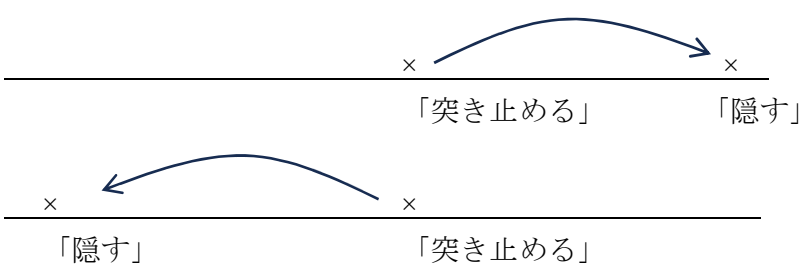
(9) *[$_P$ 彼女が宝物を隠した<u>の</u>は突き止めた]が、[$_Q$ 彼女が宝物を隠した<u>事実</u>は突き止め（られ）てい]ない。
(10) [$_P$ 彼女が宝物を隠した<u>事実</u>は突き止めた]が、[$_Q$ 彼女が宝物を隠した<u>ところ</u>は突き止め（られ）てい]ない。

第二に、二つのトコロ節は時制の使用についても違いを見せる。下記の例文を見られたい。

(11) a. [彼女が宝物を隠す ｛ところ/*の｝]を突き止めた。 タイプ A
b. [彼女が宝物を隠した｛ところ/*の｝]を突き止めた。
(12) a. [彼女が宝物を隠す ｛ところ/の｝]を目撃した。 タイプ B
b. [彼女が宝物を隠した｛ところ/の｝]を目撃した。

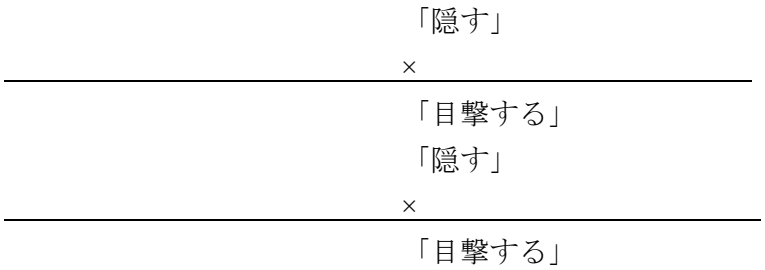
タイプ A、すなわち、(11)の文では、ル／タ形の違いが、主節に対し埋め込み節の出来事が先行／後行するのかを意味する。これを図示したものが(13)である。ル形が使われた場合、「突き止める」出来事が起こった時点において「隠す」出来事は未然的であるのに対し、タ形が用いられた場合「突き止める」出来事が起こった時点ですでに「隠す」事象は成立している。

(13) タイプ A



一方で、タイプ B においては、ル形でもタ形でも意味に大きな差はなく、どちらも「隠す」出来事と「目撃する」出来事の間に時間的オーバーラップがあることが示される（= (14)）。

(14) タイプ B



だが、両者が完全に同一だというわけではない。タ形では「隠す」出来事が終了する（＝隠しきる）ところまでが含意されるのに対し、ル形では「隠す」出来事の途中であってもかまわないというニュアンスの差が存在する。しかし、いずれの場合であっても、この差は、先行／後行関係を明確に表示する(13)に見た差とは大きく性質の異なるものである。

2.2. タイプ B のトコロ節とノ節の違い

このようにタイプ A とタイプ B のトコロ節には質的に大きな差が存在する。「場所」という名詞で置き換えられるのかという違いを踏まえると、タイプ A のトコロ節は、トコロ（場所）を修飾する主要部外在型の関係節であり、タイプ B は、ノ節同様、主要部内在型の関係節なのだ、と対比的に捉えることが妥当であろう。

とはいえ、ノ節とタイプ B のトコロ節では以下の点で相違点が存在するという点については注意が必要である。(15)を見られたい。

(15) a. ライオンは[獲物が動かなくなるところ　]を狙っている。
　　b. ライオンは[獲物が動かなくなる　の　　]を狙っている。　　主要部内在型
　　c. ライオンは[[　e_i　動かなくなる] 獲物$_i$　]を狙っている。　　主要部外在型

(15)a/b のうち、(15)c と意味的に交換可能なのは(15)b のノ節だけである。(15)a では、獲物が一時的に動かくなる一時的な状態が狙われている。例えば、獲物であるシマウマが、一時的に睡眠をとるために横になっている状況などが想定される。あくまで、一時的に動かなくなることが求められるので、その後、睡眠から覚めたシマウマが再び活動的になることがあってもかまわないという含意がある。

これに対して、(15)b では、(15)c がそうであるように、獲物が動かなくなる状態が完了することが求められる。例えば、老いたり、傷ついたりしたシマウマが絶命するのを待っているという場面で用いられ、上記に述べた一時的に動かない状態になるというような場面では使いにくい。

トコロ節で一時性が必須である点については、トコロ節は「永遠に」という副詞と共起することができないことからも確認できる。

(16) a.*ライオンは[獲物が永遠に動かなくなるところ]を狙っている。
　　b. ライオンは[獲物が永遠に動かなくなる　の　]を狙っている。

3. 分析

Obviation Effect やコト節とは異なる具体性などのノ節の特徴を捉えるために、先行研究では、ノ節は命題ではなく、事象の集合を表すという分析が提案されている。例えば、Yamada (2018)の分析に従えば、(4)のノ節は(17)のように分析される（簡便性を優先し、時制についての取り扱いは無視することとする）。

(17) $[\![\text{彼女が宝物を隠したの}]\!] = \lambda e.\lambda w.hide(e,w) \wedge AG(e,w,\text{彼女}) \wedge PAT(e,w,\text{宝物})$

このノ節の分析を下敷きに、トコロ節の意味論を考えたい。第一に、2 節で論じられたトコロ節の一時性という意味が、at-issue 的な意味であるのかどうかについて議論することにしよう。そこで、トコロ節の持つ一時性という意味が、主節が否定文であっても保持されるか否かを調べるために、下記の例を見られたい。

(18) ライオンは[（*永遠に）獲物が動かなくなるところ]を（は）狙わ<u>ない</u>。
(19) 「ライオンは獲物が動かなくなる瞬間を狙っており」、かつ、「[獲物が動かなくなる前後に獲物が動く状態が存在する]わけではない」
(20) 「[ライオンは獲物が動かなくなる瞬間を狙っている]わけでなく」、かつ、[<u>獲物が動かなくなる前後に獲物が動く状態が存在する</u>]

一時性が at-issue 的意味であり、したがって否定オペレータと相互作用を持つのであれば、(18)は(19)という読みを持ち得るという予測になる。しかし、(19)の読みを意図して(18)を使うことはできず、(18)は(20)を意味することになる。ここから、「獲物が動かなくなっていない状態が、動かなくなっている状態の前にも後ろにも存在する」という情報は否定のスコープには入らないことが分かる。

この一時性が会話の含意によって成立しているとも考えにくい（この一時性に関係する合

理的な格律を想定できない）ことも踏まえると、この(20)の下線部の意味は、前提（Karttunen 1973）や慣習的含意（Potts 2005, 2015）として先行研究で扱われてきた意味として扱われることが妥当であろう。ここでは、(21)に見られるように、この一時性という意味が他の前提表現と同じく Plug predicate（Karttunen 1973）によってキャンセルされる性質のものであることを根拠に、前提的意味として分析を行い、トコロ節に対して(22)に示した意味論を提案する（ただし、前提と慣習的含意の違いは研究者によって異なることから詳細については今後の研究に委ねたい）。■の後ろの意味が「e が存在量化を受けた時点で前提として生じる意味」であり、at-issue 次元とは明確に区別されている。

(21) [田中さんが[シマウマが動かなくなるところ]を見たと] 山田さんは報告していたが、その獲物は一度として動かなくなることはなかった。

(22) ⟦彼女が宝物を隠したところ⟧ （Version 1 out of 3）

$$= \lambda e.\lambda w.hide(e,w) \wedge AG(e,w,\text{彼女}) \wedge PAT(e,w,\text{宝物})$$

■eは「宝物を隠す動作が行われた瞬間」である。

第二に、より具体的に■の後ろの意味がどのように定式化できるのかを考えたい。ここでは、時間幅（time interval）によって時間を捉える枠組み（Dowty 1979, Ogihara 1996, 2011)に倣い、イベントが生じる瞬間というものが(23)のように捉えられるという直観を基に、(24)の分析を提案する（I は事象を取って時間幅を返す関数である）。

(23) eは「宝物を隠す動作が行われた瞬間」= eが生じる前の時間幅では宝物を隠す動作は行われておらず、eが生じた後の時間幅でも宝物を隠す動作は行われていない。eが生じている時間幅では宝隠しが実行されている。

(24) ⟦彼女が宝物を隠したところ⟧ （Version 2 out of 3）

$$= \lambda e.\lambda w.hide(e,w) \wedge AG(e,w,\text{彼女}) \wedge PAT(e,w,\text{宝物})$$

$$\blacksquare \forall e'.\forall e''.\begin{bmatrix} I(e') \prec I(e) \prec I(e'') \\ \wedge \neg[hide(e',w) \wedge AG(e',w,\text{彼女}) \wedge PAT(e',w,\text{宝物})] \\ \wedge \neg[hide(e'',w) \wedge AG(e'',w,\text{彼女}) \wedge PAT(e'',w,\text{宝物})] \end{bmatrix}$$

しかし、この(24)の前提の記述では今回の宝隠しの事象以外、「彼女」はそれまで、そしてその後の人生一度も宝物を隠すことがないという強い意味になってしまう。そこで、コンテクストで考えられている時間幅 $\mathbb{I}$ を設定し、(24)に登場する時間幅がすべてこの $\mathbb{I}$の中の部分集合であるという条件を追加する。これが、(25)に示した分析である。

(25) ⟦彼女が宝物を隠したところ⟧ （Version 3 out of 3）

$$= \lambda e.\lambda w.hide(e,w) \wedge AG(e,w,\text{彼女}) \wedge PAT(e,w,\text{宝物})$$

$$\blacksquare \forall e'.\forall e''.\begin{bmatrix} I(e') \prec I(e) \prec I(e'') \\ \wedge I(e') \subset \mathbb{I} \wedge I(e) \subset \mathbb{I} \wedge I(e'') \subset \mathbb{I} \\ \wedge \neg[hide(e',w) \wedge AG(e',w,\text{彼女}) \wedge PAT(e',w,\text{宝物})] \\ \wedge \neg[hide(e'',w) \wedge AG(e'',w,\text{彼女}) \wedge PAT(e'',w,\text{宝物})] \end{bmatrix}$$

	こと	の	とところ		合計
思う	35	3	41,435	1	41,474
言う	789	2	16,157	4	16,952
⋮	⋮	⋮	⋮	⋮	⋮
聞く	139	71	923	4	1,137

表 1 粗頻度表

	こと	の	とところ	
思う	0.1%	0.0%	99.9%	0.0%
言う	4.7%	0.0%	95.3%	0.0%
⋮	⋮	⋮	⋮	⋮
聞く	12.2%	6.2%	81.2%	0.4%

表 2 相対頻度表 I

	こと	の
思う	91.2%	7.9%
言う	99.7%	0.3%
⋮	⋮	⋮
聞く	66.2%	33.8%

表 3 相対頻度表 II

4. コーパスによる検証

上記の分析が正しければ、トコロ節の使用に関して以下の予測が立ち上がる。第一に、タイプ A については、場所目的語を取る動詞との共起が強いということが予想される。第二に、ノ節との共通点として、タイプ B のトコロ節は、事象を補文に取る動詞との共起頻度が高くなるはずだという予測が立ち上がる。一方で、（世界の集合（命題）を表すとされる）コト節と共起する動詞とは共起をしないだろうとも予測される。第三に、ノ節との違いとして、タイプ B のトコロ節は「狙う」に代表されるような事象の一時性を強く前提とする述語とより強く共起することが予想される。そこで、これらの予測が正しいかどうかを検証するために、BCCWJ から下記のフォーマットで指定される検索式を用いて、用例を採取し、コーパスにおける頻度が 30 以上の動詞について、その分布を観察することとする。

(26) [動詞 / 形容詞 / 助動詞] [と / こと(を) / の(を) / ところ(を)] (は) $\boxed{\text{動詞}}$ (ている)(ます) [(ん) / (ない)] (です)(た) 補助記号

4.1. 確率単体における分布

コーパスにおける検索の結果、私たちは表１に示すような粗頻度表を作成することができる。それぞれの動詞によって総頻度数が異なるため、比較可能性を高めるため、割合を計算したものが相対頻度表である。ただし、相対頻度表に生じる値は、列にどのような環境（今回のケースでは補文標識）を入れるのかによって変化する。例えば、表２はコト節、ノ節、ト節、トコロ節の四種類を比較して作成された相対頻度表であり、図３はコト節、ノ節のみに焦点を当てた時の相対頻度表である。表２では「思う」がコト節を取る割合は 0.1%となるが、表３ではト節が含まれていないため 92.1%という高い値となる。

この相対頻度をプロットすることを考える。第一に、コト節とノ節の二つしか検討しないような場合は、x 軸にコト節の割合を、y 軸にノ節の割合とし、各主節動詞の位置を丸で示すと、図１のような結果が得られる。ここで注目されるのは、データが、一直線すなわち一次元に分布するという点である。これはコト節の割合とノ節の割合を合計すると必ず 1（100%）になるという制約に起因する。

第二に、ト節まで検討対象に入れた場合を図示すると、図２のようになる。三つの節の割合をそれぞれ x 軸、y 軸、z 軸に対応させるため、3 次元空間が出現するが、実際にデータが分布するのは平面（すなわち、2 次元空間）であり、かつ、割合は 0 未満や 1 より大きくなることはないので、実際の分布は正三角形の内側に限られる。

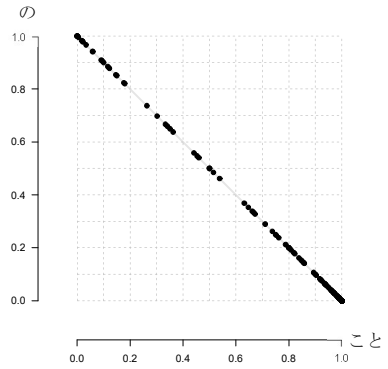


図１ 二変数の確率単体

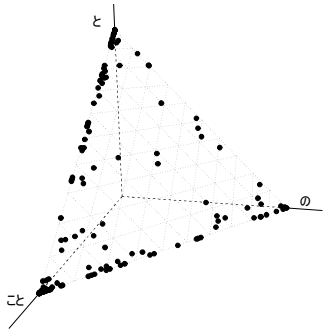


図２ 三変数の確率単体

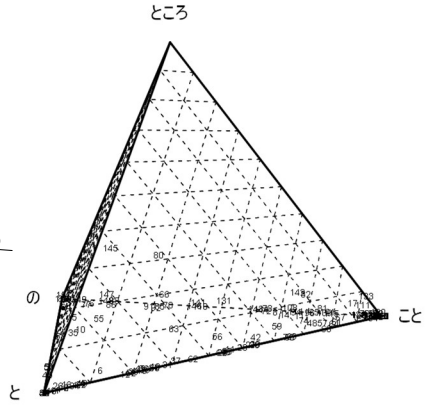


図３ 四変数の確率単体

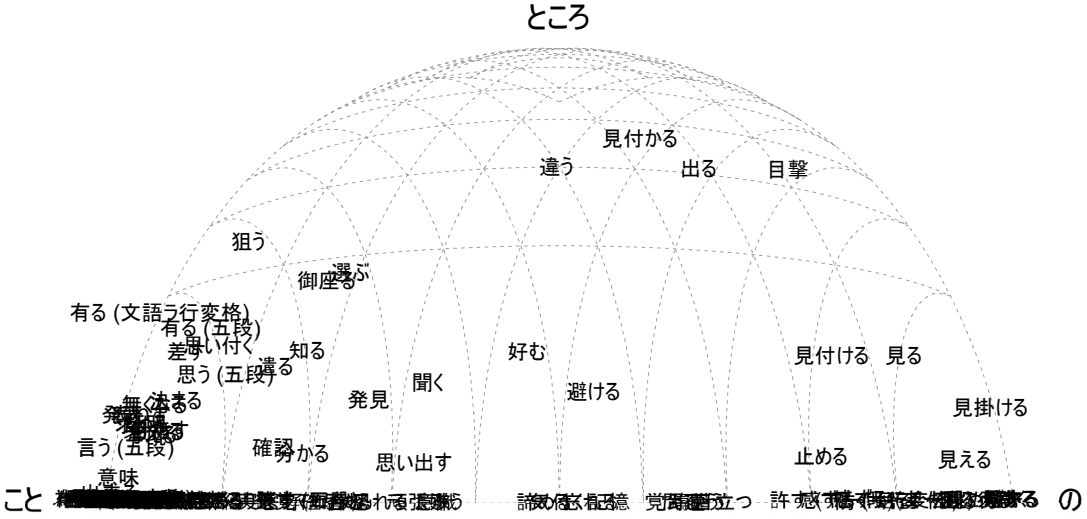


図４ コト節/ノ節/トコロ節を選択する主節動詞

上記三つの節に加え、トコロ節まで対象を広げた場合、それぞれを軸に対応させると 4 次元空間にデータが分布することとなる。しかし、実際には総和が 1 であるという上記の制約が働き、データは 3 次元に分布し、かつ、割合は 0 以上 1 以下という制約から、その分布は、図３に示すような正四面体の内側に限られる。一般に、n 個の表現の比較をする場合には、データは$n-1$次元に分布し、これを（確率）単体（simplex）と呼ぶ。

5 つ以上の表現の場合、図示ができなくなるが、ここでは先行研究で対象とされてきたコト節、ノ節、そして本稿の対象であるトコロ節に限定した三変数の確率単体を考える。可読性を高めるために Hellinger 距離に即して空間を引き延ばした散布図が図４である。

4.2. 解釈

図４の右側に分布しているものはトコロ節を取り、かつ、ノ節の頻度が高く予測通りのふるまいを示す動詞である。一方で、図４の左に分布する動詞はトコロ節の頻度が高く、かつコト節の使用が高いので、一見すると反例に見えるが、その多くが、タイプ A のトコロ節を取る動詞であることが分かる。ここから先に見た第一の仮説は実証的に支持されたと言えよう。第二の仮説についても、「目撃する」に代表されるように一時性といった意味が強く感じ

られる動詞とトコロ節の選択傾向が強く表れていることが浮かび上がっており、提示された仮説はデータと整合的であることが示された。

4.3. 今後の課題

このように大局的な傾向について本稿の分析の妥当性が示された一方で、今後より詳細な検討が求められる事例が二つ存在する。第一は、(27)に示すようなトコロ節である。この用例の「ところ」は「場所」では置き換えられない。また、「場所」は「聴（聞）け」ない。このため、タイプ A ではないと言えよう。しかし、タイプ B とも言い難い。なぜならば、(28)に示すように、このトコロ節を用いた場合、それが指す内容は「言う」事象ではなく、「言う」内容となるからである。ノ節よりもむしろコト節に近い意味が表されている。

(27) a.　[易に問いかけてその言うところ]を聴く　（BCCWJ）
　　b.　[ラボー・サン＝テティエンヌの語るところ]を聞こう　（BCCWJ）
(28) a. 言うのを聞く　⇒　相手が口から音を発しているのを聞く
　　b. 言うことを聞く　⇒　相手が話している内容を聞く
　　c. 言うところを聞く　⇒　相手が話している内容を聞く

籾山 (1992)は、トコロには「空間的範囲」（と「時間的範囲」）だけでなく「抽象的範囲」の拡張用法があることを指摘しており、(27)に該当する例を、タイプ A である場所的範囲用法から意味拡張によって生じた抽象的範囲用法のトコロとして位置づけている。

もちろん、空間的な概念が抽象的概念にメタファー等を通じて拡張することは一般的な意味変化の方向として広く観察されるところではある。しかし、仮にそうならば、(27)の事例が古風なニュアンスを有するというジャンル性を積極的に説明することができない。なぜなら、メタファーによる拡張が、特殊な（非日常的な）ジャンルにだけ限られ、日常的なジャンルではそれが生じなかった、という非常に不自然な予測を行ってしまうためである。

むしろ、この古風なジャンルへの指向性は、この構文が漢文訓読体において発達してきたという歴史的経緯から説明されるべきであろう。漢文訓読の中でトコロ節が登場する場面には二つの類型がある。一つ目は「富与貴 是 [人之 所 欲] 也（『論語』）」等に見る名詞化用法であり、二つ目は、受け身構文である。春秋戦国時代には様々な受動表現が存在していたことが知られているが、その中に(29)a に示すような構文が存在する（唐 1987；椿 2004）。

(29) a. NP_1 [PP 為 NP_2]　V　「NP_1 が NP_2 に V された」
　　（例：当知是人、[為 釈迦牟尼仏]、手摩其頭；『法華経』、椿 2004:2）
　　b. NP_1 [PP 為 NP_2] 所 V　「NP_1 が NP_2 に V された」
　　（例：方術不用、[為 人] 所 疑；『荀子』、椿 2004:3）

戦国時代以降は、受け身であることをより明示的に示すため、動詞の前に「所」を置く(29)b の構文が発達する。すなわち、日本語の*-(r)are* に該当する形態素が動詞の前に出現したものが「所」であると言える。重要なのは、この「所」は、受け身のマーカーであり、「場所」は一切表していないという点である。しかし、これらの文が日本語で訓ずるときには、その漢

字表記が尊重され、「NP2 の V するところとなる」という読み下しが与えられ、形の上では能動文の形でありながら、受動文を表すという捻じれた用法のトコロ節が生まれることとなる。

このように、タイプ C のトコロ節は、メタファーなどによる構文拡張ではなく、外国語との接触や模倣の中で登場した、Heine and Kuteva (2006)の説くところの文法複製（Grammatical Replication）の一つの事例として理解されるべきであろう。

第二に、将来の研究で深められるべき事例として、自動詞述語と共起するトコロ節の存在がある。(30)に示されるように「見つかる」という自動詞は、本来ヲ格を取ることはできない。だが、(31)に示すようにヲ格を伴ったトコロ節とは共起することが可能であり、ノ節にはないトコロ節の独自性が指摘できる。これを、(32)のような付加詞用法のトコロデ節と類似した用法だと考えたくなるかもしれないが、その場合、付加詞が動詞の選択制限とは無関係であることから、意味的な整合性さえあればこのトコロ節はどんな動詞とも生起が可能であるという予測が立つ。だが(31)と(32)の対比が示すように、トコロヲ節はすべての自動詞で容認されるわけではない。このような主節動詞への依存から完全な付加詞とも考え難い。

(30)　私の足{が/*を}　鬼に　見つかった。
(31)　私は、[足がつった{ところ　/*の}] を　（鬼に）見つかった。
(32) a.　私は、[角を曲がった　ところで]、（鬼に）見つかった。
　　b.　私は、[角を曲がった　ところで]、地面に座った。
(33) a.*　私は、[足がつった　ところ　を] 地面に座った。
　　b.*　私は、[足がつった　の　　を] 地面に座った。

本稿の分析ではこのような特定の動詞との結びつきは予測できない。このため、これらの事例は本稿の分析への反例として認知されるべきである。ただし (31)の用法も「永遠に」といった副詞との共起が難しく「一時性」等の本稿の観察が有効な部分もある。これらの点を踏まえ、より精緻な分析が今後の研究に求められてくるであろう。

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descend と ascend の語彙意味論*

（The Lexical Semantics of *descend* and *ascend*）

出水 孝典（Takanori Demizu）
神戸学院大学（Kobe Gakuin University）

キーワード：有方向移動動詞, 様態の未指定, 完結性, 非対格動詞, 事象構造

1. はじめに

本稿では英語の移動動詞のうち下降を表わす descend と上昇を表わす ascend を取り上げ、これらが (A) 有方向移動動詞で経路上の移動方向（結果）のみを語彙化しているため、様態が語彙的に未指定で、文脈からさまざまな様態が想定されること、(B) 「非完結的有方向移動動詞」と呼ばれながらも完結的な用法が見られるのは、経路の範囲が特定されて Tenny (1994)の言う「はかり分け」の解釈が生じている場合であることを主張し、これらの論点を事象構造に基づく語彙意味論によって考察する。

本稿の構成は以下のようなものとなる。初めに 2 節で、動詞 descend と ascend がそれぞれ下方向・上方向への移動を語彙化した有方向移動動詞であるため、移動様態は語彙的に未指定であることを先行研究よりまず概観する。さらに、これらの動詞が用いられた場合、文脈によりさまざまなものが想定されることを、実例を見ながら確認する。続く 3 節では、動詞 descend と ascend は、アスペクト的には完結的・非完結的のいずれの解釈も可能であること、その２通りの解釈が、直接目的語の果たす役割が「はかり分け」なのか、単なる「経路」なのかによって決まることを見ていく。4 節では、Rappaport Hovav and Levin (1998, 2005, 2010)、出水 (2023)で用いられている事象構造鋳型に基づく語彙意味論によって、2 節と 3 節で見た言語事実を説明する。5 節はまとめである。

2. 有方向移動動詞としての動詞 descend と ascend

Rappaport Hovav and Levin (2010: 27)は、有方向移動動詞(Inherently directed motion verbs)の意味的特徴を説明している部分で、動詞 ascend が上方向という移動方向は指定しているが、移動の様態については未指定だとしている。さらに Rappaport Hovav and Levin (2010: 29)で、動詞 descend では経路上の地点が重力の方向（＝下方向）へと順序づけられているのに対して、動詞 ascend では重力に逆らう方向（＝上方向）に順序づけられていると述べている。以上からわかるように、動詞 descend と ascend は、経路上のある方向への移動（位置変化）という結果のみを語彙化し、どのように移動したのかという様態に関しては未指定なのである。

このように経路上のある方向への移動を語彙的意味として含む有方向移動動詞の場合、主語の指示対象には必ず位置変化が生じる。位置変化の必然性に関する判別テストとして

Beavers (2011: 359)が提案しているのが、*ϕ, but x is not somewhere else* is infelicitous if *ϕ* entails that *x* undergoes a non-quantized change along a physical path.（*ϕ, but x is not somewhere else*（ϕだが x はどこか別の場所にいるわけではない）が不適切となるのは、x がある物理的経路に沿った量化されない［＝完結的とは限らない］変化を受けることをϕが含意している場合だ）である。このような言い方が不適切となる場合、x は必ず移動（位置変化）を生じ、動詞がそれを含意（＝語彙化）していることになる。これは以下のように適用される。

移動様態動詞である run や dance は様態を語彙化しており、それ自体が移動（位置変化）という結果を語彙化しているのではないため、次のように言うことができる。

(1) a. John just ran for hours, but he is not somewhere else. (Ausensi (2021: 49))
b. The couples just danced for hours, but they are not somewhere else. (Ausensi (2022: 49))

一方、結果動詞（有方向移動動詞）の典型である動詞 arrive や come の場合、位置変化を語彙化しているため、主語が必ず経路上を移動することになり、この言い方が不適切となる。

(2) a. Sally just arrived (in the UK), #but she is not somewhere else. (Ausensi (2021: 48))
b. Lily just came to Rome, #but she is not somewhere else. (Ausensi (2022: 49))

Ausensi (2021, 2022)はこれを動詞 descend にも適用し、動詞 arrive や come と同じく、この言い方が不適切である以上、動詞 descend も位置変化を語彙化していることを示している。

(3) John just descended (to the cave), #but he is not somewhere else.
(Ausensi (2021: 48, 2022: 47))

なお、動詞 ascend にも同様のことが当てはまると考えられる。

以上で、動詞 descend と ascend が有方向移動動詞であり、経路上の移動（位置変化）を語彙化していることを確認した。続けて、これらの動詞の様態が語彙化されておらず未指定であることを、実例を参照しながら見ていく。

初めに、物が主語の例を、descend, ascend の順で見ていく。

(4) a. … <u>a plane</u> *was descending* slowly, … (P. D. James, *The Lighthouse*: 321)
b. <u>The helicopter</u> … *descended* … (P. D. James, *The Lighthouse*: 135)
c. <u>the balloon</u> which *was* … *descending* more rapidly. (Iris Murdoch, *The Black Prince*: 94)
d. ... <u>the [elevator] car</u> began to *descend*. (Dan Brown, *Angels and Demons*: 53)
(5) a. <u>The plane</u> *ascended* rapidly. (*LDOCE*)
b. "… <u>the Haz-Mat elevator</u> *ascended*. (Dan Brown, *Angels and Demons*: 96)

descend の実例である(4a)の飛行機、(4b)のヘリコプター、(4c)の気球、(4d)のエレベータは下方向への移動を表わすという点で共通しているが、これらに関してふつうに想定される下降の様態、角度はさまざまである。また(5a)(5b)では ascend が使われているが、やはり飛行機と

エレベータでは上方向の移動は共通しているものの想定される上昇の様態はまったく異なる。
次に、人が主語の例を見てみよう。

(6) a. Dashing down the stone ramp that hugged the inside of the wall, Langdon *descended* to the courtyard. (Dan Brown, *Angels and Demons*: 430)

b. He started down the staircase, clumping sure-footed in his too-tight Wehrmacht short leather boots, *descending* to the near end of the dark green carpeted passage. (Irving Wallace, *The Seventh Secret*: 240)

c. Leaving the executive suite, Peter *descended* to the lobby. (Arthur Hailey, *Hotel*: 320)

(7) a. No one else spoke as they *ascended*. And now they were in the bedroom. (P.D. James, *The Lighthouse*: 169)

d. … Claire … entered the elevator, and *ascended* to the top floor. (Bobbie Jean, *Enough with the Secrets (Home to Lake Louise) Book Two*:74, Google Books)

(6)の descend の例はいずれも、下方向の移動によってある場所に行くことを共通して表わしているが、下降の角度は通路などによるし、様態も状況による。(6a)の傾斜路を駆け下りる場合と、(6b)の靴音を立てながら階段を下りる場合では、速度や角度といった様態がまるで異なる。(6c)は上階の事務室を出てロビーにエレベータで降りる場面だが、この場合、移動角度は垂直で速度も速い。したがってこの場合も、下方向の移動は共通しているが、想定される様態は異なる。さらに(7)の ascend の例でも、(7a)は文脈から階段を上がっている場面だと解釈されるが、(7b)ではエレベータによる上昇で、移動の角度も速度も異なっている。

動詞 descend や ascend には、経路を直接目的語として明示した他動詞用法もあるが、やはり移動方向のみが指定されており、様態は未指定のためさまざまである。

(8) a. Vogel cautiously *descended* the dirt mound to a stretch of grassy field on one side. (Irving Wallace, *The Seventh Secret*: 110)

b. … Langdon *descended* the ladder. (Dan Brown, *Angels and Demons*: 335)

(9) a. He *ascended* the path in the quarry, noticing once more the beauty of the scene. (Agatha Christie, *Hallowe'en Party*: 261)

b. Without conversation, Quaratone *ascended* the stepladder … (Arthur Hailey, *Hotel*: 286)

土の塚を下ることを表わす(8a)や、石切り場の小道を上ることを表わす(9a)では、移動様態はゆっくり歩くというもので、移動角度はそれほど急ではない状況が想定されるが、(8b)(9b)のような梯子や脚立の上り下りでは、手足を使いながらという様態で急角度の移動をおこなうことが読み取れる。

以上で動詞 descend と ascend は移動方向のみを語彙化しており、移動様態は未指定で状況ごとにさまざまであることが、英語小説の実例を検討することを通して確認できた。

3. 動詞 descend と ascend の完結性と他動詞用法

動詞 descend と ascend は、アスペクト的には完結的・非完結的のいずれの解釈も可能であ

るとされる。Levin and Rappaport Hovav (1995: 172)は、動詞 descend を rise や fall と共に非完結的な有方向移動動詞(atelic verbs of inherently directed motion)と呼び、ある終結点への到達を必ずしも含意せず、ある方向への移動を記述するものだとしている。さらに、Rappaport Hovav (2014: 272-273)は、rise, fall descend, ascend, drop, lower のような動詞を縦軸上の移動(motion along a vertical axis)を表わす動詞としてまとめ、移動方向が動詞によって完全に決定されているため、移動方向を表わす前置詞なしで生起するものだとしている。興味深いのは、上方向は無限に想定できるが、下方向は地面などの最下部を想定しやすいので、上方向の移動を表わす動詞が非完結的、下方向の移動を表す動詞が完結的となる傾向は見られるが、いずれの解釈も可能なので、これらの動詞が語彙的に完結性を指定しているわけではなく、単なる典型性の問題だと述べていることである。動詞 descend に関しては、完結的、非完結的両方の読みをもつ有方向移動動詞の例として、Walková (2017: 604)が以下のような Vendler (1957)以来用いられている、動詞の完結性に関する判別テストの結果を示している。

(10) The climber descended for/in a few hours. (atelic/telic)

ただし、for 句と in 句の場合でどのように解釈が異なるのかについては何も言っていない。

この種の descend/ ascend (the mountain) for/in …という用例を実際にインターネット上で検索すると、解釈に大きな違いが見られる。for 句を取った場合、登山道の一部を下ったり上ったりする解釈がほとんどであるのに対して、in 句を取った場合、ふもとまで下山したり頂上まで登山した解釈がふつうである。これに関して、以下のような用例のインフォーマント調査をおこなった。[1, 2]

(11) a. The climber descended (the mountain) {?for three hours/ in three hours}.
b. The climber ascended (the mountain) {?for three hours/ in three hours}.

このインフォーマントにとっては、the mountain という目的語の有無に関わらず、for 句はやや不自然で、in 句は完全に容認できるという。解釈に関しては、for 句を付けて解釈するとすれば、山の一部を下りたり上ったりする解釈になるが、in 句の場合、ふもとまで下山したり頂上まで登山した解釈となる。興味深いのは、動詞 ascend の場合、in 句であっても途中まで上ったという解釈が可能だと判断している点である。これはまさに、上方向は無限に想定できるため複数の到達地点が想定可能であるのに対して、下方向は地面などの最下部を唯一の到達地点だと想定するという、上で見た Rappaport Hovav (2014)の指摘する事実の、完結性以外の点における反映だと考えることができる。

では、完結的な解釈はどのように生じているのだろうか。Rappaport Hovav (2014)は完結性が語彙的に未指定で、単なる典型性の問題だとしているが、Levin and Rappaport Hovav (1995)のように非完結的であるのがデフォルト的で、完結的な場合は尺度に何らかの仕組みによって終結点（有界性）がもたらされたのだと考えることもできる。以下ではその方向性を探ってみたい。

Kennedy and McNally (2005: 362)は、Max descended the staircase.における動詞 descend は、直接目的語が定義する経路に沿って、主語が漸増的に移動することを含意するとしている。こ

れは Tenny (1994: 100)が John climbed the mountain.の the mountain が有するとしている、「はかり分け」(MEASURE)というアスペクト役割に相当するものである。ここで言う「はかり分け」というのは、単なる「着点」（＝移動先、経路の終点）ではなく、これ自体が尺度と終了点の両方を定めているということだ。つまり山の麓から頂上までの登山ルート上の位置が事象の進行する尺度になっていて、なおかつ頂上という尺度の端が事象の終了点を定めているのである。この場合、事象の解釈は完結的になる。

一方、同じ直接目的語であっても、Tenny (1994: 95)にあるように、「経路」(PATH)という尺度のみを定める場合がある。出水 (2023: 42)は He walked the fence line.の the fence line がこのような役割を果たすとしている。この場合フェンスで示された境界線のどこまで歩いたのかは表わされていないので、終了点はなく、事象は非完結的な解釈を受ける。

上の(11)で見た The climber {descended/ ascended} the mountain.の場合、他動詞用法の直接目的語である the mountain が、「はかり分け」と解釈されれば完結的で in 句を伴った場合の解釈となり、「経路」と解釈されれば非完結的で for 句を伴った場合の解釈となる。

(11)の The climber {descended/ ascended}.という自動詞用法は、この「はかり分け」や「経路」として解釈される直接目的語が、その場の状況から容易に想定できるためにわざわざ表現されていないのだと考えられる。Randall (2010: 83)は、動詞 enter や descend のような一部の enter 類（＝有方向移動動詞）は、経路が「暗に意味される場所」(implicit PLACE)なら自動詞で生起可能だとしている。なおこれは、典型的な対象が省略される sweep (the floor), drive (a car) のような Fillmore (1986: 96)で「不定空補部」(indefinite null complements, INC)と呼ばれている場合とは異なり、どこに入ったりどこを下ったりするかが文脈から暗に意味されていなければならないので、Fillmore (1986: 96)で「定空補部」(definite null complements, DNC)と呼ばれているものに相当すると考えられる。この暗に意味される場所が他動詞の直接目的語によって明示されている場合と同じように、通過場所（＝「経路」）・範囲を特定された場所（＝「はかり分け」）のいずれと解釈されるかによって、非完結的・完結的両方の解釈が生じていると本稿では考える。

4. 動詞 descend と ascend の語彙意味論

以上で見てきた言語事実を、以下では Rappaport Hovav and Levin (1998, 2005, 2010)、出水 (2023)で用いられている事象構造鋳型に基づく語彙意味論によって説明する。これらで想定されている、動詞の語彙化する事象構造を表わす鋳型は以下の 4 種類である。

(12) 単純事象構造:

a. [x ACT$_{<MANNER>}$] 〔x が「…する」動詞〕「様態動詞」

b. [y <*STATE*>] 〔y が「…（である）」動詞〕「状態動詞」

c. [BECOME [y <*STATE*>]] 〔y が「…になる」動詞〕「結果動詞」

(13) 複合事象構造:

[[x ACT] CAUSE [BECOME [y <*STATE*>]]]

〔x が y を「…になるようにする」動詞〕「結果動詞」 （出水 (2023: 182)）

Rappaport Hovav and Levin (1998: 108)では(12a)に activity、(12b)に state、(12c)に achievement、

(13)に accomplishment という Vendler (1957)による動詞のアスペクト分類に基づくラベルが貼られていたが、本稿では出水 (2023)に従い、これらの事象構造鋳型はむしろ、アスペクトとは独立した事象構造を表わすものと考える。Rappaport Hovav and Levin (1998: 124)で、有方向移動動詞 arrive や come の事象構造は(12c)であると想定されているので、本稿では動詞 descend と ascend も、この〔y が「…になる」動詞〕「結果動詞」の事象構造を有すると仮定する。

(12c)のような事象構造をもつ有方向移動動詞は、すでに上で見たように他動詞用法になる場合もある。Pedersen (2019: 478)は、有方向移動動詞が他動詞構文で直接目的語と組み合わされた場合を「他動詞有方向移動」(Transitive Directed Motion)構文と呼び、その場合の直接目的語は、典型的他動詞構文のような被動作主(the affected patient)とは異なり、場所(location)を表わすとしている。そして、動作主による影響を被るわけでもない場所が、なぜ直接目的語になるのかについては、Givón (1984: 96-99)に従い、場所は被動作主を目的語とする典型的な他動詞構文からは逸脱しているものの、場所が被動作主として比喩的(metaphorically)に構成されることによって、この種の構文が可能になるとしている。具体的に言うと、Givón (1984: 99)では、entering a house という表現が、単に家の中に移動することではなく、家の状況を無人から人がいる状況へと劇的に変化させるので、場所が被動作主として解釈され、構文の比喩的な拡張が生じるということが述べられている。

他動詞構文という統語論への写像においては、確かにこのような動機付けがはたらいているのかもしれないが、有方向移動動詞の場合、使役動詞とは異なり、主語が表わす移動の主体の働きかけにより直接目的語の指示対象に変化が生じることそのものを語彙化しているわけではない。あくまでもそのような解釈も文脈から可能であるため他動詞構文に生起するだけであり、「他動詞有方向移動」(DTM)自体は非使役的な事象を語彙化していると本稿では考えたい。

これらの他動詞構文が語彙化する意味自体は非使役的であることから、本稿では(13)の鋳型に相当するのではなく、むしろ Rappaport Hovav and Levin (1998: 114-115)で示される様態動詞 sweep の事象構造[x ACT$_{<SWEEP>}$ y]に含まれる y と同じような定項参与者が、z として(12c)の鋳型に付け加えられたものを、他動詞の有方向移動動詞に適用される構造だと想定する。

出水 (2023: 187-192)は、動詞 enter に(14a)の事象構造を仮定しているが、それに倣って本稿でも、動詞 descend と ascend は(14b)のような事象構造をもつと考える。[3]

(14) a. [BECOME [y <*ENTERED*> z]] （出水 (2023: 189)）
b. [BECOME [y <*DESCENDED / ASCENDED*> z]]

ここでは元の鋳型に含まれる項を y としているので、追加される定項参与者は z とする。定項参与者は、Rappaport Hovav and Levin (1998: 115)で詳述されているように、復元可能であれば統語的な具現化は必須ではない。定項参与者が表現されない場合、動詞の語彙固有の意味の違いに応じて、Fillmore (1986: 96)のいう「不定空補部」「定空補部」のいずれかになる。具体的には、上で見たように動詞 sweep の場合は典型的な対象が省略される「不定空補部」となるが、動詞 enter, descend, ascend などの場合は、文脈から暗に意味されている場所が表現されない「定空補部」となる。

これが統語構造に写像されると、y も z も BECOME 述語の内部にある以上、内項となると

考えられる。出水 (2023: 190-192)は、動詞 enter の場合、主語が非対格動詞と同様の直接内項、直接目的語が授与動詞の間接目的語と同様の間接内項だと主張し、その根拠として以下のような例を挙げている。

(15) There *entered* the room a strange man. (Chomsky (2001: 21))

(16) a. … he shoved aside the curtains and *entered* into total darkness.

b. Len *entered* into the conversation. （出水 (2023: 191)）

出水 (2023)はかろうじて容認可能だとされている(15)に、John will *give* Mary the book.という授与動詞の構文と並行した語順が生じていることに基づき、以下のような主張をしている。

(17) a strange man（奇妙な男）が直接内項であり、the room（部屋）は「部屋に」という間接目的語っぽい意味を表す間接内項だと考えることができます。 （出水 (2023: 191)）

さらに、授与動詞の間接内項が to 前置詞句で生起するのと同様に、動詞 enter の z も場合によっては前置詞句によって(16)のように具現化されることが、これが間接内項である 1 つの証左だとしている。これらを踏まえて、動詞 descend と ascend に同じ説明が可能かを考えてみたい。

動詞 descend と ascend が自動詞の場合に、非対格動詞（つまり主語が直接内項である動詞）であるという証拠は２つある。１つは、Levin and Rappaport Hovav (1995: 19)で主張されているように、「there 挿入構文」(*there*-insertion construction)で生起できることである。

(18) a. After him there *descended* a nurse in uniform, then came down the steps two men-servants.
(Frances Hodgson Burnett, *A Little Princess*)

b. … and there *ascended* a smoke, which he commanded the slave to smite with his mantle.
(Charles Montagu Doughty, *Travels in Arabia Deserta*; Google Books)

もう 1 つは、影山（編） (2009)が指摘しているように、19 世紀以前の英語では「完了形」で be 動詞を取る動詞グループだったということである。[4]

(19) 同じように昔は be 動詞で完了を表した動詞には他に，abate, ascend, awake, befall, cease, climb up, burst, descend, deteriorate, decrease, diminish, elapse, perish, reach, recover, run away/off などがある。 （影山（編） (2009: 137)）

これらは動詞 descend と ascend が非対格動詞であることを示す統語的証拠であり、動詞 descend と ascend の主語が直接内項であるという仮定自体には問題がないと考えられる。

次に、動詞 descend と ascend の直接目的語が間接内項であるという点について考えてみたい。(15)のような容認度の極めて微妙な用例を作例してインフォーマント調査をするのは妥当か否か疑問なので、ここでは(16)と同様の例として(20)を挙げたい。

(20) a. They had just *descended* through the deck onto a grated catwalk …

(Dan Brown, *Deception Point*: 463)

b. Langdon and Vittoria followed the white marble treads as they *descended* between a gauntlet of nude male sculptures. (Dan Brown, *Angels and Demons*: 126)

これらの例では、直接目的語の表わす経路に相当する z が、前置詞句によって具現化されていると考えることができる。したがって、動詞 descend と ascend の事象構造に見られる定項参与者 z も、動詞 enter の場合と同じく、間接内項であると本稿では主張する。

最後に、以上で想定してきた、統語構造への写像も含めた事象構造に基づく分析によって、2 節と 3 節で見た言語事実をどのように説明し直せるのかを検討する。

動詞 descend と ascend で様態が未指定のため文脈からさまざまな解釈が生じるという 2 節で見た事実は、(14b)で提示した[BECOME [y <*DESCENDED / ASCENDED*> z]]という事象構造から説明できる。この構造で語根が事象鋳型に結びつけられているのは、BECOME の項の位置であり、そもそもこれらの有方向移動動詞の場合、非使役的であるため ACT 述語そのものを語彙的な意味としては含まない。文脈から読み込まれるさまざまな移動様態も、動詞 descend と ascend が語彙化する意味の範囲外（つまり含意せず文脈から読み込まれる部分）となるので、このような言語事実が生じるのは不思議ではない。一方、いずれの用例でも、何らかの意味で下方向・上方向の移動を表わしていることは、これらの動詞が語彙化している意味の反映であると考えられる。以上からわかるように、こうした事象構造を想定することで、2 節で検討した実例の表わす意味間に見られる意味的な共通点と差異を、余すところなく説明することができる。

続けて、3 節で取り上げた、完結性と他動性の問題について、事象構造の観点からの振り返りをおこなう。まず、直接目的語が「はかり分け」の役割を果たして動詞句が完結的になる場合と、そうならずに非完結的になる場合について考えてみたい。出水 (2023: 164-165)にもあるように、Rappaport Hovav and Levin (2005: 281)では Lee scrubbed the tub {for hours/ in three minutes flat}.のように、scrub （ごしごし洗う）のような表面接触動詞がなぜ非完結的、完結的両方の解釈が可能なのかを、巧みに説明している。「表面接触動詞」の事象構造が[x ACT<*SCRUB*> y]のようなものであることは、Rappaport Hovav and Levin (1998: 114, 118-121)で提案されているが、それを踏まえて Rappaport Hovav and Levin (2005: 281)では、表面接触動詞で完結的な用法が生じるのは、「これらが記述する過程はふつう，特定の結果を意図して行うものだからだろう。もっとも、これらの動詞はいかなる結果の到達も含意しているわけではない」と述べている。ここで言う「意図されるだけの結果」は、出水 (2023: 164)が言うように、事象構造そのものにはコード化されず、定項参与者の y が担う「はかり分け」としての役割からもたらされるものにすぎないということになる。

ただし、有方向移動動詞の場合、[BECOME [y <*DESCENDED / ASCENDED*> z]]という事象構造を有し、事象構造そのものには下方向・上方向への移動という結果自体がコード化されている。しかしながら、Rappaport Hovav and Levin (2010: 28-32)で述べられているように、結果＝尺度のある変化であるというだけであって、必ずしも完結的とは限らない。本稿では、有方向移動動詞のような結果動詞の非使役的他動詞用法の場合でも、表面接触動詞と同様に、定項参与者 z が「はかり分け」の役割を果たす場合は完結的解釈、果たさない場合は非完結

的解釈が生じると考えたい。

そもそも、Tenny (1994: 15-18)からもわかるように、Tenny 自身は「はかり分け」という直接目的語の果たすアスペクト役割を、漸増主題動詞のような様態動詞と、状態変化動詞のような結果動詞の両方に、同じように適用している。したがって、本稿のように、非完結的な解釈を許容する、非使役的な結果動詞の直接目的語（これは定項参与者 z を具現化したもの）が果たす「はかり分け」の役割によって、この種の動詞に完結的な解釈が生じる場合があることを、本稿は例証するものだと言える。これは結局、これは出水 (2023: 271)の、「はかり分け」のアスペクト役割が、事象構造のうち様態動詞、結果動詞、両方の定項参与者に関連づけられると考えるべきだという主張を裏付けるものということになろう。

5. おわりに

本稿では、結果を語彙化しない様態動詞の定項参与者を具現化した直接目的語だけでなく、結果動詞である「非完結的有方向移動動詞」の「他動詞有方向移動構文」に関しても、定項参与者を具現化した直接目的語にいずれのアスペクト役割が適用されるかによって、この種の動詞の完結性が非完結的・完結的の両方となりうることを、事象構造に基づく語彙意味論に基づいて説明した。

他の「他動詞有方向移動構文」に関しても、同様の説明が可能か否かといった点については今後の研究課題としたい。語彙意味論研究の新たな方向性を提示できていれば幸いである。

* 発表に際して司会をして頂いた、京都産業大学の臼杵岳先生、および発表に際してコメントを頂いた先生方、インフォーマントとして協力して頂いた英語母語話者の方には感謝申し上げたい。残された瑕疵や齟齬は筆者の責任である。

注

[1] インフォーマントは 60 代のカナダ人女性である。

[2] 小野尚之先生より、日本語の「山に登る」「山を登る」の違いをどう考えるかという質問を頂いたが、これについては今後の課題としたい。

[3] 松本曜先生より、arrive や enter のような瞬間的な２点間の移動を表わす動詞と、descend や ascend のような継続的な移動を表わす動詞をどう区別するのかという質問を頂いたが、これについては Rappaport Hovav and Levin (2010: 31-32)にあるように、前者の語彙化する「２点尺度」(two-point scales)と後者の語彙化する「多点尺度」(multiple-point scales)の違いによるものだと考える。

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L2 Acquisition of Reciprocal Pronouns in Japanese Ellipsis by English and Spanish Speakers*

Kazumi Yamada, Nobuo Ignacio López-Sako, Mika Kizu, and Cristóbal Lozano
Kwansei Gakuin University & University of Southampton/University of Granada/Notre Dame Seishin University/University of Granada

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1. Introduction

The current study aims to examine the possibility of L1 influence on the interpretation of elided reciprocal pronouns by L1 English and L1 Spanish learners of L2 Japanese (E-JFLs and S-JFLs, respectively). This paper presents the results of one main study and one follow-up study showing that both E-JFLs and S-JFLs had similar acceptance rates of elided objects of reciprocal pronouns but differed in their actual interpretation of the elided argument. We claim that our pilot study shows a tendency that E-JFLs and S-JFLs retain their L1 property of having uninterpretable φ-features, but in different ways.

Previous research has suggested that null arguments in Japanese are not *pro* but argument ellipsis (AE) (Oku, 1998; Saito, 2007; Sakamoto, 2015; Takahashi, 2008; 2014; 2016, 2020). Japanese null arguments are interpreted either with a strict identity reading (STR) or with a sloppy identity reading (SLR), as (1) shows.

(1) Japanese

a. Kuma-wa zibun-no kuruma-o huita.
Bear-Top self -Gen car -Acc wiped
'Bear wiped his own car.'

b. Pengin-mo [e] huita.
Penguin also wiped
'Penguin also wiped [e].'
[e] = Bear's car (STR) [e] = Penguin's car (SLR)

In this paper, we would like to focus on the null object construction in Japanese. Suppose the Japanese sentence in (1a), *Kuma-wa zibun-no kuruma-o huita.*, 'Bear wiped his own car.' precedes (1b) *Pengin-mo [e] huita.* 'Penguin also wiped [e].' (1b) with a null argument is grammatical in Japanese. The null argument in (1b) has two interpretations: Bear's car or Penguin's car. When it refers to Bear's car, we

call it “strict identity reading” or STR. When the null argument refers to Penguin’s car, it has a “sloppy identity reading” or SLR. The sloppy identity reading is a significant feature of Japanese null arguments. In the same way, suppose (2a) precedes (2b).

(2) English
  a. Bear wiped his own car.
  b. Penguin also wiped it.
  c. *Penguin also wiped [e].

The pronoun *it* in (2b) refers to Bear’s car in (2a). However, the sentence (2c) with a null argument is ungrammatical in English. Corresponding Spanish example sentences are presented in (3). Spanish does not allow definite co-referential null objects, and so (3c) including a null object is ungrammatical, as we saw the English example sentence in (2c).

(3) Spanish
  a. El oso limpió su propio coche.
     The bear wipe-PAST-3P-SING his own car
     ‘The bear wiped his own car.’
  b. El pingüino también lo limpió.
     The penguin also it wipe-PAST-3P-SING
     ‘The penguin also wiped it’
  c. *El pingüino también limpió [e].
     The penguin also wipe-PAST-3P-SING
     ‘The penguin also wiped [e]’

2. The Theoretical Background

This section briefly explains argument ellipsis (AE), on which the discussion of this study is based.

2.1. *pro* vs. AE

As we saw in (1) above, Japanese null arguments are interpreted not only with STR but also with SLR. Previous analyses suggest that the null argument status in Japanese is in fact an AE to tell them apart from null pronouns in so-called *pro*-drop languages. According to the AE theory, AE is allowed in Japanese because uninterpretable ϕ -features are not available; unlike English, there is no uninterpretable ϕ -feature on v to form the agreement relation with the object DP to delete its uninterpretable Case feature, and therefore, it is not necessary for Japanese to have an overt DP in object position (Saito 2007). On the other hand, in English and Spanish, AE is not permitted since ϕ -features cannot be deleted in derivation; this is attributed to the Agree relation between an element with uninterpretable ϕ -features and a DP already licensed.

2.2. Reciprocal Reading

In addition to the SLR for the antecedent containing a reflexive pronoun, Takahashi (2008, 2016) observes that null arguments in Japanese also have SLR for the antecedent with a reciprocal pronoun, as shown in (4).

(4) Reciprocal reading

a. Harii to Jinii -wa otagai -o sonkeishiteiru.
Harry and Ginny-Top each other-Acc respect
'Harry and Ginny respect each other.'

b. Ron to Haamaionii-wa [e] keibetusiteiru.
Ron and Hermione -Top despise
'Ron and Hermione despise [e].'
[e] = Harry and Ginny (STR) [e] = Ron and Hermione (SLR)

The elided sentence in (4b) is preceded by (4a), where the reciprocal pronoun *otagai* ('each other') is involved. (4b) can be read as "Ron despises Hermione and Hermione despises Ron,", that is, with the SLR reading, as well as with the STR reading ([e] = Harry and Ginny). Thus, in Japanese, not only the reflexive pronoun ellipsis we saw in (1b), but also reciprocal pronoun ellipsis can have SLR.

3. L2 Acquisition Literature: Null Arguments in L2 Japanese

On the basis of the syntactic operation explained in the subsection 2.1, both E-JFLs and S-JFLs would need to "unlearn" their L1 uninterpretable feature to acquire AE in the target language, Japanese in this case. In previous L2 acquisition literature, Yamada and Miyamoto (2017) investigated how reflexive pronoun ellipsis, as indicated in (1), would be interpreted by non-*pro*-drop L1 language JFLs (mainly L1 English speakers) and S-JFLs, observing whether the SLR is available in their L2 Japanese. Their prediction was that both non-*pro*-drop and S-JFLs did not allow SLR because the learners' L1s in both groups count as agreement languages.

As Table 1 indicates, the results showed that the non-*pro*-drop group did not allow SLR (about 30% of the time) while, as Table 2 shows, the Spanish group did (about 70% to 80%). Yamada and Miyamoto argue that the non-*pro*-drop JFLs still retain their L1 feature. In contrast, the availability of SLR in the Spanish speakers' L2 Japanese follows as a result of applying a different licensing mechanism from that of L1 Japanese speakers, which will be explained in detail in the discussion section.

Table 1: Non-*pro*-drop JFLs' acceptance rate

		Sloppy	Strict
Advanced	(n=7)	28.6%	78.6%
Pre-advanced	(n=8)	31.3%	62.5%

Table 2: S-JFLs' acceptance rate

		Sloppy	Strict
Pre-advanced	(n=6)	66.7%	66.7%
Intermediate	(n=11)	77.3%	77.3%
Elementary	(n=11)	81.8%	72.7%

Yamada and Miyamoto (2017) tested only one case of an antecedent of null arguments: *zibun no* DP (one's own DP in English), which is a reflexive pronoun ellipsis. As we saw in the subsection 2.2, null arguments in Japanese allow a reciprocal reading as well. Therefore, in order to verify Yamada and Miyamoto's (2017) proposal, we also need to test the null argument interpretation of learners with the case of the reciprocal pronoun antecedent. Moreover, Japanese test sentences used in their study were affirmative sentences, which permit both SLR and indefinite NP reading (i.e., 'Penguin cleaned some kind of car' in (1b)) (Hoji, 1998; Saito, 2007). This may have caused the S-JFLs' high acceptance rates of SLR, which were not significantly different from those of the L1 Japanese control group. Therefore, to exclude the indefinite NP interpretation on the null arguments to appropriately examine the sloppy interpretation, negative forms are required in the test sentences.

4. Experiment

In this study, we focus on the availability of a reciprocal reading with null objects, used as a test to examine whether AE is available for E-JFLs and S-JFLs when the antecedent of null objects is a reciprocal pronoun.

4.1. Research Question and Predictions

The research question asks whether E-JFLs and S-JFLs permit the SLR with reciprocal antecedents and, if so, they allow null arguments in their L2 Japanese. We predicted that even in the case where an antecedent of a null argument is a reciprocal pronoun *otagai* and the test sentences are in a negative form, E-JFLs would not allow SLR with null arguments while S-JFLs would.

4.2. Participants

The current study tested 19 English-JFLs and 24 S-JFLs, whose L2 Japanese proficiency levels were in a range from elementary to intermediate (according to their results from the Japanese Language Proficiency Tests, JLPT), which is equivalent to A1 to B1 in the Common European Framework of Reference for Languages (CEFR) (Table 3). English JFLs had attained N2, N3, or N4 at JLPT (Japanese Language Proficiency Test), the equivalent to CEFR B1, A2, and A1, respectively. The starting age of learning Japanese ranged from 13 to 26, but most of them started studying Japanese at university. S-JFLs had attained N2, N3, N4 or N5 at JLPT, which roughly correspond to CEFR B1, A2, and A1. The starting age of learning Japanese ranged from 15 to 21.

Table 3: Participants

	N	Age	Level	Starting age
English-JFL	19	18-28 (mean=20.1)	elementary to intermediate JLPT CEFR N2 (n=11) => B1 N3 (n=6) => A2 N4 (n=2) => A1	13-26 (mean=18.6)
Spanish-JFL	24	20-27 (mean=22)	elementary to intermediate JLPT CEFR N2 (n=1) => B1 N3 (n=10) => A2 N4 (n=9) => A1-2 N5 (n=4) => A1	15-21 (mean=18.3)
L1 Japanese speakers	6	18-19 (mean=18.2)	-	-

4.3. Stimuli and Procedures

We conducted two tasks. A screening task was conducted to select participants who allowed null arguments in their L2 Japanese. A Truth-Value Judgment Task (TVJT) was carried out to observe how such participants interpreted null arguments. The learners of both E-JFL and S-JFL groups were tested with these two tasks in the following order: the TVJT first, followed by the screening task. This task order was selected to prevent participants from guessing that the focus of the study would be on the interpretation of null arguments.

4.3.1. Screening task

In the screening task, the participants were asked to judge whether each Japanese sentence with a null argument was correct. The aim of this task was to identify participants who allow null arguments in their L2 Japanese. In the screening task, we also asked the participants to correct the sentence if they judged it was incorrect. The screening task consisted of 12 stimuli: six sentences including a null argument, and the other six were distractors.

(5) Example

Taroo-ga konpyuutaa-o kowasite-simaimasita ga otoosan-ga naosimasita.
Taro-Nom computer -Acc broke but father-Nom fixed
'Although Taro broke the computer, his father fixed **[e]**.'

natural/correct or unnatural/incorrect

The participants circled either 'natural/correct' or 'unnatural/incorrect'. The participants were instructed to answer quickly, and not to modify responses in previous items.

4.3.2. Truth-Value Judgment Task

In the TVJT, the main study in our experiment, the participants judged whether sentences with null arguments correctly explained the situation in the dialogue. There are two contexts, as Table 4 shows. A test sentence including reciprocal pronoun ellipsis was judged in an SLR context and an STR context, respectively. Each context had three tokens. In the actual experiment, 36 stimuli including 12 contexts were involved, but we report only the relevant results.

Table 4: Sentence type

Argument	Context	N
Reciprocal pronoun ellipsis	Sloppy	(n=3)
	Strict	(n=3)

The procedure of the TVJT is presented in Figure 1.

1.	2.	3.	4.
(English) **Bear**：Hippo, I’ve been washing you for 30 minutes. I’m so exhausted now. **Hippo**：OK, that’s enough. (Spanish) **Oso:** Hipopótamo, te he estado lavando 30 minutos. Ya estoy cansadísima. **Hipopótamo:** Vale, es suficiente.	(E) **Hippo**：Bear, is it okay to stop? **Bear**：What?! It’s only been 3 minutes. (S) **Hipopótamo:** Oso, ¿puedo parar ya? **Oso:** ¡¿Qué?! Sólo han pasado 3 minutos.	(E) **Rabbit**：It’s starting to rain. **Penguin**：Rabbit, I’ll wipe your body. (S) **Conejo:** Está empezando a llover. **Pingüino:** Conejo, te voy a secar el cuerpo.	(E) **Rabbit**：You are also all wet. I’ll wipe your body. **Penguin**：Thank you. You are so kind. (S) **Conejo:** Tú también estás empapado. Te voy a secar el cuerpo. **Pingüino:** Gracias. Eres muy amable.
Test sentence: *Kuma to kaba-wa otagai-no karada-o aratta. Pengin to Usagi-wa huka-nakat-ta* *(lit: Bear and Hippo washed each other’s bodies. Penguin and Rabbit did not wipe [e].)* True or False (False => SLR)			

Figure 1: TVJT experiment item: reciprocal reading context

First, the participants were given a dialogue among animal figures or people with the corresponding photos on a projector screen while listening to the corresponding audio. The dialogues were spoken in English for E-JFLs and Spanish for S-JFLs so that the participants could fully understand the dialogues. Each dialogue was followed by a Japanese test sentence. The Japanese test sentence in Figure 1 includes the elided object referring to the reciprocal pronoun in its preceding sentence. The participants judged whether the Japanese test sentence correctly explained the situation in the dialogue. If the participants judged the test sentence 'False', this implies that the participants accepted the SLR with reciprocal pronoun ellipsis. 'False' means *Penguin and Rabbit did wipe each other's bodies*. Note that all of the test sentences given in the TVJT were negative sentences, because we needed to refrain participants from interpreting null arguments as indefinite NPs in an SLR context. Namely, *Penguin and Rabbit* wiped somebody's body.

4.4. Results

The results of the two experiment tasks, the screening task and the TVJT, are summarized in 4.4.1 and 4.4.2. Then the results of our follow-up study, which was conducted to clarify the results obtained in the TVJT, are presented in 4.4.3.

4.4.1. Screening task

The data from the screening task were analyzed first to observe the extent to which the E-JFLs and S-JFLs allow null arguments in their L2 grammar, irrespective of the interpretations of null arguments. The results are summarized in Table 5. We consider that all participants allowed sentences with null arguments. They were therefore included in the TVJT analysis, which is the main study.

Table 5: Number of participants who accepted null objects

		0 token	1 token	2 tokens	3 tokens
English-JFLs	(n=19)	0	0	1	18
Spanish-JFLs	(n=24)	0	0	6	18

4.4.2. Truth-Value Judgment Task

The results of the TVJT are summarized in Table 6. The E-JFLs allowed elided objects under SLR 57.9% of the time, the S-JFLs allowed 66.7% of the time, and the control group 72% of the time.

Table 6: Acceptance rates

		Reciprocal pronoun ellipsis	
		Sloppy	Strict
English-JFLs	(n=19)	57.9%	93.0%
Spanish-JFLs	(n=24)	66.7%	90.3%
L1 Japanese speakers	(n=6)	72.0%	94.4%

Table 7 shows the breakdown of the learners' acceptance of the SLR. 10 E-JFLs out of 19 participants accepted the SLR reading at least in two of the sloppy contexts, while 18 S-JFLs out of 24 participants did so. What remains unknown is whether they really accepted the SLR in their L2 grammar like the Japanese first language speakers.

Table 7: Breakdown of learners' acceptance of SLR

		0 token	1 token	2 tokens	3 tokens
English-JFLs	(n=19)	3	6	3	7
Spanish-JFLs	(n=24)	2	4	10	8
L1 Japanese speakers	(n=6)	0	2	1	3

4.4.3. Follow-up study

In order to clarify the question, that is, whether the learners really accepted the SLR in their L2 grammar, we also conducted a follow-up study and interviewed E-JFLs and S-JFLs who accepted the SLR at least in two of the sloppy contexts by asking them why they chose 'False' in each or two of the three stories, showing them the pictures and dialogues once again. Some of the learners' responses are summarized in Table 8.

Table 8: Answers

E-JFLs	➢ I chose all 'False' because to me the action, or emotion, being described itself was **more important than the grammatical object being specified**, or carrying on from one sentence to the next. ➢ I considered **the object of the sentence less relevant** than the technical action. I understood both sentences as two separate statements, rather than as one collective narrative where the object of the first sentence, is also the object of the second sentence. ➢ As they looked at **something** (the photos), I said that the statement 'Blue cat and rabbit didn't look/ looked not" was false. ➢ **I wasn't sure what it was they were "looking" at**, so I interpreted it based on the context of the pictures that they were looking at the pictures. As they DID look, the statement was false.
S-JFLs	➢ I chose 'False' because **I thought Penguin and Rabbit wiped each other**. Rabbit says that Penguin is wet at the end. ➢ I chose 'False' because **in fact Blue Cat and Rabbit hate each other**. **They don't want to see each other**. ➢ I chose 'False' because I understood that the Japanese sentence meant that the Blue Cat and the Rabbit **hadn't looked at the pictures, because they have**.

L1 Japanese speakers	➢ Both sentences were interpreted as **one collective narrative**. Based on the first sentence, I judged the second sentence "False" as they were looking at **each other's pictures**. ➢ Because they were looking at **each other's photos**, it is not correct that "they did not look".

Regarding E-JFLs, the action of the animal characters or their emotion was more important than the object being specified. In addition, they did not grasp the flow from the first sentence to the next sentence but interpreted each sentence separately with no contextual connection between the two. Regarding S-JFLs, they allowed null arguments in their L2 Japanese and permitted the SLR with reciprocal antecedents. Finally, L1 Japanese speakers specified the object in their answers. They interpreted the sentences as one collective narrative.

5. Discussion

In our main study, the TVJT, both E-JFLs and S-JFLs accepted the SLR in elided objects more than 50% of the time. However, our follow-up study indicates that E-JFLs actually did not interpret the elided objects as reciprocals but rather as pronominals relying on the context. This fact shows that AE is not available in their L2 Japanese although it appears to exist on the surface. On the other hand, it was revealed that the S-JFLs really allowed SLR.

According to the results, the answer to the research question, that is, "If E-JFLs and S-JFLs allow null arguments in their L2 Japanese, do they permit the SLR with reciprocal antecedents?", we can say that E-JFLs did not allow the sloppy identity reading with reciprocal antecedents while S-JFLs allowed the SLR with the same antecedents. We predicted that even in the case where an antecedent of a null argument is a reciprocal pronoun *otagai* and the test sentences are in a negative form, E-JFLs would not allow SLR with null arguments while S-JFLs would, which was confirmed in the results of the current study. In a case where an antecedent of a null argument is a reciprocal pronoun *otagai* and the test sentences are in a negative form, E-JFLs do not allow SLR with null arguments while S-JFLs allow them.

In light of the results obtained in the current study, E-JFLs did not actually permit SLR, as expected, and so they cannot unlearn uninterpretable ϕ-features in L1. However, unlike E-JFLs, S-JFLs did incidentally allow SLR. They properly interpreted missing elements and did not disregard the null objects or replace them with *pro*. Crucially, S-JFLs' Japanese proficiency levels do not seem to have an effect on SLR acceptance rates since S-JFLs of all levels behaved in a similar way. This might indicate that they transfer some L1 property to L2, rather than unlearning uninterpretable ϕ-features. Yamada and Miyamoto (2017) propose, adopting Otaki (2014), that S-JFLs consider the Japanese case particle (or K in KP) as a holder of an uninterpretable Case feature for ϕ-feature agreement just like their clitic in Spanish, which enables the learners to allow AE.

6. Summary

Our study data show the tendency that E-JFLs and S-JFLs retain their L1 property of having

uninterpretable ϕ-features, but in different ways.[1] Our L2 data shows L2 learners' interpretation more clearly by testing the case of another antecedent, reciprocal pronoun, and by using test sentences in a negative form.

* We would like to thank all the learners who kindly participated in our study. The research reported here is supported by Grants-in-Aid for Scientific Research (C) #18K00808.

NOTE

[1] As Martinez-Garcia (2023) suggests, there might be semantic configurations in Spanish that allows for AE to occur, thus pre-disposing S-JFLs to easily accept the occurrence of AE even in definite co-referential contexts. This is an issue for future research to explore.

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Linearization of Postposed Subjects and Heaviness Constraint*

Mizuki Sakamoto
Tohoku University

Keywords：heaviness, subject postposing, linearization, syntax-phonology interface

1. Introduction

While English exhibits an SVO word order by default, it also allows a certain noncanonical word order in which the subject follows the finite verb, that is, *subject postposing*. This paper deals with four different kinds of subject postposing constructions: (i) presentationl *there* construction (PTC), (ii) locative inversion with unergative verbs (henceforth, *Heavy Inversion*: HI), (iii) locative inversion with unaccusative verbs (henceforth, *Light Inversion*: LI), and (iv) comparative inversion (CI). The examples in (1a-d) illustrate these constructions.

(1) a. There walked into the room a man with long hair. (Rochemont and Culicover (1990: 116))
b. In the room slept fitfully the students in the class who had heard about the social psych experiment that we were about to prepare. (Culicover and Levine (2001: 293))
c. On the stage appeared a man. (Coopmans (1989: 743))
d. Sandy is much smarter than is the professor. (Culicover and Winkler (2008: 626))

It has widely been accepted that the postposing of constituents is functionally motivated by the end-weight principle, which favors a heavier constituent being put in the sentence-final position.[1]

However, the end-weight principle does not apply to all the cases in (1). There exist weight-insensitive word orders. For instance, the acceptability of LI is invariant regardless of whether the subject is heavy (i.e. longer) or not.

(2) a. On the stage appeared a man.
b. On the stage appeared a student who everyone thought was the most talented actress.

The aim of this paper is twofold. First, I will examine which kinds of subject postposing are sensitive to the end weight principle and which ones are not (Section 2). I will demonstrate that PTC and HI are subject to the heaviness requirement on their postposed subjects whereas LI and CI do not have to have heavy subjects. Second, I propose a linearization mechanism that makes crucial use of the prosodic, not syntactic, representation (Section 3). It will be demonstrated in section 4 that the proposed linearization

mechanism correctly accounts for the presence/absence of the heaviness effect.

2. Sensitivity to Heaviness

In this section, I will examine whether the four constructions in (1a-d) exhibit a heaviness effect. It will be shown that PTC and HI are compliant with the heaviness requirement whereas LI and CI are not.

First, PTC obeys the heaviness constraint. Its acceptability varies depending on the heaviness, or length, of the postverbal subjects.

(3) a. ??There walked into the room, the man.
b. There walked into the room, the one man she had no desire to see.
(Rochemont and Culicover (1990: 29))

The heaviness condition also holds for HI. Postposing a light DP leads to ungrammaticality as in (4a).

(4) a. * In the room slept fitfully Robin.
b. In the room slept fitfully the students in the class who had heard about the social psych experiment that we were about to perpetrate. (Culicover and Levine (2001: 293))

Based on the observations above, I conclude that PTC and HI are subject to the heaviness constraint.

Unlike PTC and HI, LI does not need to have a heavy subject. Its acceptability will not change regardless of the heaviness of the postverbal subjects. The relevant examples in (2) are repeated in (5).

(5) a. On the stage appeared a student.
b. On the stage appeared a student who everyone thought was the most talented actress.

CI behaves in the same way as LI; the heaviness of the subject does not influence the acceptability of the construction, as shown in (6).

(6) (Mary had never been to France at that time but …)
a. ? she spoke France more fluently than did the other students.
b. ? she spoke France more fluently than did the other students who had ever been to France.

This observation suggests that LI and CI are not subject to the heaviness condition.

In summary, we have seen that there is variation as for whether the four constructions obey the heaviness condition. PTC and HI follow the heaviness constraint whereas LI and CI do not.

3. Assumption and Proposal

In the previous section, we have seen that not all of the subject postposing constructions are subject to the heaviness condition. Then, one question may arise: what makes such a distinction? The rest of this paper addresses this question by proposing that linearization applies to the result of prosodic

phrasing in the externalization process. Section 3.1 introduces some theoretical background. Based on this, section 3.2 offers a prosody-based linearization mechanism, by which section 4 will account for the presence/absence of the heaviness condition.

3.1. Syntax-Phonology Interface

In the current minimalist framework, it is widely assumed that the core syntactic operation Merge constructs hierarchically structured expressions with no word order specification, handed over to the semantic and phonological interpretations. Word order, as well as other pieces of prosodic information, is added at the syntax-phonology interface, which is called externalization.

(7) Order and other arrangements are a peripheral part of language, related solely to externalization at the SM interfaces, where of course they are necessary. (Chomsky (2013: 36))

Then, externalization is assumed to contain an operation *linearization*, which assigns the order specification to each node. Since linearization is a part of externalization, it should make reference to the representation of phonology, not syntax. So, before proposing a linearization mechanism, I will introduce our theoretical background of the syntax-phonology interface that adds prosodic constituency and prosodic headedness to syntactic representations, to which linearization applies.

It has been widely argued that phonology has its own structure, called prosodic hierarchy (Nespor and Vogel (1986), Ito and Mester (2012, 2013) among others). The hierarchy is given in (8).

(8) Prosodic Hierarchy

(						$)_{\iota}$	Intonation Phrase (ι)
(	$)_{\varphi}$	(	$)_{\varphi}$	(		$)_{\varphi}$	Phonological Phrase (φ)
($)_{\omega}$	($)_{\omega}$	($)_{\omega}$	($)_{\omega}$	($)_{\omega}$	(	$)_{\omega}$	Prosodic Word (ω)
σσσσ	σσσ	σσσ	σσσσσ	σσσσσσ	σσσσσσσσ		Syllable (σ)

Then, the syntax-phonology interface must have some mapping rules translating syntactic hierarchy into the prosodic hierarchy. I assume the following rules:

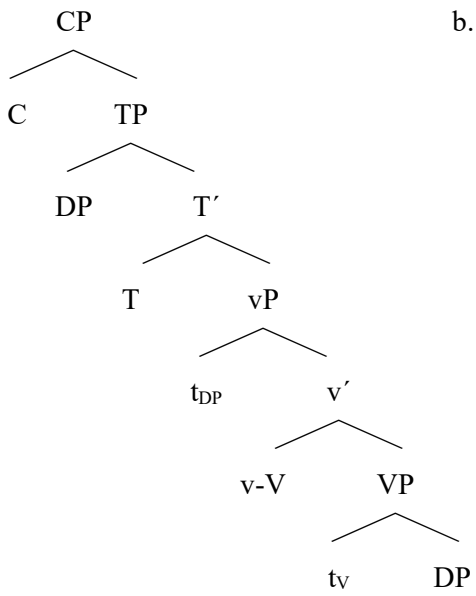
(9) a. X^0s correspond to σs or ωs depending on the lexical status.[2]
b. Phases (CPs, *v*Ps, and DPs) are mapped to φs.[3]
c. Others have no corresponding prosodic realization, notated as "[ ]".

The idea behind (9) is that prosodic constituency is assigned to nodes that play a role in externalization: X^0 for lexical insertion and phases for spell-out. The choice of prosodic constituents for X^0s, either σ or ω, is assumed to be determined lexically. Function words correspond to σ and content words to ω. Phases are mapped to a bigger prosodic unit φ.

To see how these mapping rules work, let us consider how the canonical transitive sentence is prosodically phrased. The syntactic structure (10a), for example, is mapped into the prosodic

representation in (10b). The terminal nodes T and *v*-V correspond to σ and ω respectively. Phasal nodes (CP, *v*P, and DP) are mapped to φs. The other nodes, such as TP and v′, have no corresponding prosodic constituent, which is notated as "[ ]".[4]

(10) a.



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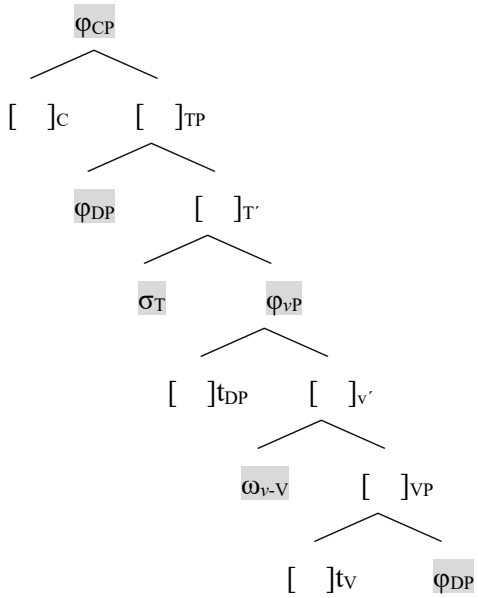


To this prosodic structure, additional phonological processes assign some prosodic features. Here, based on Kratzer and Selkirk (2020), I adopt the following rules.

(11) a. For a prosodic constituent {A, B}, if A is higher than B in the prosodic hierarchy (8), A is chosen as a prosodic head (P-head).
b. If A and B are of equal prosodic category, either node can be a P-head.
c. If a node A in a prosodic representation is chosen as a P-head, it should be realized as being heavier than its sister at the phonetic representation.

According to (11), φ will be chosen as a P-head for the node {ω, φ}, since φ is higher than ω in the prosodic hierarchy. In the following discussion, it will be shown that the choice of P-heads plays an important role in linearization.

3.2. Proposal

In the last subsection, I introduced the mechanism in externalization that maps syntactic structures to prosodic representations. If word order is also determined at externalization, linearization should refer to a phonological representation like (10b), not a syntactic one like (10a). In this subsection, I give a precise formulation of such a linearization procedure.

Linearization is a process to determine word order. More specifically, I assume that it determines the relative ordering between sister nodes of a prosodic representation, based on the properties of these nodes (cf. Fox and Pesetsky (2005)).[5] Given the prosodic representation introduced in the previous subsection, linearization may have access to two kinds of prosodic information regarding the nodes to

be linearized. First, the types of prosodic constituents (σ, ω, or φ) are available. Since externalization requires that one of them be a P-head, P-headedness may also be of use for linearization.

Second, linearization may see whether the node has a corresponding prosodic node, that is, whether it corresponds to a prosodically empty node "[ ]" or not. If one of the two nodes is prosodically empty, then the first node that linearization can detect may be the prosodically contentful one. Then, I propose that the node to be detected first precedes the other node. Based on this intuition, I propose the following linearization mechanism.[6]

(12) Proposal (Linearization based on prosodic structure):

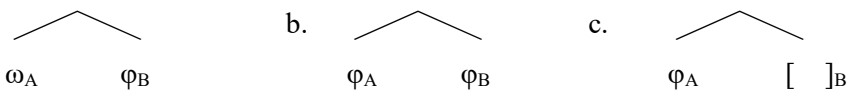
For a node {A, B} in prosodic structure, linearization specifies that A precedes B if …

a. A and B are prosodic categories and B is a prosodic head. (weight-based order)

b. Only A is a prosodic category. (visibility-based order).

For illustration, let us consider the linearization of the cases in (13a-c). First, when the nodes are both prosodic categories and they are of unequal types, (11a) unambiguously assigns P-headedness to the node higher in the prosodic hierarchy (φ_B in (13a)). Then, in (13a), ω_A precedes φ_B by (12a). Second, when two nodes are of the same prosodic category as in (13b), the choice of a P-head is optional according to (11b). Either φ_A or φ_B can be a P-head. If φ_A is a P-head, then φ_B precedes φ_A by (12a). On the other hand, φ_A precedes φ_B when φ_B is a P-head. Finally, when one of the two nodes is prosodically empty like [ ]$_B$ in (13c), the visible node (=φ_A) is linearized to precede its sister by (12b).

(13) a. b. c.



Notice that the patterns of (13a) and (13b) are linearized so that the P-head is located rightward whereas P-headedness is irrelevant in (13c) at all. Given that the P-headedness is reflected in the heaviness (=(13c)), the application of (12a) can be understood to be a source of the heaviness condition. On the other hand, (12b) produces no heaviness effect. So, we arrive at the following prediction.

(14) Prediction: The heaviness condition is observed in the word orders that are produced by (12a).

In the next section, I will analyze the four constructions (PTC, HI, LI, and CI) in terms of the proposed externalization mechanisms and demonstrate that the prediction (14) is borne out.

4. Analysis

In section 2, we have observed that the four subject postposing constructions behave differently in terms of whether the postposed subjects have to be heavy or not. PTC and HI obey the heaviness condition while LI and CI do not. I will show in this section that these patterns are derived from the proposed externalization mechanism.

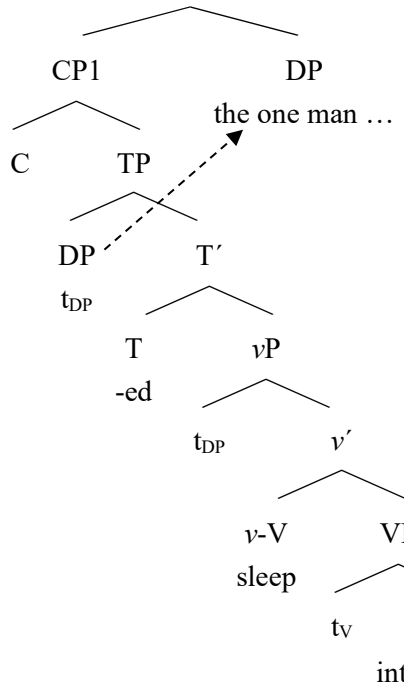
Let us begin with PTC. The acceptability of PTC depends on the length of its postposed subject.

(15) a. ??There walked into the room, the man. (=(3a))

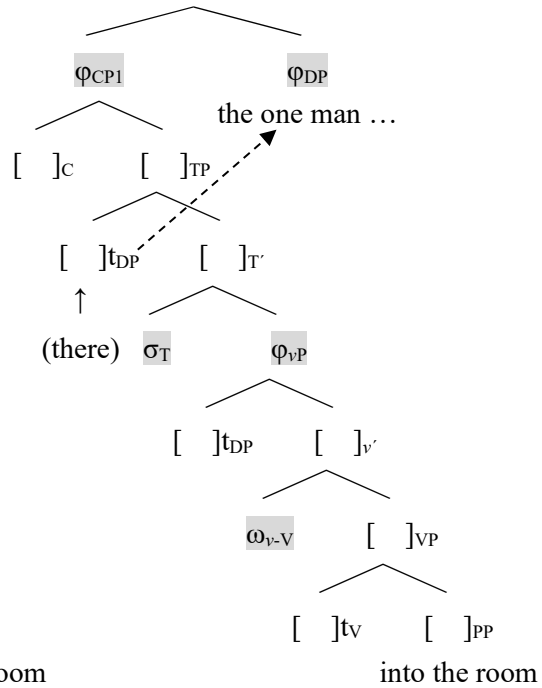
b. There walked into the room, the one man she had no desire to see. (=(3b))

Following Rochemont and Culicover (1990), I assume that the postposed subject moves to the edge of CP, past Spec, TP. Expletive *there* is inserted into Spec, TP at some later point of the derivation. Then, the syntactic structure thus derived is mapped onto the prosodic representation (16b).

(16) a.



b.



Here, notice that the nodes CP1 and the subject DP are both mapped phonological phrases φ by (9b) since both nodes are phases. This means that the linearization rule in (12a) applies to yield the heaviness effect, as predicted in (14). When φ_{DP} is chosen as a P-head, the DP will follow CP1 and be phonetically realized as a heavy constituent as desired.

In principle, φ_{CP1} can also be a P-head. However, this choice causes CP1 to follow DP. This yields the same linearization result as the derivation in which the subject DP stays in Spec, TP. However, it will be ruled out due to a violation of the ban on vacuous movement (Chomsky (1986)). Thus, we only have a linearization pattern of PTC for the structure of (16a).

Next, let us move on to the discussion of HI. Just like PTC, the moved subject of HI has to be heavy.

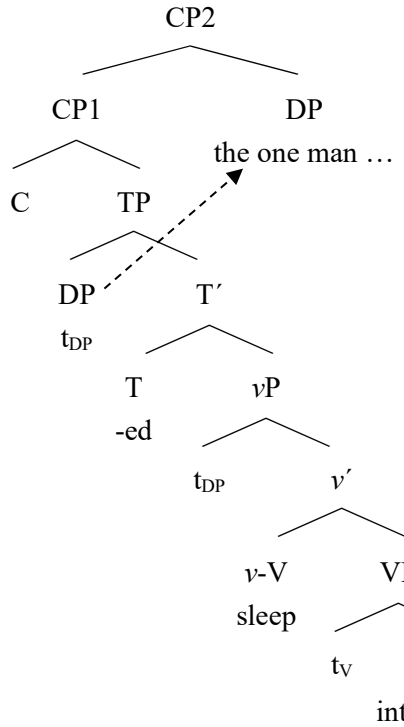
(17) a. * In the room slept fitfully Robin. (=(4a))

b. In the room slept fitfully the students in the class who had heard about the social psych experiment that we were about to perpetrate. (=(4b))

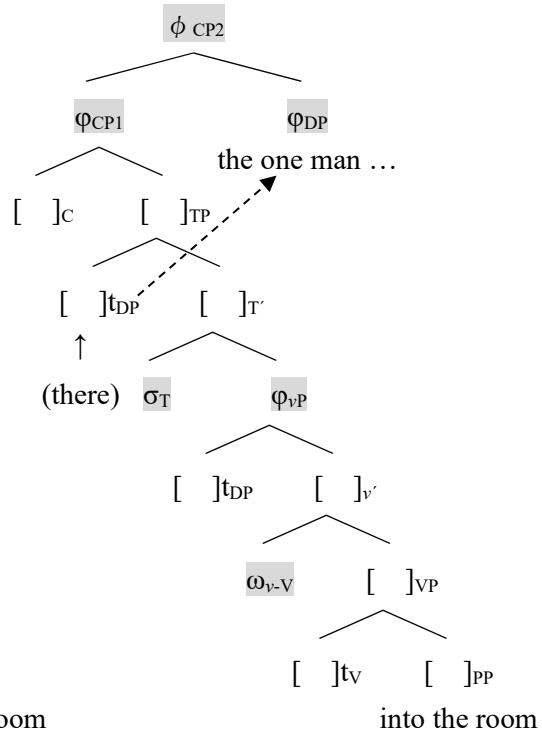
The derivation of (17b) is illustrated in (18a). First, the postposed subject moves through Spec, TP to the CP edge, just as in the case of PTC. In addition to this, in HI, the PP moves to the sentence-initial

position, instead of expletive insertion. Then, the resulting structure will be sent to externalization and undergo phonological phrasing, yielding the prosodic representation in (18b).

(18) a.



b.



The order between the postposed subject and CP1 will be specified in the same way as PTC. Since CP1 and DP are both phases, both of them become φs. Choosing φ_{DP} as a P-head will produce an ordering where DP follows CP1 by (12a). This causes the heaviness condition on the subject, as predicted by (14).

So far, we have discussed the two subject postposing constructions that exhibit the heaviness condition. Then, let us consider the ones in which the postposed subject need not be heavy: LI and CI.

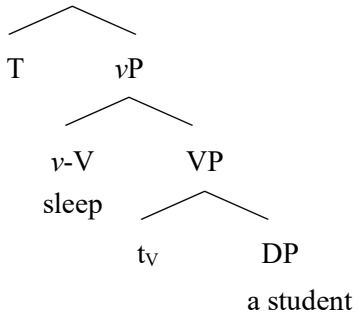
LI is well-formed even when its subject is not heavy.

(19) a. On the stage appeared a student. (=(5a))

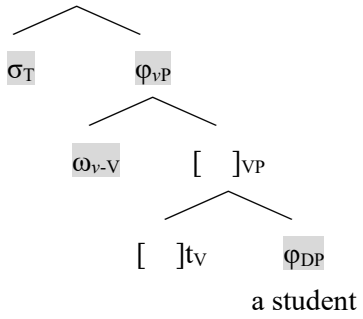
b. On the stage appeared a student who everyone thought was the most talented actress. (=(5b))

Since the predicates of LI are unaccusative verbs , the subjects of LI are base-generated and stay in VP. The examples in (19) thus have the structure as (20a). Then, this structure is mapped to the phonological representation in (20b). Notice that the sister of the subject DP is a trace of V, which is prosodically empty. This means that it needs no order specification. In other words, no linearization rule applies to it. So, according to (14), the postverbal subjects of LI can be light, as desired.[7]

(20) a.



b.



Finally, consider how CI is linearized. Postverbal subjects of CI can also be light.

(21) (Mary had never been to France at that time but …) (=(6))

a. ? she spoke France more fluently than did the other students.

b. ? she spoke France more fluently than did the other students who had ever been to France.

We here adopt Culicover and Winkler's (2008) analysis for the derivation of CI. They reported that the postverbal subjects of CI can follow a cluster of auxiliary verbs, as shown in (22).

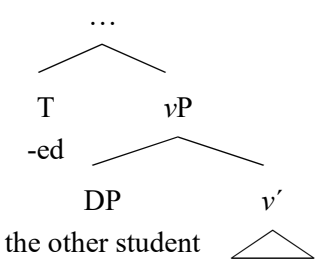
(22) a. But Moktów was much further from the City Center [than had been the OLD town] and the evacuation under the German lines all the more perilous.

b. Some ranchers still permitted the military to use their property, though the vehicles were far more destructive to the land [than had been the soldiers on HORSEBACK].

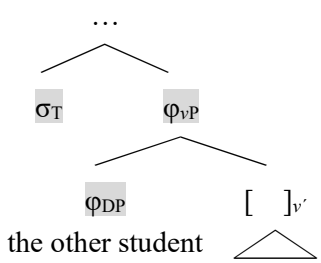
(Culicover and Winkler (2008: 629-630))

This data suggests that the subjects of CI do not rise to Spec, TP. Instead, it stays below the rightmost auxiliary verb. Thus, Culicover and Winkler argue that the subject of CI stays in Spec, *v*P. Then, I assume that CI has a syntactic structure in (23a), which will be phonologically phrased as in (23b).

(23) a.



b.



Importantly, the sister of the subject is *v*′, which is mapped to a prosodically empty node. Therefore, the relevant linearization rule for the structure is (12b). This means that no application of (12a) takes place. So, according to (14), no heaviness effect will be imposed on CI.

So far, I have demonstrated the validity of our prediction (14). The proposed externalization mechanism correctly predicts the heaviness (in-)sensitivity of four different constructions. In PTC and HI, the postverbal subjects and its landing site (CP) are both mapped to φ. So, this structure is linearized

by (12a), which raises the heaviness condition. On the other hand, LI and CI leaves the postverbal subjects in situ, and their sisters are phonetically empty. These structures are linearized by (12b). According to (14), such structures are free from the heaviness requirement.

5. Conclusion

In this paper, I have discussed two issues. First, I pointed out that not every instance of the subject postposing constructions obeys the heaviness condition; PTC and HI are weight-sensitive but LI and CI are not. Thus, the end-weight principle, which is solely based on word order, needs reconsideration. Second, I have proposed a linearization rule in (12) and derived the presence/absence of the heaviness condition for the postverbal subjects.

As far as the current analysis is on the right track, there are two consequences. First, at least at a phrasal level, the application of prosodic principles like the end-weight is structurally restricted. It refers not only to the word order but to prosodic structures. In addition, our analysis crucially depends on the assumption that linearization is a part of externalization. So, the current analysis may provide empirical support for the view in (7) that linearization is a part of externalization.

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NOTES

[1] See Kuno (1979), Quirk et. al. (1985), and Huddleston and Pullum (2002) for the end-weight principle.

[2] See Selkirk's (2011) Match Word for the correspondence between terminal nodes and ωs.

[3] See Dobashi (2003) and Ishihara (2007) among others for the mapping from phases to φs.

[4] Note that (10b) is not a final phonological representation. Rather, it is an intermediate representation. Following Kratzer and Selkirk (2020), I assume that externalization is a two-stage procedure. First, syntactic constituency is mapped to prosodic structure with no mismatch. Next, purely phonological constraints operate modifying the prosodic structure. The later step captures the mismatch between syntax and phonology. Our mapping rule (9) corresponds to the former mechanism, and therefore some additional rules are needed to give an overall picture of externalization, which is left for future work.

[5] Since linearization determines the order between two phonologically realized nodes, empty categories like traces need not be linearized (Takita (2020)).

[6] The intuition of (12a) comes from the proposal of Tokizaki (2018), which reformulates the traditional head parameter in terms of where the phrasal stress falls. According to Tokizaki (2018), the linearization rule is parameterized as to whether the node with stress is linearized leftward or rightward. English chooses the latter option. In line with the analysis of Tokizaki (2018), I also assume that (12a) is parameterized, leaving the cross-linguistic investigation for further research.

[7] The audience of the 41st Conference of the English Linguistic Society of Japan points out that the

sister of φ_{DP} in (20b) need not be linearized because it is an empty category (i.e. trace). See note 5.

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Andrews Amalgam as a Relative Clause*

Tetsuro Hiratsuka
Tohoku University

Keywords：Andrews amalgams, parentheticals, relative clauses, Horn amalgams, it-cleft, sluicing

1. Introduction

This paper addresses the syntactic derivation of Andrews amalgams (AAs), first observed by Lakoff (1974). AAs involve what looks like a sluiced interrogative clause in the argument position of the matrix verb, and its internal element serves as an argument of it, as exemplified in (1).

(1) John invited you'll never guess how many **people** to his party. (Lakoff (1974: 321))

The AA in (1) can be decomposed into two separate sentences, *John invited people to his party* and *you'll never guess how many people*. Thus, the bold-faced part *people* serves as an argument of the matrix verb *invite* even though the shaded part *you'll never guess how many people* intervenes between them. Following Kluck (2011), I will refer to the bold-faced part as the pivot and the shaded part as the intervening clause (IC).

AAs exhibit distinctive characteristics in which the pivot and the remaining elements display different behaviors in terms of syntactic and semantic dependency formation. To begin with, the IC except the pivot is not accessible to the matrix clause.

(2) * Every student$_1$ bought he$_1$ didn't realize how many **books** that day. (De Vries (2012: 163))

(2) shows that it is impossible to interpret the quantified matrix subject *every student* as binding the bound pronoun *he* in the IC subject position. This observation suggests that the IC is opaque to c-command from the matrix clause.

Surprisingly, however, (3) demonstrates that the pivot is c-commanded by both the matrix subject and the IC subject.

(3) Every student$_1$ was kissing, no professor$_2$ could have imagined how many of **his$_{1/2}$ mistresses**. (Kluck (2011: 97))

In (3c), either the matrix subject *every student* or the IC subject *no professor* can establish a variable

binding relation with the pivot *his mistress*. Thus, the pivot is c-commanded by both the matrix subject and the IC subject, despite the fact that the matrix subject does not c-command the IC subject, as demonstrated in (2).

There is another fact that shows the accessibility of the pivot to the matrix clause. Sub-extraction from the pivot is also possible as in (4)

(4) Tolkien is **the author** Bob read you can imagine how many **books by**. (Kluck (2011: 93))

In this sentence, the head of the relative clause *the author* is extracted from the pivot *how many books by* to the matrix clause as the head of the relative clause.

2. Previous Analyses

2.1. Tsubomoto and Whitman (2000)

Tsubomoto and Whitman (2000) assume that the matrix verb takes a null argument, which the IC adjoins to as a relative clause, and that the sluiced CP containing the *wh*-phrase covertly moves to the highest position in the IC (Spec, CP). This enables the null element to bind the *wh*-phrase, establishing a relationship between them. For example, the structure of (1) will be as in (5).

(5) John invited [[$_{NP}$ **e**]$_1$ [$_{CP1}$ [$_{CP2}$ how many **people**$_1$ ~~[$_{TP}$ John invited t$_2$]~~] [you'll never guess [t$_{CP2}$]]]] to his party.

The problem is that the element in the matrix clause does not c-command the one in the IC. Recall that the quantified matrix subject cannot bind the variable in the IC, as in (2). Thus, the null argument in the matrix clause cannot bind the *wh*-phrase in the IC since it is an opaque domain to the c-command.

2.2. Kluck (2011)

Kluck (2011) views the IC as a parenthetical clause. It is impossible for a matrix quantifier to bind a variable in a parenthetical clause, as shown in (6). Thus, a parenthetical clause forms an opaque domain like the IC.

(6) * Every$_1$ guest – he$_1$ just arrived – was talking about Hank. (De Vries (2007: 212))

To capture the opacity, she adapts Parenthetical merge (*Par*-merge) proposed by De Vries (2007) as briefly illustrated below.

(7) [$_{ParP}$ XP [$_{Par'}$ Par [YP]]]

Par-merge creates a parenthetical phrase headed by Par, and Par itself and its complements form a domain that is not accessible to syntactic operations, or a domain opaque to syntactic relations such as c-command. For example, the Par head in (7) takes YP as its complement, creating the invisible domain

Par′. Subsequently, Par′ merges with XP to form the specifier.

Based on this assumption, Kluck (2011) proposes that (1) has the structure in (8).

(8) John invited [$_{ParDP}$ e [$_{Par'}$ Par [$_{CP}$ you'll never guess [$_{CP}$ [how many **people**]$_1$ ~~John invited t$_1$ to the party~~]]]] to the party.

The IC *you'll never guess how many people* is a sluiced clause which is a complement of the Par head. The Spec, ParP is a null argument *e*.

Although Kluck (2011) successfully accounts for the invisibility of the IC by the introduction of ParP, the analysis suffers from the fact that the extraction from the pivot does not induce ungrammaticality, while the extraction from a parenthetical clause does, as shown below.

(9) a. Tolkien is the author Bob read you can imagine how many **books by**. (Kluck (2011: 93))

b. Tolkien is the author$_1$ Bob read [$_{ParPDP}$ e [$_{Par'}$ Par [$_{CP}$ you can imagine [$_{CP}$ how many **books by t$_1$** [$_{TP}$…]]]]]

(10) * What$_1$ did the police – the commissioner suspected Hank stole t$_1$ – search his house?

(De Vries (2007: 209))

According to Kluck's analysis, the pivot is contained within Par′, which is inaccessible to syntactic operations from outside. Then, considering (9) and (10), it remains unclear why extraction from the parenthetical clause is permitted exclusively in AAs. Consequently, this proposal would incorrectly predict that no element moves out of the pivot to the matrix clause. However, *the author* in (9) does move out of the IC that contains the pivot to the beginning of the relative clause, contrary to the prediction.

2.3. Matsuyama (2015)

Matsuyama (2015) argues that the head of the IC is the pivot, with the remaining parts of the IC being attached to the pivot.

(11) John invited [$_{NP}$ [$_{QP}$ [$_{DegP}$ [$_{ParP}$ [$_{TP}$ you'll never guess]] how] many] **people**] to the party.

As shown in (11), Matsuyama also assumes ParP, but the *wh*-phrase is not included within ParP. ParP in this analysis contains the IC excluding the *wh*-phrase (*you'll never guess* in (11)), and it adjoins to the *wh*-phrase (*how many* in (11), which is taken to be QP in Matsuyama). The resultant phrase then serves as a pre-modifier for the pivot.

However, the IC subject does not c-command the pivot in this proposal, so that Matsuyama (2015) faces challenges in accounting for the acceptability of (3), in which the quantified subject in the IC binds the variable in the pivot. The simplified structure of the sentence is given in (12).

(12) Every student$_1$ was kissing [$_{NP}$ [$_{ParP}$ no professor$_2$ could have imagined] how many of **his$_{1/2}$ mistresses**]

As shown in (12), the bound variable *his* is out of the scope of the IC subject *no professor*, although the quantified matrix subject c-commands it. Thus, this structure incorrectly excludes the interpretation in which the *no professor* binds *his* in the pivot.

3. Proposal and Analysis

In this section, I introduce my proposal along with the assumptions I make. Building on the work of De Vries (2007) and Kluck (2011, 2015), I posit that the IC in AAs functions as a parenthetical clause introduced by the Parenthetical head Par. Additionally, aligning with Tsubomoto and Whitman (2000), I assume that AAs involve sluiced CP, and consider the IC as a type of relative clause. The crucial distinction from the previous analyses lies in the presence of two pivots inside and outside the IC in AAs, with the IC left-adjoining to the latter as a relative clause. I illustrate how I systematically derive the AA in (1) repeated as (13) step by step.

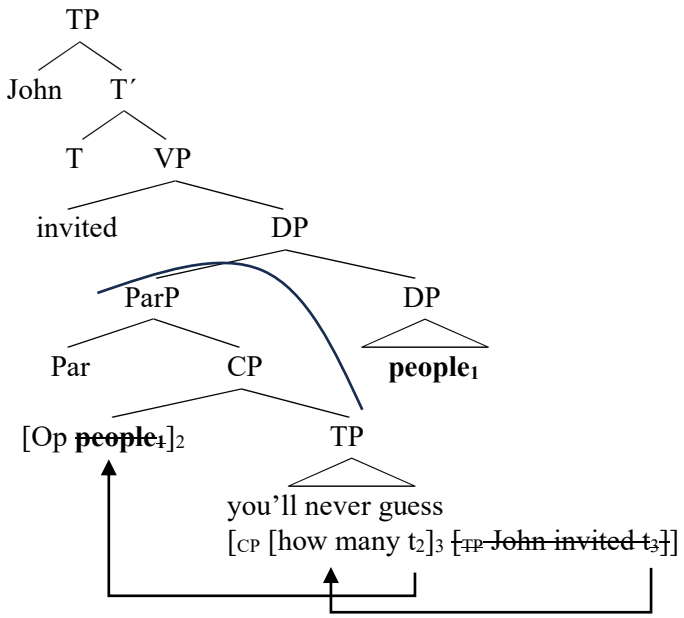
(13) John invited you'll never guess how many **people** to his party. (Lakoff (1974: 321))

(14) a. You'll never guess [$_{CP}$ [how many [Op **people$_1$**]]$_2$ [$_{TP}$ John invited t$_2$]].

b. [$_{CP}$ [Op **people$_1$**]$_2$ C you'll never guess [$_{CP}$ [how many t$_2$] [$_{TP}$ …]]]

c. [$_{DP}$ [$_{ParP}$ Par [$_{CP}$ [Op **people$_1$**]$_2$ C you'll never guess [$_{CP}$ [how many t$_2$] [$_{TP}$ …]]]] **people$_1$**]

d.



In (14a), I present the initial structure of the IC. It encompasses an indirect interrogative clause, which, in line with the assumptions in the two previous approaches, will be deleted. In (14b), the pivot *people* with the operator OP moves to CP, serving as the internal head of the relative clause. This CP clause then adjoins to the external head (or *people* to function as a matrix argument) of the relative clause, as illustrated in (14c). Subsequently, as in (14d), the relative clause-internal head [*Op people*] undergoes deletion under identity with the external head. This process of relativization conforms to the so-called

matching analysis proposed by Sauerland (2000).[1,2]

One may wonder whether the movement of the pivot to Spec, CP violates criterial freezing. Typically, it is said that sentences involving such movement are ungrammatical. However, if only a part of a *wh*-phrase is moved, the acceptability of the sentence improves.

(15) a. * Which dog_1 do you wonder [t_1 C_Q [John likes t_1]]

b. ?? Which dog_1 do you wonder [which picture of t_1 C_Q [John likes t_1]]

(Epstein, Kitahara, and Seely (2015: 230))

Furthermore, Radford (2009) and Chaves (2012) observe acceptable sentences in which a part of the *wh*-phrase is extracted from the interrogative CP to form a relative clause.

(16) a. There is discussion in the book about the motivation for serial killers, *which* I don't know [how much of ---] we have to print. (Radford (2009: 428))

b. This is [the handout]$_2$ that I can't remember [how many copies of t_2]$_1$ we have to print t_1.

(Chaves (2012: 500))

Although I cannot offer a principled explanation for this contrast, (16) indicates that the proposed movement of the pivot for relativization is not impossible.

Let me now proceed to analyze the empirical facts discussed so far. Firstly, the IC subject is not bound by the matrix clause, as illustrated in (2), repeated below. The structure is provided in (17b).

(17) a. * Every $student_1$ bought he_1 didn't realize how many **books** that day. (De Vries (2012: 163))

b. Every $student_1$ bought, [$_{DP}$ [$_{ParP}$ Par [$_{CP}$ [Op ~~**books**$_2$~~]$_3$ C he_1 didn't realize [$_{CP}$ [how many t_2]$_3$] [$_{TP}$ …]] **books**$_2$]].

The IC is opaque to binding because it is the parenthetical phrase ParP. Therefore, the matrix quantifier phrase *every student* cannot bind the IC subject.

Secondly, the pivot is accessible from both the matrix clause and the IC. The sentence and its structure are given in (18a, b), respectively.

(18) a. Every $student_1$ was kissing, no $professor_2$ could have imagined how many of **his**$_{1/2}$ **mistresses**.

(Kluck (2011: 97))

b. Every $student_1$ was kissing, [$_{DP}$ [$_{ParP}$ Par [$_{CP}$ [Op ~~**his mistresses**$_3$~~]$_4$ C no $professor_2$ could have imagined [$_{CP}$ [how many of [Op ~~**his**$_2$ **mistresses**$_3$~~]$_4$] [$_{TP}$ …]] **his**$_1$ **mistresses**$_3$]].

The matrix subject is not able to c-command the IC due to its opaqueness. However, in my proposal, the matrix clause also has the pivot, so that *every student* can bind it in the matrix clause. Furthermore, as is clear from the structure, the IC subject *no professor* can bind the pivot in the IC (*his mistress*$_3$). Thus, the proposed account can also account for the binding ambiguity in (18).[3]

Third, the sub-extraction from the pivot, repeated in (19a), is possible, which poses a challenge for Kluck (2011). The structure is presented in (19b).

(19) a. Tolkien is the author Bob read you can imagine how many **books by**. (Kluck (2011: 93))

b. Tolkien is the author$_1$ Bob read [$_{DP}$ [$_{ParP}$ Par [$_{CP}$ [Op ~~**[books by the author]**$_2$~~]$_3$ C you can imagine [$_{CP}$ [how many t$_3$] [$_{TP}$ …]] **[books by t$_1$]$_2$**]].

The matrix pivot is available for sub-extraction since, needless to say, it does not reside in the ParP, the opaque domain for syntactic operations.

4. Extension to Horn Amalgam

In this section, I expand my approach to another well-known amalgam construction called Horn Amalgam (HAs). Similar to AAs, HAs involve constructions where two propositions are merged into a single sentence.

(20) Bea kissed I think it was **Bob** at the party. (Kluck (2015: 107))

The HA in (1) can be decomposed into two sentences: *Bea kissed Bob at the party* and *I think it was Bob*. Thus, the bold-faced part *Bob* in (1) is interpreted as an argument of the verb *kiss*, even though it is not immediately followed by *Bob*, since the string *I think it was* intervenes between them. I designate the underlined clause as the IC and the bold-faced part as the pivot, following the same terminology used in AAs. HAs share many features with AAs such as the opaqueness of the IC, the accessibility of the pivot both to the matrix clause and to the IC, and the possibility of extraction from the pivot. Each example is shown in (21a, b, c), respectively.

(21) a. * No professor$_1$ taught, he$_1$/his$_1$ students claimed it was **a boring class**. (Kluck (2011: 97))

b. Every dean$_1$ was kissing, not a single professor$_2$ would have suspected it was **his$_{1/2}$ mistress**. (Kluck (2011: 97))

c. ? Tolkien is **the author**$_1$ Bob read I think it was **books by t$_1$**.

(21a) shows that the matrix quantified subject *no professor* cannot bind the bound variable in the IC subject. Conversely, (21b) illustrates that the pivot, seemingly embedded in the IC, can access not only the IC but also the matrix clause, owing to the fact that the bound variable *his* in the pivot can be bound either by the matrix subject *ever dean* or by *not a single professor*. (21c) presents a case in which an element in the pivot, *the author* (or a relative operator), is moved from the pivot to the matrix clause. This example further suggests that the pivot is available for syntactic operations from the matrix clause.

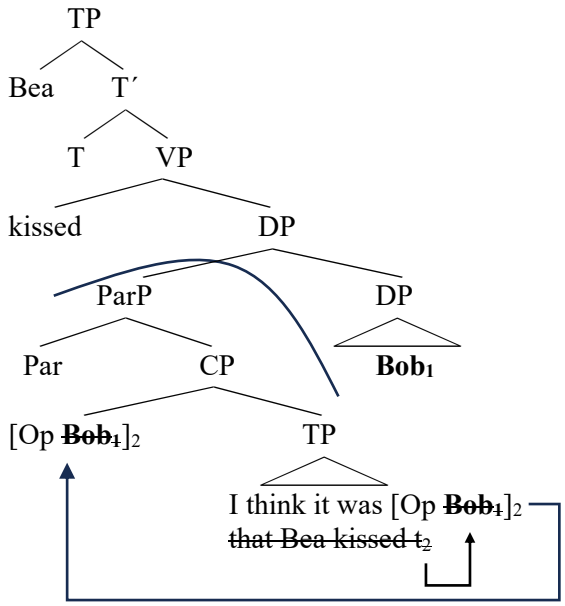
Based on the proposal, I posit that an HA has two pivots: one in the matrix clause and the other in the IC, and that the IC is a kind of *it*-cleft whose presuppositional clause is deleted.[4] I illustrate the derivation of (20) in (22).

(22) a. I think it was **Bob$_1$** [$_{CP}$ that Bea kissed t$_1$] at the party.

b. [$_{CP}$ [Op **Bob**]$_1$ C [I think it was t$_1$ [$_{CP}$ …]]]

c. [$_{DP}$ [$_{ParP}$ Par [$_{CP}$ [Op **Bob$_1$**]$_2$ C [I think it was t$_2$ [$_{CP}$ …]]]] **Bob$_1$**]

d.



First, the derivation begins with (22a). The IC involves a *that*-clause which will be deleted later. Second, as in (22b) the pivot *Bob* and Op moves to the highest CP for the purpose of relativization. Third, in (22c) the clause formed in (22b) merges with the Par head and forms an opaque domain. Lastly, the elements of the matrix clause are introduced, and the derivation is completed in (22d).[5]

This accounts for the empirical facts in (21). The structures of (21a, b, c) are given in (23a, b, c), respectively.

(23) a. No professor$_1$ taught, [$_{DP}$ [$_{ParP}$ Par [$_{CP}$ [Op ~~**a boring class$_2$**~~]$_3$ C [he$_1$/his$_1$ students claimed it was [Op ~~**a boring class$_2$**~~]$_3$ [$_{CP}$ …]]]] **a boring class$_2$**].

b. Every dean$_1$ was kissing, [$_{DP}$ [$_{ParP}$ Par [$_{CP}$ [Op ~~**his mistress$_3$**~~]$_4$ C [not a single professor$_2$ would have suspected it was [Op ~~**his$_2$ mistress$_3$**~~]$_4$ [$_{CP}$ …]]]] **his$_1$ mistress$_3$**] at the party.

c. Tolkien is the author$_1$ Bob read [$_{DP}$ [$_{ParP}$ Par [$_{CP}$ [Op ~~**books by the author$_1$**~~]$_2$ C I think it was t$_2$ [$_{CP}$ …]]] **books by t$_1$**]

First of all, as in (23a), the matrix subject *no professor* cannot bind the IC subject *he* or *his student* because the latter appears in the opaque domain, ParP.[6] Second, as in (23b), my proposal can also capture the ambiguity in the interpretation of the variable *his* in the pivot by positing the two pivots. Each subject binds the pivot in each clause, resulting in the two possible interpretations. Third, the matrix pivot accounts for the possibility of extraction from the pivot in (23c). Since the extracted constituent in the pivot is not in the IC but is in the matrix clause, there is nothing preventing it from moving.

5. Conclusion

This paper has introduced an alternative syntactic derivation of Andrews Amalgams (AAs). In my

proposal, both the matrix clause and the IC have a pivot, and the IC adjoins to the matrix pivot as a relative clause introduced by ParP. This approach effectively accounts for the behaviors of AAs, including the opaqueness of the IC and the accessibility of the pivot to both the matrix clause and the IC. As a result, my analysis successfully deals with the problems of the previous analyses. Furthermore, I have demonstrated that my analysis can be applied to Head-Adjuncts (HAs), which share similar characteristics with AAs.

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NOTES

[1] Thus, in my proposal, the IC functions as a non-restrictive relative clause, sharing characteristics with non-restrictive relatives, including opaqueness to the matrix clause. For example, the bound variable in the relative clause cannot be bound by the matrix quantifier, as illustrated in (i).

(i) * Everyone$_1$ spoke about the Millennium Dome, which he$_1$ had visited. (De Vries (2006: 256))

[2] This approach is motivated by the fact that the pivot of AAs and the head of the relative clause both behave as an element that belongs to the two clauses. Taking (i) for example, the reflexive pronoun *himself* in the relative head can refer to either the matrix subject *John* or the relative-clause subject even though it surfaces in the matrix clause

(i) John$_1$ bought **the picture of himself$_{1/2}$** that Bill$_2$ saw. (Kayne (1994: 87))

[3] This analysis might be problematic because when the IC subject binds the bound pronoun in the pivot in the IC, the one in the matrix clause remains unbound and thus not licensed. This problem will be solved by a positive licensing requirement (PLR) proposed by Saltzman (2019), according to which an element that is dependent on another element can be deleted at LF if it is not licensed in a particular position. An example of an element with a PLR is an idiomatic expression, in which an idiomatic verb and an idiomatic NP have to be adjacent. Consider (i).

(i) a. The [careful track] [that she's keeping of her expenses] pleases me.

b. the [~~careful track~~] [$_{CP}$ ~~careful track~~$_1$ C she is keeping careful track$_1$ of her expenses]

(Saltzman (2019: 12), slightly modified)

(ia) involves a relative clause whose head NP is an idiomatic NP *careful track*, and it is licensed only in the complement position of the idiomatic verb *keep* within the relative clause. Therefore, as shown in (ib), *careful track* in the head NP is deleted at LF because it is not licensed in that position.

I consider bound variables to be elements with a PLR because the interpretation is dependent on its antecedent. Thus, the problem is circumvented by deleting the unlicensed bound variable at LF as shown in (ii).

(ii) Every student$_1$ was kissing, [$_{DP}$ [$_{ParP}$ Par [$_{CP}$ [Op ~~**his mistresses**~~$_3$]$_4$ C no professor$_2$ could have

imagined [$_{CP}$ [how many of [Op **his$_2$ mistresses$_3$**]$_4$] [$_{TP}$ …]] ~~**his$_1$ mistresses$_3$**~~]].

[4] Tsubomoto and Whitman (2000) and Kluck (2011) also address the analysis of HAs and assume that HAs involve a reduced *it*-cleft.

[5] The pivot of an *it*-cleft can undergo relativization, as proposed in my analysis. Indeed, Haegeman et al. (2015) observe data in which the pivot of an *it*-cleft undergoes relativization, and the informants I consulted find (ib) acceptable.

(i) a. This is *the woman* whose job it is that I am applying for. (Haegeman et al (2015: 80))

b. ? This is *the woman* that I think it was that I met.

The pivots of these *it*-clefts (*whose job* in (ia) and *woman* in (ib)) move to form a relative clause, which means that the proposed movement for HAs is a legitimate operation.

[6] As for the invisibility of the IC of AAs and HAs such as (2) and (21a), Kluck (2011) explains these in a manner consistent with my approach.

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Get 受動文における by 句と Theta System*

森 敏郎（Toshiro Mori）
名古屋大学大学院（Nagoya University）

キーワード：Get 受動文, (暗黙の)by 句, 二次的動作主, Theta System, Cluster Distinctness

1. 導入

Get 受動文の by 句の振る舞いは be 受動文といくつかの点で異なる。第一に、(1)のような例における受動分詞により表される出来事について、be 受動文では Mary が John を故意に撃ったと解釈される。一方、get 受動文では主語が出来事への責任を持ち、John は故意に自分が Mary に撃たれるようにしたと解釈される。get の主語が出来事に対して持つこのような責任の解釈は二次的動作主(Secondary Agent)と呼ばれている。[1] 第二に、get 受動文の by 句が担う意味役割の種類は限られている。(1b)のように get 受動文の by 句が動作主の役割を担えないことに加え、経験者も担うことができない(cf. (2))。第三に、be 受動文においてのみ(暗黙の)by 句は目的を表す不定詞節の PRO をコントロール可能であり、照応形を束縛できる(cf. (3)-(4))。

(1) a. John **was** shot by Mary *deliberately*.
(* > John acted deliberately), (> Mary acted deliberately)
b. John **got** shot by Mary *deliberately*.
(> John acted deliberately), (* > Mary acted deliberately) (Givón (1993: 67))

(2) a. Harry **was** feared by John.
b. * Harry **got** feared by John. (Fox and Grodzinsky (1998: 325, 328))

(3) a. The ship **was** sunk [PRO to collect insurance money].
b. * The ship **got** sunk [PRO to collect insurance money].
(Fox and Grodzinsky (1998: 327))

(4) a. Food should never **be** served only for oneself.
b. * Food should never **get** served only for oneself.(Fox and Grodzinsky (1998: 327))

本論文はこれらの特性が Reinhart (2002)が提案する Theta System(TS)とその改訂案である Sugimoto (2012)の枠組みに基づき説明されることを示す。

2. Get 受動文の統語構造と by 句の位置付け

理論的枠組みを導入する前に、get 受動文の統語構造について論じる。現代英語における get 受動文について Mori and Tanaka (2022)が提案する以下の構造を採用する。

(5) $[_{TP}$ John T $[_{vP}\ t'_{John}\ [_{v'}\ [_{v}$ get$_{[\cancel{EPP}]}][_{v^*P}\ [_{PP}$ by Mary$]\ [_{v^{*\prime}}\ [_{v^*}$ V+$v^*_{(=Participle)}]\ [_{VP}\ t_V\ t_{John}]]]]]]$

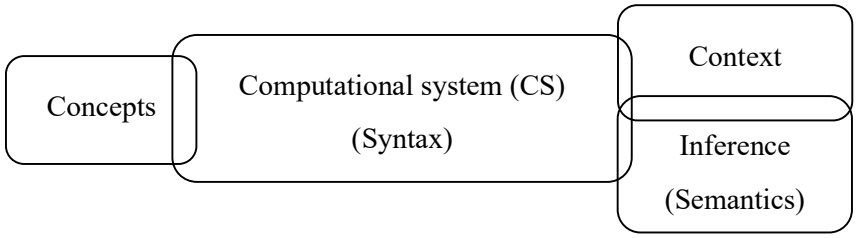
受動の get は史的発達における文法化を経て *v* として位置づけられ、受動分詞句(*v**P)を補部にとる。get の主語は V の補部で一次的な意味役割(e.g. Patient)を、また、get の指定部へと移動して二次的な意味役割(i.e. Secondary Agent)を付与される。これにより get の主語が担う出来事への責任の解釈が保証される(cf. (1b))。最後に、受動分詞句の表記(*v**P)はフェイズ性を有することを意味せず、対応する能動文と同様に外項として by 句が導入されることを反映している(Collins (2005))。

3. Theta System[2, 3]

前節までの議論をふまえると、get 受動文の by 句が動作主の役割を担えないこと(cf. (1b))は、2 つの項(get の主語と by 句)が同じ意味役割を同時に持つことができないという一般化に還元される可能性がある。この一般化を形式的にとらえるため、Reinhart が提案する TS と Sugimoto によるその改訂案を導入する。

Reinhart は部門間の接触関係が(6)に示されるような構成である可能性を指摘し、また、語彙から統語部門への写像を扱う枠組みとして TS を提案している。TS は、Concepts 部門の中心的体系を成す。また、TS において符号化されている θ-grid を備えた語彙記載項(Base entry)をもとに、(7)の(i)-(iv)に示す手続きを必要に応じて経ることで統語への写像が行われる。

(6) 部門間の接触関係



(cf. Reinhart (2006))

(7) Base entry → Marked entry → CS(Syntax)

(i) Lexicon marking (iii) CS merging instructions
(ii) Arity operations (iv) Cluster distinctness(CD)

(cf. Reinhart (2002))

本節では(iv)の CD について動詞 worry を例に論じる。(8)に示す項具現から(9a)の θ-grid が想定されるが、各意味役割は素性に基づきより原始的な単位で形式化される(cf. (9b))。TS では(10)-(11)に示すように、出来事の因果関係に寄与する[±c(ause change)]と参与者の心的状態の出来事への関与を表す[±m(ental state)]により 8 つのクラスターが定義される。対応する伝統的意味役割名は必ずしも一対一に対応していない(cf. (11b, e))。

(8) a. $[_{Cause}$ Something] worries $[_{Experiencer}$ Lucie]
b. $[_{Experiencer}$ Lucie] worries $[_{Subject\ Matter}$ about something] (Reinhart (2002: 258))

(9) Base entry of *worry*

a. (Cause, Experiencer, Subject Matter)

= b. ([+c], [−c+m], [−m]) (cf. Reinhart (2002: 273))

(10) a. [±c]: cause change

b. [±m]: mental state (cf. Reinhart (2002: 230))

(11) a. [+c+m] Agent

b. [+c−m] Instrument/Cause

c. [−c+m] Experiencer

d. [−c−m] Patient/Theme

e. [+c] Cause

f. [+m] Sentient

g. [−m] Subject Matter

h. [−c] Goal/Benefactor (cf. Reinhart (2002: 232, 279, 285))

(12) Target/Subject Matter Restriction (T/SM 制限)

感情の対象/題材(Target/Subject Matter)項は原因(Cause)項と共起することができない。 (cf. Pesetsky (1995))

(13) Cluster Distinctness

互いのクラスターが少なくとも 1 種類の素性を共有し、かつ、異なる値あるいは共有していない種類の素性を持たなければならない。

(cf. Reinhart (2002: 264))

(14) * The doctor's letter$_{[+c](=Cause)}$ worried Lucie$_{[-c+m](=Experiencer)}$ about her health$_{[-m](=Subject\ Matter)}$. (Reinhart (2002: 261))

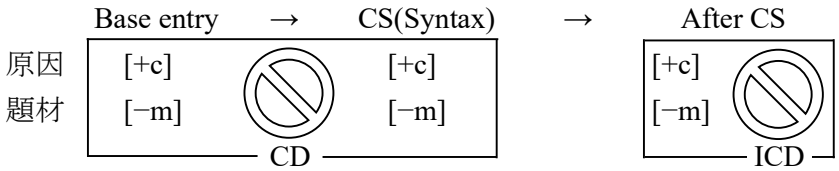
これに基づき Reinhart は(12)に示す T/SM 制限を(13)の CD に基づき説明している。CD は互いのクラスターが少なくとも 1 種類の素性を共有し、かつ、異なる値あるいは共有していない種類の素性を持つことを要求する。これに従い、(14)のような文は[+c]と[−m]が同じ種類の素性を共有していないため非文法的であると説明される。

このような説明にとって、主語が有生である以下の例が容認されることを Sugimoto は問題としている。(15)では主語が有生であり、文脈との整合により動作主の解釈を持ち得ることが容認性の改善に関わると考えられるが、(16)に示す通り CD が適用される語彙から統語部門への写像のタイミングでは主語は有生性にかかわらず[+c]であるため、(14)と(15)の例は共に非文法的であると誤って予測される。

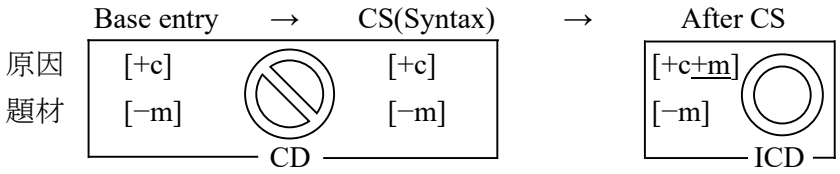
(15) ? Albert$_{[+c](=Cause)}$ worried John$_{[-c+m](=Experiencer)}$ about the adequacy of his insurance coverage$_{[-m](=Subject\ Matter)}$. (Bouchard (1995: 333))

(16) (14)-(15)における CD 違反と素性充填による ICD 違反の救済

(14)



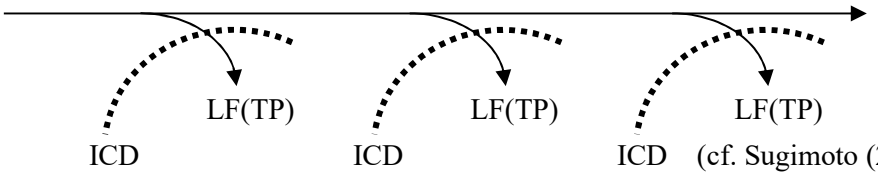
(15)



この問題に対処するため、Sugimoto は LF に課される Interpretive Cluster Distinctness(ICD)という CD の代案および素性充填操作を提案している(cf. (17), (19))。ICD は(6)の構成における Inference において適用される条件であり、互いのクラスターが少なくとも 1 つの素性を共有し、かつ、その素性が逆の値を指定されていることを要求する。(18)に示されるように、この評価は TP をサイクルとして行われ、ICD に抵触する場合、その救済として素性充填が行われる。素性充填とは、(19)に示す通り、(6)の部門構成における Context の働きにより、正の値を持つ素性をクラスターに充填する操作である。

(17) Interpretive Cluster Distinctness
互いのクラスターが少なくとも 1 つの素性を共有し、かつ、その素性が逆の値を指定されなければならない。 (cf. Sugimoto (2012: 375))

(18) ICD is applied cyclically at each transferred TP.



(cf. Sugimoto (2012: 379))

(19) Feature-Suppletive Operation

a. The [+c] cluster is supplied with the +m-feature by context at the C-I interface. (Sugimoto (2012: 374))

b. [T]he feature-suppletive operation is a kind of repair or last-resort mechanism activated only when the representation fails to meet the need of the inference system, that is, the need of ICD […]. (Sugimoto (2012: 377))

(20) ? [$_{TP}$ Albert$_{[+c](=Cause)}$ worried John$_{[-c+m](=Experiencer)}$ about the adequacy of his insurance coverage$_{[-m](=Subject\ Matter)}$]. (=(15))

a. ∃e (… & **[+c]**(e, Albert) … & **[−m]**(e, the adequacy of his insurance coverage)) (=∃e (… & Cause(e, Albert) … & Subject Matter(e, the adequacy of his insurance coverage)))

→ b. ∃e (… & **[+c+m]**(e, Albert) … & **[−m]**(e, the adequacy of his insurance coverage)) (cf. Sugimoto (2012: 378))

以上に示した枠組みの下で、(15)の容認可能性は(20)に示される派生により説明される。統語表示が(6)の Inference に送られると出来事意味論の形式(20a)に変換され ICD が適用されるが、(20a)では[+c]と[−m]がこれに違反する。この救済策として Context の働きにより[+m]が[+c]に充填されることで適格な解釈(20b)が導かれる。一方、(14)では主語が無生物であることが心的状態([+m])と相容れず救済されない。したがって、(16)に示されるように、(15)のみが容認

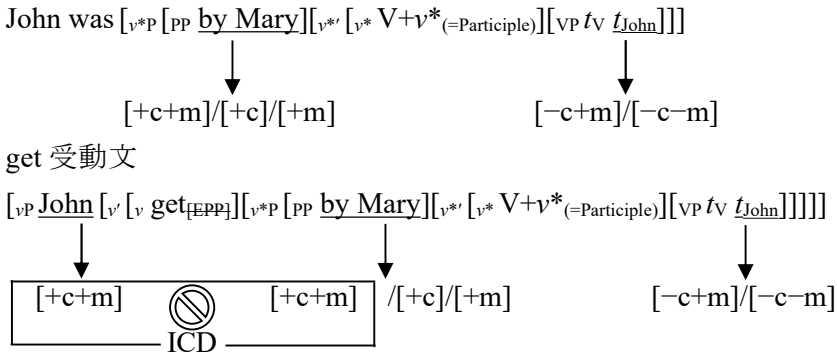
されることになる。本論文では ICD と素性充填の枠組みを採用するが、後者について Sugimoto とは異なり素性充填は正の値だけでなく負の値での充填も可能であると提案する。[4]

(21)　素性充填についての代案
素性充填は正負どちらの値でも充填可能である。

4. Get 受動文における by 句の振る舞い

Get 受動文の統語構造(cf. (5))、TS、ICD、素性充填に基づき get 受動文の by 句の諸特性を説明することになるが、その前に(7)の体系における対格付与の仕組みについて論じる。詳細は appendix に述べられているが、概略、θ-grid に正の値のみから成るクラスター(=[+c+m], [+c], [+m])に加え[−c+m]あるいは[−c−m]が含まれるとき動詞は対格付与能力を持つ。受動文は一般に対格付与能力を持つ動詞から派生されること、また、受動分詞の項は対応する能動文と並行的な位置に導入されること(cf. (5))から、まず be 受動文について、各クラスターは(22a)のように分布すると考えられる。ICD に抵触しない限り、受動分詞の項が担う意味役割の種類は制限されない。

(22)[5]　a.　be 受動文



対照的に、(22b)に示される get 受動文では、get が付与する Secondary Agent(=[+c+m])が受動分詞により付与される意味役割と弁別される必要があるため、by 句も Agent を担うことはできない。これにより、(23)に示す動作主志向副詞に関わる対比が説明される。Deliberately は動作主(=[+c+m])を修飾するため、(23a)の get 受動文において表層主語を修飾する。一方で、同受動文の by 句は表層主語が担う[+c+m]との間の ICD 違反を避けるために[−m]の素性充填を受けているため、deliberately に修飾されない(cf. 注 5)。一方、(23b)の be 受動文について、受動分詞 shot の外項([+c])と内項([−c−m])の間の関係それ自体は ICD に違反していないため、素性充填は動機づけられず by 句が[+c]を担うことになると予測されるが、実際には deliberately が要求する動作主項の存在を保証するために by 句への[+m]の素性充填が働いている。[6]

(23)[7]　a.　John$_{[+c+m]}$ **got** shot $t_{John[-c-m]}$ by Mary$_{([+c]\rightarrow[+c\underline{-m}])}$ *deliberately*$_{(modifying\ [+c+m])}$.
(> John acted deliberately), (* > Mary acted deliberately)
(Base entry: *get* ([+c+m]), *shoot* ([+c], [−c−m]))
b.　John **was** shot $t_{John[-c-m]}$ by Mary$_{([+c]\rightarrow[+c\underline{+m}])}$ *deliberately*$_{(modifying\ [+c+m])}$.

(* > John acted deliberately), (> Mary acted deliberately)
(Base entry: *shoot* ([+c], [−c−m]))

(24) a. * The ship$_{[+c+m]}$ **got** sunk $t_{\text{the ship}[-c-m]}$ ((implicit) *by*-phrase$_{i([+c]\rightarrow[+c\underline{-m}])}$) [PRO$_{i(\text{requiring } [+c+m])}$ to collect insurance money].
(Base entry: *get* ([+c+m]), *sink* ([+c], [−c−m]))

b. The ship **was** sunk $t_{\text{the ship}[-c-m]}$ ((implicit) *by*-phrase$_{i([+c]\rightarrow[+c\underline{+m}])}$) [PRO$_{i(\text{requiring } [+c+m])}$ to collect insurance money].
(Base entry: *sink* ([+c], [−c−m]))

(23)の対比と同様の説明が、コントロール不定詞節を伴う(24)の対比にもあてはまる。目的を表す不定詞節の PRO はコントローラーに動作主(=[+c+m])の解釈を要求するが、(24a)のような get 受動文において(暗黙の)by 句が[+c+m]を担うことは許されない。これは、表層主語が担う[+c+m]との間で ICD 違反が生じることになるからである。一方、(24b)の be 受動文について、受動分詞 sunk の外項([+c])と内項([−c−m])の間の関係それ自体は ICD に違反していないため、素性充填は動機づけられず by 句が[+c]を担うことになると予測されるが、実際には PRO がコントローラーに要求する動作主の解釈を保証するために by 句への[+m]の素性充填が働くと仮定する。

束縛に関わる(25)の対比について、これは束縛とは独立した要因により実際には説明される。具体的には、for 句が要求する行為者の強い意図性(=[+c+m])と get 受動文の by 句が担う解釈が両立しないことが原因であると主張する。

(25) a. * Food$_{[+c+m]}$ should never **get** served $t_{\text{food}[-c-m]}$ ((implicit) *by*-phrase$_{([+c]\rightarrow[+c\underline{-m}])}$) only [for oneself]$_{(\text{requiring } [+c+m])}$.
(Base entry: *get* ([+c+m]), *serve* ([+c], [−c−m]))

b. Food should never **be** served $t_{\text{food}[-c-m]}$ ((implicit) *by*-phrase$_{([+c]\rightarrow[+c\underline{+m}])}$) only [for oneself]$_{(\text{requiring } [+c+m])}$.
(Base entry: *serve* ([+c], [−c−m]))

この点について、Reed (2011)が指摘する accidental Agent という概念について概観する。Accidental Agent とは、(26)に示すような、出来事に参与してはいるがその実現に支配力を持つわけではない動作主のことを指す。本論文では、このような動作主は[+c]に相当する解釈を持ち、典型的な動作主の素性指定である[+c+m]とは異なると仮定する。この仮定に基づくと、(27)-(28)のような動作主志向副詞や PRO を伴う例が非文法的であることは、それらが要求する強い意図性(=[+c+m])が win や cure 等の動詞がとる外項には欠如していることによると説明される。[8]

(26) Certain verbs denote actions that their external argument engages in, but whose ultimate successful realization is generally outside their control. […] Verbs like *win*, *cure*, and *score* all involve "accidental" or "lucky" Agents. That is, one usually cannot say things like **Mary deliberately won the race today*. because normally she can only

try to win – she cannot choose to do so. (Reed (2011: 52))

(27) a. * Mary$_{[+c]}$ deliberately$_{(\text{requiring } [+c+m])}$ won the race today.

b. * The doctor$_{[+c]}$ deliberately$_{(\text{requiring } [+c+m])}$ cured her patients. (Reed (2011: 53))

(28) a. * Mary$_{[+c]}$ won the race today [PRO$_{(\text{requiring } [+c+m])}$ to garner national media attention].

b. * The doctor$_{[+c]}$ cured her patients [PRO$_{(\text{requiring } [+c+m])}$ to pay off her loans].

(Reed (2011: 56))

(29)[9] a. * The book got torn **on purpose**.

b. The book **accidentally** got torn. (Reed (2011: 53))

Reed (2011: 53)によれば、get 受動文における受動分詞の外項は accidental Agent を担う。このことは、(29)に示すように、on purpose のような deliberately タイプの動作主志向副詞類によっては外項の存在が検知されないが、accidentally タイプであれば検知されることから分かる。Reed (2011: 61, 63)によれば、(25a)のような例は、for 句が要求する強い意図性と get 受動文の by 句が担う accidental な意図性が衝突するため容認されない。本論文での枠組みに即して捉えなおせば、get 受動文では[+c+m]が表層主語により担われるため ICD の観点から(暗黙の)by 句は[+c+m]を担えないが、このことと for oneself が束縛子である by 句に[+c+m]を要求することが両立しないため容認されないということになる。一方、(25b)の be 受動文では for oneself が要求する強い意図性と両立するように by 句の[+c]に[+m]の素性充填が行われ容認される。

最後に、get 受動文の by 句が経験者項を担えない(30a)の事実について論じる。(22b)の提案によれば、by 句として[+m](i.e. Sentient)を担う項が導入されることができる。Sentient は、外項位置にのみ生起するような経験者項(e.g. love/know/believe の主語)を指す。ここで、(30a)の get 受動文について、fear の外項も Sentient を担うとすると、by 句の[+m]は ICD の違反を回避するため[−c]の素性充填を受け表層主語が担う[+c+m]と弁別されることにより救済され文法的となると予測される。しかし、この例は実際には容認されない。

(30) a. * Harry$_{[+c+m]}$ **got** feared $t_{\text{Harry}[-c-m]}$ by John$_{([+m]\rightarrow[\underline{-c}+m])}$.

(Base entry: *get* ([+c+m]), *fear* ([+m], [−c−m]))

b. Harry **was** feared $t_{\text{Harry}[-c-m]}$ by John$_{[+m]}$.

(Base entry: *fear* ([+m], [−c−m]))

(31) a. * The lesson$_{[+c+m]}$ **got** read $t_{\text{the lesson}[-c-m]}$ by the choirboy$_{([+c]\rightarrow[+c\underline{-m}])}$.

(Base entry: *get* ([+c+m]), *read* ([+c], [−c−m]))

b. The lesson **was** read $t_{\text{the lesson}[-c-m]}$ by the choirboy$_{[+c]}$.

(Base entry: *read* ([+c], [−c−m])) (荒木 (1986: 380))

(30a)の容認不可能性は、ICD とは独立した理由により説明される。(31a)を同じクラスターの分布を持つ(23a)と比較すると分かるように、get 受動文は表層主語が何らかの変化を受けない場合は ICD に違反していなくても容認されない。これと同様に、(30)のように受動分詞が主語経験者動詞である場合、その内項が何らかの変化を受けることはないため、(31a)と同じ理由で(30a)の文も容認されないと結論づけられる。

5. 結語

本論文では、Reinhart (2002)における TS および Sugimoto (2012)によるその改訂案、そして後者が提案する素性充填についての代案に基づき get 受動文の by 句が持つ特性が説明されることを示した。Reinhart が提案する CD では個々の述語単位で意味役割の弁別が評価されることとは対照的に、Sugimoto が提案する ICD では TP 構造を単位として評価するため、当該受動文における二次的動作主の存在によって受動分詞の項が担う意味役割が制限され、様々な帰結が導かれた。

Appendix

本論文が採用する理論的枠組みである Theta System は、語彙と統語部門の間の写像を扱う仕組みである。ここでは、その具体的な手続きについて、項具現の位置決定や格付与の仕組み、受動文形成に関わる部分を概観する。(7)に示されるように、述語の項構造(θ-grid)は必要に応じて(i)-(iv)の手続きを経て統語へと写像される。一般的な他動詞文の派生を例として、まず、(i, iii)の手続きを概観する。Theta System では、たとえば(32a, c, e)に例示されるような θ-grid について、個々の意味役割を(10)に示される素性によりクラスターとして形式化している。これにより、(32a, c, e)はそれぞれ(32b, d, f)に示す通り形式化される。(32b, d, f)の θ-grid に、Lexicon marking(=(7i))と CS merging instructions(=(7iii))が適用される。具体的には、各クラスターが(33)の通りに付された指標に基づいて、(34)の併合手続きを受ける。(33)-(34)の手続きの結果として、break, eat, love はそれぞれ(35)-(37)に示すように派生される。

(32) Base entry (cf. (11))

a. *break* (Cause, Theme) c. *eat* (Agent, Theme) e. *love* (Sentient, Theme)

= b. *break* ([+c], [−c−m]) = d. *eat* ([+c+m], [−c−m]) = f. *love* ([+m], [−c−m])

(cf. Reinhart (2002: 233-235, 285))

(33) Lexicon marking

2 項以上の動詞の語彙記載項について、

a. 正の値のみからなるクラスター(=[+c]/[+m]/[+c+m])に指標 1 を標示せよ。

b. 負の値のみからなるクラスター(=[−c]/[−m]/[−c−m])に指標 2 を標示せよ。

c. θ-grid に正の値のみからなるクラスターに加え、[−c+m]あるいは[−c−m]が含まれるとき、その動詞に対格素性を与えよ。 (cf. Reinhart (2002: 246))

(34)[10] CS merging instructions

a. 1 が付されているクラスターを伴う項は外項位置に併合する。

b. 2 が付されているクラスターを伴う項は内項位置に併合する。

c. 妨げられない限り、外項位置に併合する。 (cf. Reinhart (2002: 247))

(35) a. Base entry: *break* ([+c], [−c−m])

b. Marking: $break_{(acc)}$ ($[+c]_1$, $[-c-m]_2$)

c. Merging: $[_{v*P}\ EA_{[+c]}\ V{+}v*_{(=break)}\ [_{VP}\ t_V\ IA_{[-c-m]}]]$

(36) a. Base entry: *eat* ([+c+m], [−c−m])

b. Marking: $eat_{(acc)}$ ($[+c+m]_1$, $[-c-m]_2$)

c. Merging: $[_{v*P}\ EA_{[+c+m]}\ V{+}v*_{(=eat)}\ [_{VP}\ t_V\ IA_{[-c-m]}]]$

(37) a. Base entry: *love* ([+m], [−c−m])

b. Marking: $love_{(acc)}$ ($[+m]_1$, $[-c-m]_2$)

c. Merging: $[_{v*P}\ EA_{[+m]}\ V{+}v*_{(=love)}\ [_{VP}\ t_V\ IA_{[-c-m]}]]$

(38) a. $[_{v*P}\ [by\ DP_{[+c]}]\ V{+}v*_{(=broken)}\ [_{VP}\ t_V\ IA_{[-c-m]}]]$

b. $[_{v*P}\ [by\ DP_{[+c+m]}]\ V{+}v*_{(=eaten)}\ [_{VP}\ t_V\ IA_{[-c-m]}]]$

c. $[_{v*P}\ [by\ DP_{[+m]}]\ V{+}v*_{(=loved)}\ [_{VP}\ t_V\ IA_{[-c-m]}]]$

受動文は一般に対格付与能力を持つ動詞から派生されること、また、各項は対応する能動文と同様に項が導入されること(Collins (2005))から、broken, eaten, loved を含む受動文の基底構造およびクラスターの分布は(38)のようであると結論付ける。本論文では、このような項具現において互いのクラスターが弁別されることを要求する Cluster distinctness(=(7iv))の適用について議論する。

最後に、Arity operations(=(7ii))の 1 つである Saturation について議論する。Reinhart (2002) によれば、受動文形成における外的意味役割は(39)-(40)に示されるように存在閉包を受けるため、解釈上は存在するが統語的には具現化されない。また、この操作により対格付与能力が失われる。これと対照的に、2 節で採用した(5)の構造における by 句は、対応する能動文の外項と導入の仕方が同じである点で Reinhart の提案とは異なり、対格付与能力が排除されない可能性が生じることになる。さらなる議論が必要であるが、説明の便宜上、本論文では受動文形成を単純化し、項の導入は対応する能動文と並行的に行われ、かつ、対格は受動形態素により吸収される(cf. Tanaka (2007))と仮定する。

(39) Saturation, which applies e.g. in passive formation, existentially closes one of the arguments, which will, then, not be realized syntactically. (Reinhart (2002: 239))

(40) a. wash (θ_1, θ_2)

b. Saturation: ∃x (wash (x, θ_2))

c. Max was washed: ∃x (x washed Max) (Reinhart (2002: 239))

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注

[1] 本論文では、表層主語が無生名詞である場合も二次的動作主は担われていると仮定する。

[2] 本論文が採用する理論的枠組みである TS による語彙と統語部門の間の写像の手続き(cf. (7))について、更なる概要を appendix にて参照されたい。

[3] 本節での Reinhart による研究の概観は、Sugimoto (2012)における議論を一部参考にしている。

[4] この提案に従い(14)の[−m]を担う項に[−c]を充填すると同例が容認可能であると誤って予測されるが、これについては今後の課題とする。1 つの可能性として、[−m]に[−c]を充填すること自体は可能であるが、その結果として生じる[−c−m] (i.e. Theme (cf. (11d)))が既に完了している統語部門での派生に従い oblique で標示される点と相容れないことが考えられる。

[5] (22b)について、by 句として導入される[+c]あるいは[+m]は、get の主語が担う[+c+m]との間の ICD 違反を回避するため、それぞれ[−m]と[−c]の充填を受けることになる。
[6] 本文での説明から分かるように、本論文では、素性充填の動機づけとして厳密には 2 つの場合を仮定していることになる。1 つは 3 節で示したような、動詞の項具現における ICD 違反の救済である。もう 1 つは、各項が担う意味役割と(deliberately のような)共起する要素が要求する解釈との両立が不可能である場合の救済である。後者については今後さらなる研究が必要であるが、前者と同じく(18)のような TP 構造を単位とする評価により適用の是非が判断され、また、(19)のような最終手段としての操作であるという精神に則っていると仮定する。
[7] これ以降、素性充填の適用を矢印により表す。また、充填された素性に下線を引く。
[8] このような説明にとって問題となるのは、(23b)や(24b)において動作主志向副詞や PRO が要求する動作主解釈を保証するために by 句が担う[+c]に[+m]が充填されているにも関わらず、同様の救済が(27)-(28)においてなぜ適用されないのかということである。1 つの要因として、解釈上 win や cure 等の動詞が外項に[+c]の accidental Agent のみを認め、素性充填はその選択関係を破綻させるため許されない可能性が挙げられる。
[9] (29a)について、on purpose が[+c+m]を担う the book を修飾するならば容認されると誤って予測される。この点については、今後の研究課題とする。
[10] 外項/内項位置への併合は、それぞれ *v* の指定部/VP 内での併合であると本論文では仮定する。また、指標が付かないクラスターの併合位置は可変的である。詳細については Reinhart (2002)を参照されたい。

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The Syntax of *Die* *

Takahiro Honda
Kobe Women's University

Keywords：syntax, labeling, theta-role, cognate object, *there* constructions

1. Introduction

Intransitive verbs are generally classified as unergative, ergative, and unaccusative verbs. However, whether the verb *die* is unergative or unaccusative remains controversial. As illustrated in (1) and (2), the verb *die* cannot appear in *there* constructions but can appear in cognate object constructions.

(1) a. There appeared a ship on the horizon. (Levin (1993: 89))
b. * There a little boy ran in the yard.
c. * There died some people in that fire. (Milsark (1974: 252))

(2) a. * Karen appeared a striking appearance at the department party.
(Levin and Rappaport Hovav (1995: 150))
b. He died an untimely death. (Horita (1996: 225))
c. Sarah smiled a charming smile. (Levin (1993: 95))

Based on these examples, some studies classify *die* as an unergative verb (e.g. Larson (1988), Macfarland (1995)). On the other hand, Horita (1996) argues that *die* is not unergative, pointing out that its argument is not Agent and it cannot be passivized as in (3).

(3) *A natural death was died by my grandfather. (Horita (1996: 242))

Takami and Kuno (2002) argue against classifying *die* as an unergative verb and claim that the argument of *die* is not Agent but rather Theme, given that the event the verb *die* describes is not volitional.

This study proposes a syntactic structure for *die* that matches its semantic and syntactic properties.

2. Effectum Objects, Affectum Objects, and Their Relation to Transitivity Alternation

Verbs that can appear in existential *there* sentences (inside verbal *there* constructions) are limited to certain verb classes: appearance (*appear*, *occur*) or existence (*be*, *exist*).

(4) a. * The magician appeared a rabbit out of his hat.

b. A rabbit appeared out of the magician's hat. (Levin (1993: 3))

These verbs cannot appear as transitive verbs; in this respect, they are the opposite of verbs like *bake*.

(5) a. She baked a cake.
b. * A cake baked. (Kageyama (1996: 161))

Note that the Theme of *bake* is an effectum object in (5), and that the verb *bake* can appear as an intransitive verb if its Theme is an affectum object, as in (6).[1]

(6) a. She baked the potatoes. (Kageyama (1996: 161))
b. The potatoes baked. (Levin (1993: 243))

This study proposes that the theta-role of effectum objects differs from that of affectum objects, and that (5a) and (6a) have the structures as shown in (7a) and (7b), respectively.

(7) a. [$_{v1P}$ Agent (she) [v1 [$_{v2P}$ Causer (she) [v2 [$_{v\sim P}$ v~ [$_{RP}$ R Theme (a cake)]]]]]]
b. [$_{v1P}$ Agent (she) [v1 [$_{v2P}$ Causer (she) [v2 [$_{v3P}$ Affectum (the potatoes) [v3 [$_{RP}$ R Theme (the potatoes)]]]]]]]

R = √BAKE

In (7a), *a cake* merges with R(oot) as its complement and receives the theta-role Theme. RP in (7a) is then selected by the light verb v~, which determines the category of R as a verb.[2]

On the other hand, in (7b), R merges with *the potatoes*, assigning the theta-role Theme to its complement, *the potatoes*. R in (7b) is selected by the light verb v3, which assigns the theta-role "Affectum" as well as determining the category of R as a verb.[3] The newly assumed theta-role Affectum is assigned to *the potatoes* when it is internally merged at SPEC-v3, giving it an affectum object reading. This study adopts Fujita and Matsumoto's (2005) derivational theta-marking analysis, where the subject of a transitive sentence is externally merged at SPEC-v2, receiving the theta-role Causer, and then, it is internally merged at SPEC-v1, receiving the theta-role Agent as well.[4]

One might argue that it is dubious to assume v2 in (7a), given the unacceptability of (8b), but according to my informants, (9b), whose object is an effectum object, is perfectly acceptable.

(8) a. She intentionally baked a cake.
b. * She unintentionally baked a cake.
(9) a. She intentionally {dug a hole / made an error}.
b. She unintentionally {dug a hole / made an error}.

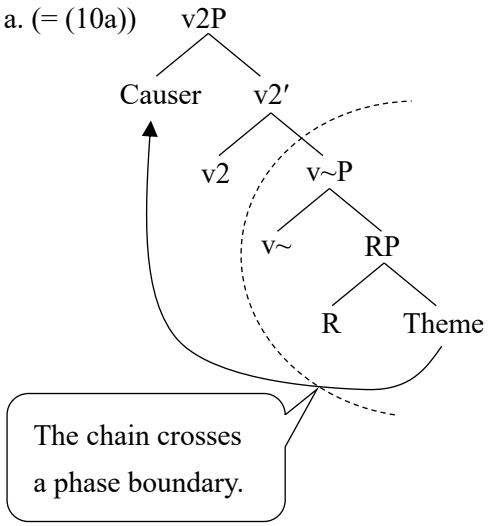
Thus, we assume that the unacceptability of (8b) may be ascribed to the difficulty in imagining the situation and is thus irrelevant to syntax.

Fujita and Matsumoto (2005) suggest two possible derivations of ergative sentences, one of which v1 is excluded and Theme is internally merged at SPEC-v2, where the Theme argument also receives the role of Causer. Based on this analysis, this study proposes that (5b) and (6b) are derived from the structures (10a) and (10b), respectively.

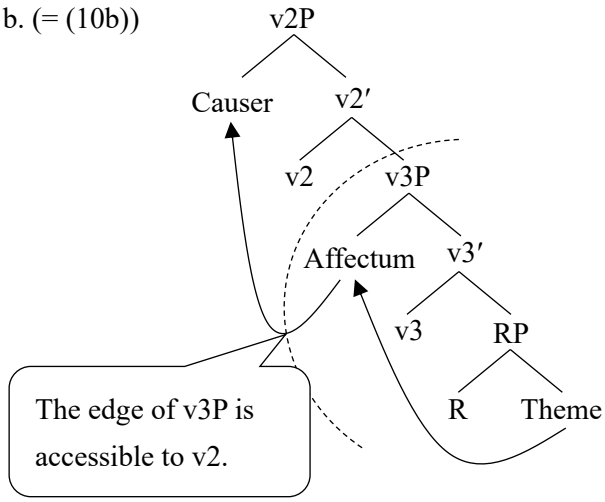
(10) a. [$_{v2P}$ Causer (a cake) [v2 [$_{v\sim P}$ v~ [$_{RP}$ R Theme (a cake)]]]]
b. [$_{v2P}$ Causer (the potatoes) [v2 [$_{v3P}$ Affectum (the potatoes) [v3 [$_{RP}$ R Theme (the potatoes)]]]]]
R = √BAKE

I assume that a chain formed by internal merge triggering derivational theta-marking is legitimate only if it is formed within a single phase, and hence the deviance of (5b). Supposing that v~P and v3P are phases, each chain in (11b) is formed within a phase, whereas that in (11a) crosses a phase boundary.

(11) a. (= (10a))



b. (= (10b))



Note that the edge of a phase is accessible to the higher phase head; thus, the chain from SPEC-v3 to SPEC-v2 is legitimate.

3. Effectum Objects, Affectum Objects, and the Derivations of *There* Constructions and Cognate Object Constructions

The argument of (1c) is an affectum object, whereas the argument of *appear* in (1a) can be an effectum object.[5] Provided that the argument of *appear* in (1a) is an effectum object, this study proposes the structures (12a) and (12b) for (1a) and (1c), respectively.

(1) a. There appeared a ship on the horizon. (Levin (1993: 89))
c. * There died some people in that fire. (Milsark (1974: 252))
(12) a. [$_{TP}$ ___ [T [$_{v\sim P}$ v~ [$_{RP}$ √APPEAR Theme (a ship)]]]]
b. [$_{TP}$ ___ [T [$_{v3P}$ Affectum (some people) [v3 [$_{RP}$ √DIE]]]]]

According to Fujita and Matsumoto's (2005) analysis, unergative verbs have their complements just as

transitive verbs do, and these are incorporated into the verbs (under the current framework, Rs), leaving unpronounced traces that become audible when modifiers intervene, as in (2c).

(2) a. * Karen appeared a striking appearance at the department party.
(Levin and Rappaport Hovav (1995: 150))
b. He died an untimely death. (Horita (1996: 225))
c. Sarah smiled a charming smile. (Levin (1993: 95))

(2b) is derived as shown in (13).

(13) [$_{TP}$ he [T [$_{v3P}$ Affectum (he) [v3 [$_{RP}$ √DIE an untimely death]]]]]

In (13), *death* is a trace/copy incorporated into R as well as the complement of R, and *he* is externally merged not at the complement position of R but at SPEC-v3. That is, the argument of *die* is base-generated at SPEC-v3.

On the other hand, the complement of √*APPEAR* is occupied by the argument of *appear*, which makes it impossible to derive cognate object sentences like (2a).

Note that insertion of *there* in SPEC-T (the underlined parts in (12)) *per se* is possible in both (12a) and in (12b).[6] However, the label v3P in (12b) is in fact the set {DP, v3P}. As Chomsky (2013) points out that the set {XP, YP} cannot be labeled; hence, the set {DP, v3P} is unlabeled as it is, which requires either movement of one of DP and v3P or feature sharing between them so that the set can be labeled. One might argue that theta-role can be a feature and the set then can be labeled by the feature; however, according to Hornstein (1999), such a feature can be borne only by predicates assigning theta-roles but not by nominal elements receiving the roles. Therefore, it is dubious that DP and v3P share theta-features.[7]

Given that DP and v3P do not have any feature in common, one of the two needs to move, and the only possible landing site is SPEC-T; otherwise, the expletive *there* would fill that position, which would yield the ill-formed sentence (1c). Accordingly, the Affectum argument *some people* has no choice but to internally merge at SPEC-T, resulting in (14).

(14) Some people died in that fire.

4. What Is "Affectum"?

Based on Kinsui's (1994) analysis of verbs of change of state, Kageyama (1996) distinguishes the conceptual structure of verbs of appearance from that of verbs of change of state, as shown in (15).

(15) a. verbs of appearance: [$_{EVENT}$ BECOME [$_{STATE}$ y BE AT-z]]
b. verbs of change of state: [$_{EVENT}$ y BECOME [$_{STATE}$ y BE AT-z]]

The abstract predicate BECOME just takes STATE as its argument in (15a), while it takes an internal

argument (what is affected in the event) as well as STATE in (15b). This study proposes that "y," the argument of BECOME in (15b), corresponds to "Affectum," the newly proposed theta-role presented herein.

5. Passivization in Cognate Object Constructions

Horita (1996) points out that the verb *die* cannot appear in passive sentences, by which she suggests that *die* is not an unergative verb. However, the same is true for the verb *live*, which is a canonical unergative verb.

(3) *A natural death was died by my grandfather. (Horita (1996: 242))

(16) a. * A gruesome death was died by John.

b. * An uneventful life was lived by Harry. (Jones (1988: 91))

Contrary to Jones' (1988) observation, Macfarland (1995) presents examples such as (17) in which the verb *live* is passivized.[8]

(17) Life here had been lived on a scale and in a style she knew nothing about.

(Macfarland (1995: 180))

Fujita and Matsumoto (2005: 185) explain this contradiction based on Borer's (1994) observation that while referential nominal phrases may appear as the subjects of passive sentences, non-referential nominal phrases may not, as in (18).

(18) a. Some sand was collected (by Anna).

b. * Sand was collected (by Anna). (Borer (1994: 41))

Thus, whether a cognate object can be the subject of a passive sentence depends on whether it is referential or non-referential. One could conclude that the cognate objects of the verb *die* are unlikely to be referential, which is why sentences such as (3) and (16a) are unacceptable.

6. Verbs that Do Not Appear in *There* Constructions nor Cognate Object Constructions

Macfarland (1995) argues that the verb *die* is classified as an unergative verb, while the verb *perish* is an unaccusative verb because it never appears in cognate object constructions.

(19) *Opera stars don't perish normal perishes: they perish spectacular perishes, tentacular perishes …

(Macfarland (1995: 198))

In fact, no example of a cognate object sentence with the verb *perish* was found in the British National Corpus (BNC), nor did I find cognate object sentences with either *vanish* or *disappear*.[9]

This study proposes that verbs that do not appear in either cognate object constructions or *there*

constructions derive from the structure in (20a) and verbs that appear in *there* constructions derive from the structure in (20b).

(20) a. [$_{TP}$ there [T [$_{v3P}$ Affectum [v3 [$_{RP}$ R Theme]]]]] (perish, vanish, disappear)
b. [$_{TP}$ there [T [$_{v\sim P}$ v~ [$_{RP}$ R Theme]]]] (appear, occur, exist)

In (20a), the argument of a verb first externally merges with R as its complement, receiving the theta-role Theme, and then internally merges at SPEC-v3, receiving the theta-role Affectum. If the argument moved to SPEC-T, there would be no labeling problem, but if it stayed at SPEC-v3 to insert the expletive *there* at SPEC-T, v3P in (20a) could not be labeled, as demonstrated in Section 3.

In contrast, no labeling problem occurs even if the argument stays where it is externally merged in (20b), which is why verbs like *appear*, *occur*, and *exist* can appear in *there* constructions. Note that the verb *appear* does not always have the structure in (20b); sentences such as (21a) probably have the same structure as (20a).

(21) a. The delayed train finally arrived at the station.
b. * There finally arrived the delayed train at the station.

Therefore, we can conclude that the structure of the verb *die* is different not only from (20a) but also from (20b), and that the only theta-role the argument of *die* receives is Affectum.

7. Some Consequences and Further Research

Kishimoto (2005) points out that the English verb *die* seems to be classified as an unaccusative verb in that it demonstrates a change of state, but that *die* should be classified as an unergative verb owing to its incompatibility with resultative predicates, as in (22b).

(22) a. John blushed red. (Simpson (1983: 144))
b. * John died honorable/disgraceful. (Kishimoto (2005: 109))

On the other hand, Kishimoto classified the Japanese verb *sinu* 'die' as an unaccusative verb because it is compatible with resultative predicates, as in (23b).[10]

(23) a. * John-wa kutakutani hasit-ta.
John-Top tired run-Past
'John ran himself tired.'
b. Ookuno doobutu-ga {mudani/muimini} sin-desimat-ta.
many animals-Nom {in vain/for nothing} die-Negative Outcome-Past
'Unfortunately, many animals died {in vain/for nothing}.'
c. Hana-ga karakarani kare-tesimat-ta.
flower-Nom parched wither-Negative Outcome-Past

'Unfortunately, the flowers have withered away.' (adapted from Kishimoto (2005: 110))

The analysis in this study does not contradict Kishimoto's (2005) observation regarding the English verb *die*, because we propose that the argument of *die* does not appear in R's complement position, which is why the argument cannot be compatible with resultative predicates.

Unfortunately, which type of verb the Japanese verb *sinu* belongs to is not clear because there seems to be no example of a cognate object sentence with the verb.

(24) *Kare-wa muda-zini-o sin-da.
He-Top meaningless-death-Acc die-Past
'He died a meaningless death.'

An anonymous reviewer asked whether v2 exists in verbs such as *speak* and *play*. I suggest that the verb *speak* has the structure presented in (25).

(25) [$_{v1P}$ Agent [v1 [$_{v2P}$ Causer [v2 [$_{v\sim P}$ v~ [$_{RP}$ √SPEAK [$_{PP}$ to DP]]]]]]]

The verb *speak* appears in pseudo-passive sentences, but not in ergative sentences, which means that the verbs *speak* and *bake* with an effectum object behave alike in this respect.

(26) a. John spoke to Mary.
b. Mary was spoken to (by John).
c. * Mary spoke to.
(27) a. John baked a cake.
b. A cake was baked (by John).
c. * A cake baked. (= (5b))

We can claim that (26c) is unacceptable because the DP in (25) is in the complement position of P, and thus raising from the position to SPEC-v2 would cross a phase boundary. The chain made by the movement is not legitimate, as proposed herein. Contrariwise, no illegitimate chains are formed in (26b) or (27b).[11]

With regard to the verb *play*, the sentences in (28) were found in the BNC, and this study proposes that they have the structure in (29), although the musical instruments might be given some kind of personification.

(28) a. The figure recedes, the circle dims, the piano plays softly so far away.
b. The organ played.
(29) [$_{v2P}$ Causer [v2 [$_{v3P}$ Affectum [v3 [$_{RP}$ √PLAY Theme]]]]]

This study has not clarified how the accusative Case is assigned in the proposed structures. Given

that (30) is grammatical, accusative Case assignment is related to v2, but how the uninterpretable phi-features on v2 are valued in ergative sentences remains a mystery.

(30) John unintentionally broke the pot. (Fujita and Matsumoto (2005: 89))

One possibility is that it is optional whether v2 bears phi-features. (Fujita and Matsumoto (2005) assumes a special functional category "μ" that determines whether accusative Case is assigned.)

According to my informants, a pseudo-passive sentence like (31b) is not acceptable, and this may support the claim that the verb *die* is not classified as an unergative verb; however, I leave this issue for future research.[12]

(31) a. Bill died in the hospital.
b. * The hospital was died in (by Bill).

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NOTES

[1] Yoshikawa (1995) points out that the verb *bake* cannot be used as an intransitive verb, as in (i), whereas Levin (1993) and my informants judge both sentences in (ii) acceptable.

(i) *The potatoes have boiled. (Yoshikawa (1995: 111))

(ii) a. Jennifer baked the potatoes.
b. The potatoes baked. (Levin (1993: 243))

[2] The light verb "v~" is proposed in Deal (2009).

[3] I only assume here that R can be merged with any light verb and that the light verb v2 selects either v~ or v3.

[4] Fujita and Matsumoto (2005) point out that *John* in (i) can be interpreted as both Causer and Agent depending on whether the derivation contains v1.

(i) John (intentionally / unintentionally) broke the pot. (Fujita and Matsumoto (2005: 89))

If it does not contain v1, the subject of the sentence is just interpreted as Causer.

[5] As we see below, the verb *appear* does not always take an effectum object. The argument of *appear* in sentences like (i) is no doubt an affectum object, and therefore, such an object cannot appear in *there* constructions, as in (ii).

(i) He appeared on the stage.

(ii) *There appeared {he / him} on the stage.

[6] See Honda (2020) for an analysis where the expletive *there* is not an independent lexical item.

[7] Theta-roles may be the C-I interface's reflex of the positions of arguments in the narrow syntax. The S-M interface requires linear order information, but there is no *a priori* condition that the C-I interface also does so.

[8] (17) may have a structure similar to (ii), which is called the "peculiar passive."

(i) a. This spoon has been eaten with. (Kageyama and Ura (2002: 183))

b. * This spoon was being eaten with. (ibid.: 185)

(ii) This spoon$_k$ has been [eaten [with *pro*$_k$]] (ibid.: 192)

[9] One may argue that the verbs *disappear* and *vanish* can appear in *there* sentences, as in (i).

(i) a. There had *vanished from the dresser* two rings left me by my mother.

b. There had *disappeared from the safe* two diamond rings that her ex-husband had given her.

(Takami and Kuno (2002: 63))

However, as Takami and Kuno (2002) indicate, these examples are outside verbal *there* sentences, and the verbs still cannot appear in inside verbal *there* sentences, as in (ii).

(ii) a. *There vanished a diamond ring from this drawer.

b. *There disappeared three ships last week. (ibid.)

Why such a difference is observed between outside and inside verbal *there* sentences remains a mystery. This study only considered inside verbal *there* sentences, and I would like to leave studies on outside verbal *there* sentences for future research. Additionally, an anonymous reviewer wondered why the structure of the verb *disappear* is different from that of *appear*, given their morphological similarity. According to Deal (2009), notwithstanding their morphological similarity, the two verbs exhibit different syntactic behaviors, which suggests the possibility that *disappear* can be classified as an ergative verb.

(iii) a. ?The magician disappeared a rabbit.

b. *The magician appeared a rabbit. (Deal (2009: 298))

[10] The acceptability of resultative constructions differs between Japanese and English, as shown in (i), and this may be related to the unacceptability of (22b).

(i) a. The horses dragged the logs smooth.

b. * uma-ga maruta-o subesube-ni hikizut-ta.
horse-NOM log-ACC smooth drag-PAST
'The horses dragged the logs smooth.' (Washio (1997: 6))

[11] See Honda (2019) for the derivation of pseudo-passive sentences. Hornstein et al. (2006) propose a structure where a participle, not a light verb, takes VP(= RP) as its complement in passive sentences.

[12] The unacceptability may be ascribed to the fact that the phrase "in the hospital" in (31a) is not an argument but an adjunct of the verb *die*.

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Adnominal Partitive Absolute Constructions: A Dynamic Approach*

Ryu Takamatsu
The Graduate School, University of Tokyo

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1. Introduction

This paper is concerned with those hitherto little-studied absolute constructions in English that act as non-restrictive adnominal modifiers, as exemplified below.[1] For example, in (1a) the italicized portion *nine of them gold* is set off by a comma and provides supplementary information to the antecedent *some 32 medals*. The examples in (2) show that *of*-phrases can be dropped without essential change in meaning.

(1) a. Her trophy cabinet boasts some 32 medals, *nine of them gold*. (NW Jul. 26, 2021)
b. Her closest heirs were her brothers, *one of them my grandfather*. (I 95)

(2) a. An ambiguous sentence has two or more readings, *each with its own truth conditions*. (M 221)
b. Gunfights last month, *some involving the army*, left six civilians dead and more than 150 wounded. (GU Feb. 6, 2007)

We will refer to these absolute constructions henceforth as adnominal partitive absolute constructions (APACs for short). APACs exhibit some noteworthy peculiarities, compared with ordinary absolute constructions (hereafter ACs), which almost invariably act as adverbials and rarely seem to function as adnominal modifiers (cf. Kortmann (1991: 135)).

One peculiarity is that APACs act as DP-internal adnominal modifiers. In (3) below, an APAC occurs after a DP conjoined with another DP, indicating that it is a bona fide DP-internal constituent.

(3) At least 85 people were killed in clashes between [protesters, *some of them armed*], and [police who fired into crowds]. (RT May 13, 2010)

Another peculiarity is the variable judgments on *with*-augmented APACs (hereafter WAPACs), as illustrated in (4).[2, 3]

(4) a. We only have old Soviet rockets, (?/?/?**with*) *many of them not in a good state*. (GU Jan. 19, 2022)

b. Every hospital makes mistakes, (^{OK}/*/?*with*) *some of them fatal*. (LT Dec. 5, 2004)

c. Behind him is a photo of him and his wife of 32 years, the actor Tracy Pollan, (??/^{OK}/??*with*) *both of them looking so young, beautiful and in love*. (GU Nov. 21, 2020)

d. Two days later, villagers with search dogs found 12 bodies, (??/?*/?*with*) *some buried in shallow pits in the jungle*. (AP Dec. 30, 2021)

Meanwhile, ACs used as adverbials can readily undergo *with*-augmentation, as shown below:[4]

(5) a. Several soldiers strolled through the neighborhood, (^{OK}/^{OK}/^{OK}*with*) *pistols in their waistbands*.

b. They walked along the lake, (^{OK}/??*with*) *the crickets a little quieter than usual*.

c. Mary sighed, (^{OK}/^{OK}*with*) *tears welling up in her eyes*.

d. Their lives were frenetic, (^{OK}/^{OK}/??*with*) *their schedules controlled by their jobs*.

(TM May 27, 2021)

By virtue of these peculiarities, APACs merit serious descriptive and theoretical consideration. In what follows, we consider the three questions below, among others.

(6) a. What are the properties of APACs?

b. How are APACs analyzed?

c. What leads to the variable judgments on WAPACs?

In the remainder of this paper, we attempt to bring out the little-studied properties of APACs and provide an analysis from the dynamic view of language proposed by Kajita (1977, 1997).

2. Properties of APACs

2.1. Constituency

In this section, we examine syntactic properties of APACs and argue that they are structurally CPs. To begin with, we claim that the concatenation of DP + XP in APACs forms a syntactic constituent. Support for this comes from the fact that the string serves as the locus of conjoining (7) and as an antecedent of a relative pronoun (8):

(7) The incidents at the top of this article were not carried out by far-right goons but by Islamists, *most of them young* **and** *some of them immigrants*. (NT Nov. 29, 2018)

(8) Salazar's plan is to limit Slaney to 50 miles a week, *some of them to be run on a treadmill*, **which** is easier on her feet. (COCA 1994)

2.2. Clausehood

We further claim that the DP + XP makes up a clausal constituent, DP being the subject and XP the predicate (X = T, *v*, A, D, P). This claim is backed by the following examples, where APACs serve as the domain of Passive (9a), Subject-to-Subject Raising (9b), and *Tough*-Movement (9c), and as the scope

of clausal negation (9d):

(9) a. Henry VIII commissioned many such beasts for his palaces, *all of them* ***believed*** *to be lost*. (EC Mar. 9, 2013)

b. Video taken by local news media after the shooting showed injured people, *many of them* ***appearing*** *to be middle aged*, being loaded into ambulances on stretchers. (RT Jan. 22, 2023)

c. She concentrated on street signs, *many of them* ***hard*** *to read*. (W 30)

d. We only have old Soviet rockets, *many of them* ***not*** *in a good state*.

2.3. Internal Structure

We argue that the subject-predicate relationship in APACs is established with the aid of a functional category, which we take to be den Dikken's (2006) RELATOR. Moreover, empirical evidence suggests that AspP and TP can be projected.[5] Consider the following, where aspectual *have* (10a) and *to*-infinitives (10b) occur in APACs. We assume that Asp hosts features that specify whether the event denoted by a verb is ongoing or completed, i.e. [±Prog] and [±Perf] (cf. Radford (2016: 100)).

(10) a. There are at least a dozen varieties of motor sports extant in the United States, *some of them* ***having*** *been contested for more than a century*. (NT Nov. 2, 2012)

b. The Berkeley researchers have broken parallel computing problems into seven classes, *each of them* ***to be attacked*** *using a different approach*. (NT Apr. 30, 2008)

Furthermore, we conjecture that APACs have a CP layer. One piece of indirect evidence is the fact that Locative Inversion occurs in ACs, which presumably have the same structure as that of APACs. Consider (11), where locative PPs display movement to the CP domain (cf. Rizzi and Shlonsky (2006)):

(11) a. She gripped my hand. 'Stop,' she said, ***in her voice*** *a sense of urgency*. (Q 74)

b. During her reign, Britain had 15 prime ministers, ***among them*** *Winston Churchill, Anthony Eden, Margaret Thatcher and Boris Johnson*. (JT Sep. 16, 2022)

A natural question that may arise is what case the subject DPs in APACs bear. Since there appears to be no case assigner in the configuration, it would be safe to assume that they bear ACC, the default case in English (Schütze (2001); Radford (2016: 216)).

Based on the discussion so far, we propose the following representations for APACs (where the *v*P in (12b) is for gerund participles, that in (12c) for passive participles, and that in (12d) for infinitives):[6]

(12) a. $[_{DP}$ DP $[_{CP}$ C $[_{RP}$ DP $_{[ACC]}$ $[_{R'}$ RELATOR XP]]]] (X = A, D, P)

b. $[_{DP}$ DP $[_{CP}$ C $[_{AspP}$ DP $_{[ACC]}$ $[_{Asp'}$ Asp $[_{vP}$ ~~DP~~ $[_{v'}$ *v* $[_{PartP}$ Part VP]]]]]]]

c. $[_{DP}$ DP $[_{CP}$ C $[_{AspP}$ DP $_{[ACC]}$ $[_{Asp'}$ Asp $[_{VoiceP}$ $[_{Voice'}$ Voice $[_{vP}$ ~~DP~~ $[_{v'}$ *v* $[_{PartP}$ Part VP]]]]]]]]]

d. $[_{DP}$ DP $[_{CP}$ C $[_{TP}$ DP $_{[ACC]}$ $[_{T'}$ to $[_{vP}$ ~~DP~~ *v*']]]]]

Some words are in order about these representations. For (12b, c) we assume that PartP is headed by either of the morphemes *-ing* and *-en*, which respectively form gerundive and passive participles when V is adjoined to Part, in the spirit of Collins (2005).[7] We also assume that the edge feature (EF) in C is inherited to Asp in (12b) and T in (12c), in the sense of Chomsky (2008). The subject DPs in [Spec,*v*P] move to [Spec,AspP] in (12b) and to [Spec,TP] in (12c), satisfying the EFs on Asp and T, respectively. We assume that APACs adjoin to DP in exactly the same way as non-restrictive relative clauses do.

3. Dynamism

3.1. Extension of Grammar

In this section, we provide an analysis for the derivation of APACs from the dynamic view of language proposed by Kajita (1977, 1997) after briefly introducing the basic concepts of the framework.

According to Chomsky's (1975, 1986, etc.) instantaneous model of language acquisition, the notion of possible grammar is determined solely in terms of the properties of UG (as well as additional non-language-specific factors). Kajita's non-instantaneous model of language acquisition, on the other hand, allows for the temporal dimension of language acquisition and defines the set of possible next-stage grammars on the basis of the properties not only of UG but also of the grammar at a certain developmental stage, as stated in (13) below.

(13) If the grammar of a language L at stage i, G(L, i), has property P, then the grammar of the language at the next stage, G(L, i+1), may have property P'. (Kajita (2002: 161))

One of the conditions under which this principle is manifested is a syntactico-semantic discrepancy. Suppose that at a certain stage of language acquisition, the grammar G_i generates the structures S_1 and S_2 and assigns to them the essentially unrelated and distinct semantic readings of M_1 and M_2 respectively. However, it may happen that there can be no practical difference between M_1 and M_2 in a limited class of cases; namely, S_1 is virtually synonymous with S_2. When this happens systematically, the system "finds" a discrepancy emerge between the syntactic structure and its interpretation. To resolve this discrepancy, G_{i+1} (the grammar at the next developmental stage) activates a new rule that reinterprets S_1 as S_1' on the model of S_2; S_1' has an analogous structure to S_2. This model-dependent extension has been employed to explain certain other constructions, indicating that the process is well motivated (see Kono (1984); Omuro (1985); Suzuki (1987); among others). Our alternative to be presented below falls under this class of extensions.

3.2. Extension Analysis

We argue that APACs are derived from ACs on the model of non-restrictive partitive relative clauses (hereafter NPRCs) as in (14), which bear a semantic resemblance to APACs.

(14) The contestants, *some of whom were primary school children*, were kept waiting for two hours.

Assume here that there is a developmental stage at which G_i generates the structure of ACs (=S_1)

and that of NPRCs (=S_2), both with their own distinct interpretations M_1 and M_2, respectively. However, in the sentence-final position, ACs can behave analogously to NPRCs; S_1 would virtually mean M_2, which should be expressed by S_2, giving rise to a syntactico-semantic discrepancy. For example, consider (15), where the italicized portion can be interpreted in two ways, i.e. as an adverbial that describes an accompanying circumstance of the situation in the main clause (*and some of them are still burning*) and as an adnominal modifier (*some of which are still burning*):

(15) The floor around him is thick with cigarette butts, *some of them still burning*. (COCA 1990)

To eliminate this discrepancy, a new rule is activated in G_{i+1} that syntactically reorganizes S_1 into S_1' (the structure of APACs), on the model of S_2, allowing APACs to be adjoined to DP, as represented in (16) (irrelevant details omitted). [8] It should be noted here that the flat structures, or strings of ACs and NPRCs are quite similar and that the partitive subject contributes significantly to the reanalysis.

(16) a. G_i Base: ACs
[$_{TP}$ [$_{TP}$ The floor around him is thick with cigarette butts], [$_{CP}$ *some of them still burning*]].
b. G_i Model: NPRCs
The floor around him is thick with [$_{DP}$ [$_{DP}$ cigarette butts], [$_{CP}$ *some of which are still burning*]].
c. G_{i+1} Derivative: APACs
The floor around him is thick with [$_{DP}$ [$_{DP}$ cigarette butts], [$_{CP}$ *some of them still burning*]].

Assume further that once this extension is established in G_{i+1}, another extension is triggered in G_{i+2}, enabling APACs to adjoin to DP in other syntactic positions such as subject, as in (17a). This extension is also motivated by the model structure of NPRCs as in (14) (repeated here as (17b)).

(17) a. The contestants, *some of them primary school children*, were kept waiting for two hours.
(Huddleston and Pullum (2002: 1268))
b. The contestants, *some of whom were primary school children*, were kept waiting for two hours.

In summary, ACs are driven to develop their adnominal usage (APACs) on the model of NPRCs; therefore APACs can act as non-restrictive adnominal modifiers. This is our answer to question (6b).

3.3. Consequences

Now let us consider some consequences of our analysis. First, we expect some commonalities between APACs and NPRCs if they have essentially the same structures. APACs and NPRCs are, depending on idiolects, either included in or excluded from the target of VP-ellipsis, as shown below:[9]

(18) John bought a bag of goldfish, *some of them rare types*, and
a.^{OK}/*/?*so did Mary. [*did* = bought a bag of goldfish]
b.??/^{OK}/^{OK}so did Mary. [*did* = bought a bag of goldfish, some of them rare types]

(19) John bought a bag of goldfish, *some of which were rare types*, and

a.^{OK}/*/?*so did Mary. [*did* = bought a bag of goldfish]

b.?/^{OK}/^{OK}so did Mary. [*did* = bought a bag of goldfish, some of which were rare types]

APACs and NPRCs in combination with antecedents can appear in the focus position of *it*-cleft sentences, as illustrated in (20):[10]

(20) a. It was a bunch of chipmunks, *some of them rare*, that Bill caught.

b. It was a bunch of chipmunks, *some of which were rare*, that Bill caught.

For some speakers, APACs or NPRCs do not readily undergo extraposition, as shown in (21):

(21) a. The contestants $\underline{^{OK}/^{OK}/^{OK}}$ were kept waiting for two hours $\underline{^{OK}/?*/?}$. (*some of them primary school children*)

b. The contestants $\underline{^{OK}/^{OK}/^{OK}}$ were kept waiting for two hours $\underline{^{OK}/*/??}$. (*some of whom were primary school children*)

Interestingly, those who allow the extrapositions of APACs and NPRCs also allow those with split antecedents as in (22), which is reasonable given that APACs and NPRCs are structurally analogous:[11]

(22) a.^{OK}/?John$_i$ entered the room and Mary$_j$ went out, *both of them*$_{i+j}$ *taller than six feet*.

b.^{OK}/??John$_i$ entered the room and Mary$_j$ went out, *both of whom*$_{i+j}$ *were taller than six feet*.

In addition, the NPI *any* in APACs and NPRCs is not properly licensed by *only* in the determiner position of antecedents, as illustrated below. This can be explained if we assume that APACs and NPRCs adjoin to DPs containing *only*, escaping the scope of the licensor.

(23) a.^{OK}/^{OK}Only the students, *most of them having had some drinks*, stayed in the room.

b.??/*Only the students, *most of them having had any drinks*, stayed in the room.

(24) a.^{OK}/?Only the students, *most of whom had some drinks*, stayed in the room.

b.?*/*Only the students, *most of whom had any drinks*, stayed in the room.

Second, our analysis accounts for the fact that APACs inherit a property of ACs. Consider (25), where multiple APACs can be stacked, whereas the same does not hold for NPRCs:

(25) a.^{OK}/^{OK}John found himself among a group of formally dressed people, *some of them local, most of them visitors*.

b.?/?*John found himself among a group of formally dressed people, *some of whom were local, most of whom were visitors*.

Multiple ACs functioning as adverbials can be stacked, as illustrated below:

(26) I blame Tommo for what happened on that cold night in Lancashire, *the wreck of our young lives strewn across a wet field, the lights of campus glowing in the distance, the stars bright above us*. (B 72)

Third, the variable judgments on WAPACs as was shown in (4) (repeated here as (27)) can be naturally accounted for if we take the "derivativeness" of APACs into account.

(27) a. We only have old Soviet rockets, (?/?/?**with*) *many of them not in a good state*.
b. Every hospital makes mistakes, (^{OK}/*/?*with*) *some of them fatal*.
c. Behind him is a photo of him and his wife of 32 years, the actor Tracy Pollan, (??/^{OK}/??*with*) *both of them looking so young, beautiful and in love*.
d. Two days later, villagers with search dogs found 12 bodies, (??/?*/?*with*) *some buried in shallow pits in the jungle*.

It has been pointed out in the literature that derivative constructions in general resist further syntactic operations (cf. Chomsky (1981: 147, n. 108)). Our assumption is that *with*-augmentation is among those syntactic operations, hence the overall low acceptability of WAPACs. This is our answer to question (6c). On the other hand, ACs functioning as adverbials can readily be augmented by *with*, as was shown in (5) (repeated here as (28)), because they are not a derivative.

(28) a. Several soldiers strolled through the neighborhood, (^{OK}/^{OK}/^{OK}*with*) *pistols in their waistbands*.
b. They walked along the lake, (^{OK}/??*with*) *the crickets a little quieter than usual*.
c. Mary sighed, (^{OK}/^{OK}*with*) *tears welling up in her eyes*.
d. Their lives were frenetic, (^{OK}/^{OK}/??*with*) *their schedules controlled by their jobs*.

In view of the facts presented thus far, it might be tempting to conclude that APACs are more precisely a subspecies of parentheticals.[12] However, one important piece of evidence against this idea comes from the judgments on VP-ellipsis, as illustrated in (29)–(31) below:

(29) John talked, of course, about politics, and Mary did too. (= Mary talked about politics too; ≠ Mary talked too; ≠ Mary talked, of course, about politics, too) (McCawley (1982: 96))
(30) John bought a bag of goldfish, *some of them rare types*, and
a.^{OK}/*/?*so did Mary. [*did* = bought a bag of goldfish] (=(18a))
b.??/^{OK}/^{OK}so did Mary. [*did* = bought a bag of goldfish, some of them rare types] (=(18b))
(31) John bought a bag of goldfish, *some of which were rare types*, and
a.^{OK}/*/?*so did Mary. [*did* = bought a bag of goldfish] (=(19a))
b.?/^{OK}/^{OK}so did Mary. [*did* = bought a bag of goldfish, some of which were rare types] (=(19b))

For two informants, who judge (30b) and (31b) to be acceptable, *of course* is excluded from the target of VP-ellipsis (^{OK}/^{OK}*did too = Mary talked about politics too*; */**did too = Mary talked too*; */??*did too = Mary talked, of course, about politics, too*), while APACs and NPRCs are not. For another informant, who judges (30a) and (31a) to be acceptable, *of course* can be included in the target of VP-deletion (^{OK}*did too = Mary talked about politics too*; ??*did too = Mary talked too*; *did too* = ^{OK}*Mary talked, of course, about politics, too*), whereas APACs and NPRCs cannot be.

The crucial point here is that the parenthetical *of course* behaves completely oppositely to APACs and NPRCs, leading us to conclude that the parenthetical analysis is rather dubious.[13]

4. Concluding Remarks

This paper has attempted to examine the little-studied properties of APACs and provide an analysis within the framework of Kajita (1977, 1997). It has been argued that APACs are generated through an independently motivated process – the reanalysis of ACs as APACs on the model of NPRCs – with the aid of partitive subjects. We hope to have shown that the existence and the properties of APACs are best explained if we take the temporal dimension of language acquisition into account, pointing to the advantage of non-instantaneous over instantaneous model of language acquisition.

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NOTES

[1] Sources of the data and their abbreviations are as follows: *Newsweek* [NW]; Paul Auster, *I Thought My Father Was God*, Picador [I]; John R. Taylor, *The Mental Corpus: How Language is Represented in the Mind*, Oxford University Press [M]; *The Guardian* [GU]; *Reuters* [RT]; *Los Angeles Times* [LT]; *The Associated Press* [AP]; *Time* [TM]; *The New York Times* [NT]; *The Economist* [EC]; Aimee Phan, *We Should Never Meet*, Picador [W]; Roger J. Ellory, *A Quiet Belief in Angels*, Hachette UK [Q]; *The Japan Times* [JT], Sophie Duffy, *Bright Stars*, Legend Press [B].

[2] In what follows, all parenthesized portions in attested examples are mine.

[3] For various reasons, it became impossible to obtain data from one informant in the course of this study. The judgments on the slightly modified attested examples and my original ones are provided by three informants, unless otherwise noted.

[4] The judgments on (5b, c) are provided by two informants.

[5] As pointed out by Chigusa Morita (p.c.), the T head seems to be specified as [–φ, –Tense].

[6] I am grateful to Kow Kuroda for pointing out to me that APACs might have different structures depending on their predicates. The structural difference naturally follows if we assume the Minimal Structure Principle of Bošković (1997: 25).

[7] Collins (2005) makes no distinction between passive and perfect participles. We argue in a similar vein

that what is traditionally called "verbal gerunds" and "present participles" can be handled as just one inflected form of the verb sharing the same morpheme *-ing*, i.e. "gerund participles" (see also Huddleston and Pullum (2002: 82–83)). We assume that those participles are licensed either by progressive *be* or by *v*, as passive participles are either by aspectual *have* or by Voice (Collins (2005: 90–91)).

[8] It may well be that once APACs with a certain type of predicate are acquired, the system gradually extends the class of possible predicates, but we leave this for future research.

[9] For those speakers who find (18a) and (19a) acceptable, APACs and NPRCs would function as parentheticals. Another possibility would be that the adverbial nature of APACs is more prominent than for those who do not accept (18a) and (19a) and that the property affects NPRCs after the acquisition of APACs, hence the interaction between APACs and NPRCs.

[10] One might argue that the data in (22) do not constitute the type of evidence we are now seeking for, in the sense that they point to the possibility of APACs and NPRCs acting as parentheticals, which also appear in the focus position of *it*-cleft sentences:

(i) It was Fred, *incidentally*, who asked John for help. (McCawley (1998: 482, n. 15))

However, we will see in note 16 that APACs and NPRCs behave differently from parentheticals in another respect; therefore we take the examples in (22) as evidence that APACs and NPRCs are both adjoined to DP, forming syntactic constituents.

[11] The judgments on (22)–(25) are provided by two informants.

[12] I am grateful to Takao Yagi for drawing this point to my attention.

[13] One might be tempted to say that whether APACs are parentheticals or not could be confirmed by combining them with quantified expressions. As is well known, non-restrictive modifiers cannot appear in combination with those expressions. Consider the following:

(i) a. * **Every** man, *who drives a Cadillac*, is insane. (Jackendoff (1977: 175))
b. * The doctor gave a lollipop to **each** child, *who she examined*. (McCawley (1998: 451))

However, the examples below cast some doubt on this view. APACs, as well as NPRCs, which are analyzed as non-restrictive modifiers as shown in (i), can in fact appear in combination with quantified expressions. At the moment we do not have an account for the contrast between (i) and (ii).

(ii) a. But what amazed me was that **every** girl – *none of them older than 10* – could articulate a position on the ballot measure. (LT Nov. 1, 2008)
b. A small open boat is deployed to cart enthusiasts to **each** dive spot, *most of which are within 10 minutes reach*. (JT Mar. 21, 2015)

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CORPUS

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A Semantic Analysis of *teiru* Form in Japanese

Takahiro Shimizuno
Tohoku University

Keywords：aspect, event, progressive, result state

1. Introduction

Since Kindaichi (1950), interpretations of Japanese aspectual expressions V-*teiru* have been known to exhibit progressive and result state interpretations depending on the types of verbs to which -*teiru* attaches. In this section, we will survey the basic properties of V-te iru. Interpretations of V-*teiru* vary depending on the aktionsart of VPs, as shown in the following examples, which illustrate that when the verb phrases are activities or accomplishments as in (1a,b), V-*te iru* describes progressive events. However, when VPs are achievements (1c), VP-*teiru* describes result states of events denoted by the VP.

(1) a. Taro-ga hasit-te iru.
Taro-nom run-teiru-pres
'Taro is running.'
b. John-ga mado-o kowasi-tei-ru.
John-nom window-acc break-teiru-pres
'John is breaking the window.'
c. Nezumi-ga sin-dei-ru.
mouse-nom die-teiru-pres
'The mouse is dead.'

In English, V-*ing* describes progressive events too, but V-*ing* does not show the interpretation such variability observed in V-*te iru*. V-*ing* with achievements in (4) cannot describe the state of being dead but only expresses the preliminary stage of dying.

(2) The mouse is dying.

The question here is why only V-*teiru* shows two interpretations depending on the aktionsart of VP and what difference is there between V-*teiru* and V-*ing*.

In section 2, we review Ogihara (2020), which analyzes the two interpretations indicated by V-*te iru* in a unified manner. We show that passive sentences with accomplishments involving V-*te iru* cannot

be tenable in his proposal.

In section 3, I introduce verbal decomposition in syntax (Ramchand (2008)) and identifying states (henceforce, ID-states), which is proposed by Ramchand (2018) to explain the V-*ing*.

In section 4, I argue that it is necessary to specify what parts of eventuality are denoted by verbs to avoid the V-*ing* form of achievement verbs to describe the result state. Furthermore, I propose that V-*ing* and V-*teiru* both express ID-state, but the ID-states referred to by them are different: V-*ing* denotes causing ID-state, and V-*teiru* refers to caused ID-state.

In section 5, I analyze V-*teiru* in terms of caused-ID-state. I demonstrate that the two interpretations are captured, and furthermore, ambiguous interpretations displayed by passive sentences involving V-*te iru* are also explained by my analysis.

2. The Analysis Based on Subject Thematic Roles

Ogihara (2020) proposes a unified analysis of the two meanings of V-*teiru*. He explains the meaning of -*teiru* based on the thematic roles of subjects of -*teiru* sentences: if subjects are agents, then interpretations of V-*te iru* are progressive. On the other hand, if subjects are target states, which are holders of result states of change-of-state events, then the interpretations are result state. He proposes that contrary to neo-davidsonian semantics (cf. Person(1990)), thematic roles are predicates holding of a temporal argument in addition to event and individual arguments. He argues that the role of -*te iru* is to locate a temporal argument which the subject thematic role holds of in time preceding or being equal to the evaluation time.[1] The proposed denotation of -*te iru* is shown in (3):

(3) $[\![\text{-teiru}]\!] = \lambda f_{<e,<\varepsilon,<i,<w,t>>>}.\lambda x.\lambda e.\lambda t.\lambda w.\exists P[P(x)(c_T)(w)\ \&\ [\forall w' \in \text{BEST}_{\text{Japanese}}(P, f, x, M, O, w, c_T)\ \exists e \exists t'[c_T \not< t'\ \& f(x)(e)(t')(w')]]]$ (Ogihara (2020: 26))

The element -*teiru* combines with VP typed as $<e, <\varepsilon,<i,<w, t>>>$, in which e, ε, i, w and t represent individuals, events, intervals, worlds and truth values respectively.

The first conjunct in (3) indicates that an individual x has a property at an evaluation time t and a world w. The second conjunct shows that for all best worlds w' there is an event e and a time t' such that the time t' precedes or is equal to the evaluation time t and a property f holds of individual x and event e at the time t' and the world w'. The second conjunct indicates that events denoted by the VP occur in all worlds specified by $\text{BEST}_{\text{Japanese}}$, i.e., the worlds in which x has a property P and events described by f is not interrupted by external factors.[2] For example, a sentence involving agentive subjects and its interpretation are given as in (4).

(4) a. Hanako-ga miti-wo watat-tei-ru.
Hanako-nom street-acc cross-teiru-pres
'Hanako is crossing the street.'

b. $\exists P[P(\text{Hanako})(c_T)(c_W)\ \&\ [\forall w' \in_{\text{BESTJapanese}} (P, [\lambda z.\ \lambda e''.\ \lambda t''.\ \lambda w''.\ [\text{agent}(w'', t'', z, e'')\ \&\ \text{crossing-the-street}(e'')]], \text{Hanako}, M, O, c_W, c_T)\ \exists e \exists t'[c_T \not< t'\ \&\ \text{agent}(w', t', \text{Hanako}, e)\ \&\ \text{crossing-the-street}(e)]]]$ (adapted from Ogihara (2020: 26))

The interpretation suggests that *Hanako* has a certain property at the utterance time and the current world; in worlds where *Hanako* has this property and no intervening factors disrupt a "Hanako crossing-the-street" event, there is an event at a certain time such that this time precedes or is equal to the utterance time, and *Hanako* is the agent of the crossing of the street at the time. Ogihara suggests that default interpretation of the time of an occurring event is the time enclosed within the utterance time, leading to the progressive interpretation.

We now turn to the result state interpretation shown by *-teiru* sentences involving achievement verbs.

(5) a. Hanako-ga taore-tei-ru
Hanako-nom fall.over-teiru-pres
'Hanako is lying on the ground. She must have fallen over.'

b. $\exists P[P(\text{Hanako})(c_T)(c_W)$ & $[\forall w' \in \text{BESTJapanese}(P, [\lambda z.\ \lambda e''.\lambda t''.\lambda w''\ .\text{target state}(w'', t'', z, e'')$& $\text{falling.over}(e'')], \text{Hanako}, M, O, c_W, c_T)\ \exists e \exists t'[c_T \nless t'$ & target state $(w', t', \text{Hanako}, e)$ & $\text{falling.over}(e)]]]$

(adapted from Ogihara (2020: 27))

The interpretation suggests that *Hanako* has a certain property at the utterance time and the current world; in worlds where *Hanako* has this property and no intervening factors disrupt a 'Hanako falling-over' event, there is an event at a certain time such that this time precedes or is equal to the utterance time, and *Hanako* is the target state of the falling over at the time. In this case, the time of the target state is not following to the utterance time and if the time of target state is equal to the utterance time, the result state interpretation obtains, i.e., *Hanako* has a property that suggests she fell over, and as a result, she is now lying on the ground.

Although Ogihara (2020) analyzes progressive and result state V-teiru in a unified manner, the coverage of the analysis is limited to active voice sentences. Passive voice sentences may have the target state holder as a subject. Then, his analysis predicts that the interpretation of them has only a result state reading, contrary to the fact. For example, although the subjects are the same in (6a) and (6b), (6a) receives either a progressive or a result state reading, but (6b) with an overt agent phrase only expresses the progressive.

(6) a. Kuma-ga koros-are-tei-ru.
bear-NOM kill-pass-teiru-pres
'The bear is dead due to being killed. / The bear is being killed.'

b. Kuma-ga ryosi-ni koros-are-tei-ru.
bear-nom ryosi-prep kill-pass-teiru-pres
'The bear is being killed by a hunter.'

(Okuda (1978: 136))

Since his analysis depends on thematic roles of subjects, it is incorrectly predicted that both (6a) and (6b) has the same reading.

3. Assumptions

3.1. Verbal decomposition

In the previous section, we have seen analysis based on thematic roles of subjects are problematic. Alternatively, I propose event-based analysis, not relying on thematic roles. Before turning to my proposal, in this section, I introduce some backgrounds I assumes .

In this paper, I assume that verb phrases are decomposed in syntax, following the framework proposed by Ramchand (2008, 2018). She proposes that a verb is composed of any of these three projections: *init*(ial) heads, *proc*(ess) heads and *res*(ult) heads. These heads denote initial states (s1), process events (e2) and result states (s3) respectively. Following Hale and Keyser (1993) and Ramchand (2008), I assume that the embedded relation between these heads is interpreted as a causal or "lead to" relation. For example, in (10), *init* heads embedding *proc*P are interpreted as the initial state causing the process event. *Proc* heads embedding *res*P, in turn, are interpreted as process events causing the result states. This causal relation is represented in the first conjunct of (7b) by a symbol "→": $e = s_1 \rightarrow e_2 \rightarrow s_3$.

(7) a. $[_{initP}$ initiator $[_{init'}$ init $[_{procP}$ undergoer $[_{proc'}$ proc $[_{resP}$ resultee $[_{res'}$ res XP]]]]]]

b. $\lambda e \exists s_1,e_2,s_3[e = s_1 \rightarrow e_2 \rightarrow s_3 \wedge \text{init}(s_1) \wedge \text{initiator}(s_1,x) \wedge \text{proc}(e_2) \wedge \text{undergoer}(e_2,x) \wedge \text{res}(s_3) \wedge \text{resultee}(s_3,x)]$

As shown in (7b), each head introduces its own participants. The *init* head introduces an initiator, which is an external argument and play the role of causers or agents. The *proc* head introduces an undergoer, which undergoes change. The *res* head introduces a resultee, which holds result states of events.

3.2. Identifying State

I also assume identifying states analysis of English progressive proposed by Ramchand (2018). She proposes that V(erb phrase)-*ing* expresses the state which can be judged as part of the event described by VP. The semantics of the morpheme *ing* is a function from event properties denoted by VP to event properties that identify them, as indicated in (8).

(8) Identifying state (ID-state)

$[\![\text{-ing}]\!] = \lambda P \lambda s$ [s is an ID-State for property P(e)]

(adapted from Ramchand (2018: 58))

This state is argued to be a conceptual snapshot which enables the speaker to infer the extended whole eventuality given enough conditions or knowledge. V-*ing* as an ID-state captures the fact that neither (9a) nor (9b) can be true.

(9) a. The coin is coming up heads.

b. The coin is coming up tails.

The intended interpretation expresses the coin spinning in the air. However, a mere description of spinning does not identify the state described by (9a, b) because it is not possible to infer from the coin spinning in the air whether it will come up heads or tails. As a result, the state described by (9a, b) does not qualify as an ID-state, leading to the sentences being false.

4. Proposal

4.1. Problems of ID-states

Although Ramchand (2018) argues that the characteristic of progressive i.e., the imperfective paradox (cf. Dowty (1977)), which states that a progressive sentence does not entail the corresponding non-progressive sentence, is resolved by an ID-state because an ID-state is just part of the event, and the event itself is not realized, thus the imperfective paradox does not occur, there remains a question: why cannot ID-state be the result state of the event description? For example, (10) does not refer to the result of an event described by 'the rat dies,' i.e., the rat being dead, but rather to the preparatory stage of that event.

(10) The rat is dying.

It seems possible to infer the event description of 'die' from the result state of being dead. Therefore, a mere ID-state analysis cannot predict why an example like (10), involving achievement verbs, cannot describe the result state.

4.2. Adding a Specification on ID-states

To resolve the above problem, I propose that V-*ing* denotes the state included in the causing eventualities.

(11) ⟦-ing⟧ = λPλs [*s* is a causing ID-state for a property of P(*e*)]

By specifying ID-state to be causing eventualities, "dying" expresses the causing state leading to death, rather than the caused state of being dead.

On the other hand, V-*teiru* represents the state included in the caused eventualities, as stated in (12).

(12) ⟦-teiru⟧ = λPλs [*s* is a caused ID-state for a property of P(*e*)]

In the next section, we will explore how the semantics of -*teiru* in (12) gives rise to progressive and result state interpretations depending on the verbal classes.

5. Analysis

I assume that activity verbs are composed of *init* and *proc* component as illustrated in (13b). The structure in (13b) is interpreted as (13c).

(13) a. Taro-ga hasi-ru.
Taro-Nom run-pres
'Taro runs'
b. [$_{\text{initP}}$ Taro [$_{\text{init'}}$ run$_{init}$ [$_{\text{procP}}$ Taro [$_{\text{proc'}}$ run$_{proc}$ XP]]]]
c. ∃e[e = s1→ e2 & initiator(s1) ='Taro' & run$_{init}$(s1) & undergoer(e2) = 'Taro' & run$_{proc}$ (e2)]

In the interpretation, *init* introduces external arguments and represents causing eventualities expressing something done by *Taro*. The *proc* head expresses Taro's undergoing change along some path. The head *init* embeds *proc*P; this structural relationship between *init* and *procP* is interpreted as meaning that am initial state causes (or leads to) a process event as represented in the first conjunct in (13c).

I assume that V-*teiru* is derived by -*teiru* attaching to full verbal projections. The resulting structure is shown in (14b) and interpreted as (14b).

(14) a. Taro-ga hasit-te iru.
Taro-nom run-teiru-pres
'Taro is running'
b. [$_{\text{te iruP}}$ te iru [$_{\text{initP}}$ Taro [$_{\text{init'}}$ run$_{init}$ [$_{\text{procP}}$ Taro [$_{\text{proc'}}$ run$_{proc}$ XP]
c. λs [caused ID-state (s, ⟦Taro run⟧)]

The interpretation in (14c) expresses a set of ID-state which is included in caused eventualities denoted by verbal phrases. In this example, *proc* is a caused eventuality. The head *proc* express Taro's undergoing change along some path. Thus, a part of the change involving Taro falls into an ID-state. Since an ID-state of activities is a part of change, the sentence obtains a progressive interpretation.

Achievement verbs are composed of *proc* and *res* projections, indicating that there is a change which leads to some results. For example, *sinu* 'die' has a structure indicated in (15). The sentence means that a mouse undergoes some process, and it causes the mouse to be dead.

(15) a. Nezumi-ga sin-u
Mouse-nom die-pres
'The mouse dies'
b. [$_{\text{procP}}$ the mouse [$_{\text{proc'}}$ die$_{\text{proc}}$ [$_{\text{resP}}$ <the mouse> [$_{\text{res'}}$ die$_{\text{res}}$ XP]]]]
c. ∃e[e = e2 → s3 & undergoer(e2) = 'the mouse' & die$_{proc}$(e2) & resultee = 'the mouse' &die$_{res}$(s3)]

Since caused eventuality is s3 as shown in (15c), V-*teiru* in (16) expresses the resulting state of dying, i.e., 'the state of being dead'.

(16) Nezumi-ga sin-de-i-ru.
Mouse-nom die-teiru-pres

'The mouse is dead.'

Next, consider the case of V-*ing* in (17).

(17) The mouse is dying.

(17) expresses the mouse's state as being about to die, not the state of being dead. This is because V-*ing* refers to causing ID-state: *dying* denotes a state included in e2, which is the preliminary stage of death.

Accomplishments are composed of *init*, *proc*, and *res* projections. In example (20), *init* describes a stative event in which *Hanako* engages in some act. *Proc* expresses a change undergone by a door, which is caused by the act denoted by *init*. The *res* head expresses the door's state of being closed, which is resulted from the process denoted by *proc*.

(18) a. Hanako ga doa-o sime-ru.
Hanako-nom door-acc close-pres
'Hanako closes a door'

b. $[_{initP}$ Hanako $[_{init'}$ init $[_{procP}$ a door $[_{proc'}$ proc $[_{resP}$ <a door> $[_{res'}$ res XP]]]]]

c. ∃e[e = s1→ e2→s3 & initiator(s1) ='Hanako' & $close_{init}$ (s1) & undergoer(e2) = 'a door' & $close_{proc}$ (e2) & resultee = 'a door' &$close_{res}$ (s3)]

In this case, caused eventualities are e2 and s3. However, s3 representing the state of being closed cannot be referred by the *teiru* form of accomplishments as illustrated in (19).

(19) Hanako-ga doa-o sime-tei-ru. [Progressive]
Hanako-nom door-acc close-teiru-pres
'Hanako closes a door'

Although accomplishments involve a result component, V-*teiru* has only progressive interpretation. This indicates that only states included in e2 qualifies as ID-state, but states in s3 do not. Notice that s3 involves a door as an event participant, but not *Hanako*. Since it is not possible to infer from s3 that the whole event involves *Hanako* as an initiator of the event, s3 does not qualify as ID-state.

One may wonder why e2, which involves only a door as an event participant, can be ID-state. Notice that the process event expressed by e2 temporally overlaps with the s1 indicated by acts of *Hanako* as in the example of activity verbs. *Hanako*'s act on the door and the door's undergoing closing occurs at the same time. I assume that a part of overlapped eventualities between s1 and e2 may be licensed as an ID state. Because of this temporal coextensivity of s1 and e2, a state included in e2 involves an initiator, *Hanako*, in addition to an undergoer, a door. In this case, it seems possible to infer from e2 that the whole event involves the two participants. Thus, a state included e2 qualifies as an ID-state.

Unlike active sentences, passive V-*teiru* sentences give rise to an ambiguity between progressive and result state interpretation. Following the literature (e.g., Bruening (2013) and Alexiadou et al.

(2015)), I assume that a pass*(*ive*)* head existentially closes an implicit argument representing an initiator in passive sentences. Consider the example of (20), which shows the ambiguity.

(20) a. Kuma-ga koros-are-tei-ru.
Bear-nom kill-pass-teiru-pres
'The bear is dead due to being killed.[result state] / The bear is being killed.[Progressive]'
(Okuda (1978: 136)

b. [$_{teiruP}$ te iru [$_{PassP}$ Pass [$_{initP}$ (by the hunter) init [$_{procP}$ the bear [$_{proc'}$ proc [$_{resP}$ <the bear> [$_{res'}$ res XP]]]]]

I assume that the absence of an overt initiator makes this sentence ambiguous. As with the case of V-*teiru* in accomplishment, e2 denoted by *proc* temporally overlaps with s1 denoted by *init*. For the same reason as active accomplishment sentences, a part of e2 qualifies as an ID-state in (20). But in passive sentences, in addition to e2, a part of s3 is also a candidate for an ID-state. Since initiator is covert in (20), it is not necessary to infer an existence of particular initiator from an ID-state. It is enough to imagine some person or thing, which is causally responsible for the bear's death. Even if s3 does not involve initiator as an event participant, an existence of some initiator seems to be inferred from s3. Thus, a part of both e2 and s3 can be denoted by passive V-*teiru*.

Next, consider the passive sentence with an overt initiator indicated by adjunct *by*-phrase. Unlike (20) with a covert initiator, (21) has only progressive interpretation.

(21) a. Ryosi-ni kuma-ga koros-sare-tei-ru [Progressive]
Hunter-by bear-nom kill-pass-teiru-pres
'The bear is being killed by a hunter.' (Okuda (1978: 136))

b. [$_{teiruP}$ te iru [$_{PassP}$ Pass [$_{initP}$ by the hunter [$_{initP}$ init [$_{procP}$ the bear [$_{proc'}$ proc [$_{resP}$ <the bear> [$_{res'}$ res XP]]]]]

When the initiator appears as *by*-phrases in passives, as with corresponding active sentences, it is not possible to infer who or what causes the bear to be dead from the result state. Thus, parts of s3 do not qualify as ID-states and only parts of e2 can be ID-states.

6. Conclusion

In this paper, I pointed out the problem with Ogihara's (2020) analysis, in which the interpretations of V-*teiru* are sensitive to subject thematic roles. Drawing on Ramchand (2008, 2018), I have proposed that -*teiru* is sensitive to the event structure of VP itself, and V-*teiru* denotes an ID-state, similar to V-*ing* in Ramchand (2018). Additionally, I have argued that the difference between V-*teiru* and V-*ing* is rooted in the specification of a part of eventuality: V-*teiru* denotes a caused ID-state, while V-ing denotes a causing ID-state.

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NOTES

[1] I put aside the case in which temporal arguments of thematic roles are located before the utterance time. In this case, the event is located wholly in the past. For example, (1) describes the current state, in which addressee's pants are dirty and it suggests that addressee's falling down happened in the past.

(i) Hanako: Koron-deru ne.
fall-teiru.pres ending
[Lit.] '(You are) falling down.'
[Intended] 'You fell down. (I know that because your pants are dirty.)'. (Ogihara (2020: 27))

I speculate that the current state described in (i) would be analyzed as kind of caused ID-state which is caused by the whole event located in the past.

[2] More detailed definition of $\mathrm{BEST}_{\mathrm{Japanese}}$ is illustrated as follows.

(i) $\mathrm{BEST}_{\mathrm{Japanese}}(P, f, x, M, O, w, t)$ = the set of worlds $w_1 \in \cap\mathrm{M}(P, x, w, t)$ such that there is no world w_2 in $\cap\mathrm{M}(\mathrm{P}, \mathrm{x}, \mathrm{w}, \mathrm{t})$ where $w_2 <_{O(f, x, w, t)} w_1$

(Ogihara (2020: 25))

Here, $\cap\mathrm{M}(P, x, w, t)$ provides the set of worlds in which an individual x has a property P at the world w and time t. The ordering source O (f, x, w, t) specifies the proposition that ensures that in world w and time t, an f-type event engaged in by x is not interrupted by external factors.

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不変化詞 *out* を伴って生じる「除去」および「獲得」を表す句動詞構文*

（V + *out* Phrasal Verb Constructions with ‘REMOVAL’ and ‘OBTAINMENT’ Senses）

岩宮 努（Tsutomu Iwamiya）
大阪大学大学院（Graduate School of Letters, Osaka University）

キーワード：構文文法, 句動詞, 不変化詞, 多義性, コーパス

1. はじめに

動作動詞と不変化詞 *out* で構成され、行為対象の「除去 (REMOVAL)」または「獲得 (OBTAINMENT)」の意味として多義的に用いられる句動詞構文は非常に生産性が高い。本稿は、*out* を伴い主要部の動詞だけでは選択できない目的語があらわれる事例を観察することにより、この２つの句動詞構文の意味と形式について検討する。なお、本稿で示すデータは 2023 年 2 月 14 日から 3 月 15 日、および 2 次調査として 2023 年 8 月 17 日から 23 日 [1] の間に、NOW Corpus から抽出された英語圏のデータに基づく。

2. *Out* を伴う句動詞構文に生じる多義性と目的語にかかる意味制約

Jackendoff（2002: 84）によると、句動詞構文の特徴の一つは統語的に主要部となる動詞によってその意味が決定づけられず、多くの場合、動詞のみでは生じない目的語があらわれることである。たとえば、(1a) の「(*cattle*) を駆り立て、一つの場に集める」という表現では *up*、(1b) の「*sleep(ing)* によって、時間（*the afternoon*）を無為に過ごす」という表現では *away* を伴って句動詞特有の目的語が生じるが、いずれも不変化詞がなくては文が成立しない。[2]

(1) a. They **{round up/ *round} the cattle**. (Bolinger 1971: 100)
b. Bill **{slept the afternoon away/ * slept the afternoon}**. (Jackendoff 2002: 81)

ただ、このように不変化詞の付加によって適格となる具体的な事例を提示し、句動詞特有の目的語について分析を行っている研究は少ない。本稿が扱うのは、きわめて生産性が高く、また新規的な表現も生じやすいとされる (Bolinger 1971: 109)、不変化詞 *out* を伴って生じる句動詞表現である。

不変化詞 *out* を伴う句動詞表現には、「退去 (LEAVING)」、「外出行為 (AWAY FROM HOME)」、「（行為の）完遂 (COMPLETENESS)」など、様々な意味があるが（Cobuild Phrasal Verbs Dictionary: 514-518）、「除去」および「獲得」を意味する表現では句動詞特有の目的語が生じやすい。[3] たとえば、(2a) の *wipe* は、*virus* のような行為対象の「除去」を示す表現では不変化詞 *out* がなくては容認されない。一方で、(2b) の *dig out* で *(the) truth* といった目的語を伴う表現では、

句動詞の形でしか文が成立せず、また行為対象の事物・概念が「獲得」されるという「除去」と逆の意味の解釈となる。

(2) a. The health service is aiming to **{wipe out/ *wipe} the virus** in England…
(GB 2022/ NOW Corpus)
b. Guardian journalists have worked round-the-clock to **{dig out/ *dig} the truth** about the pandemic. (GB 2020/ NOW Corpus)

本稿は、これらの V+*out* 句動詞構文にいかなる目的語が生じ、いかにして解釈されるのか、そして当該構文がどのような構文的な意味が持つのか、コーパスを用いた実証研究によって明らかにする。

3. 「除去」および「獲得」を表す V+ *out* 句動詞構文

Out を伴って生じる「除去」および「獲得」を表す句動詞構文では、特に労力を伴う動作を示す動詞を主要部にとり、（通常目視では確認できない）潜在する事物・概念を「除去」又は「獲得」する事態が表される。*Sweat* は自動詞であるため、*out* の付加なしで、「汗をかくことで（ウイルス）を排出する (3a)」、「不断の努力によって（勝利）を得る (3b)」といういずれの意味解釈でも使用できない。

(3) a. He went running to try and {**sweat out/ *sweat} the virus**. (Cobuild Phrasal Verbs Dictionary)
b. …Hachimura had to **{sweat out/ *sweat} his victory**,… (AU 2020/ NOW Corpus)

なお、(4) の *dig* に対する *weeds*、*wipe* に対する *dust* や *dirt* など、動詞が表す行為の過程で容易に取り除かれてしまう事物の場合、不変化詞を伴わなくとも表現としてしばしば成立する（このような文脈では *out* は *completely* とほぼ同義の副詞として機能するため、つまり「（行為）の完遂」の意味を表すため、本稿では扱わない）。

(4) …these volunteers have spent years patiently **digging (out) weeds** and caring for the reserve.
(AU 2022/ NOW Corpus)

3.1. 「除去」および「獲得」を表す V+ *out* 句動詞の形式と意味

主要部の動詞だけでは通常使用できない 2 つの句動詞構文の意味と形式は (5a-b) の構文式によって表すことができる。また、それぞれの表現で際立って高い頻度であらわれる目的語とその用例数を (6) に記す。[4]

また、COHA, COCA, Wordbanks, The Movies Corpus, The TV Corpus において 2000 年以降にあらわれている新規的な表現を太字で、*out, off, away, from, into* といった除去・分離を表す句動詞を形成する不変化詞を伴わずに、主要部の動詞のみでその目的語が成立している場合の用例数を * が付された値で記す（ちなみに、“*scratch a win*” など不変化詞のない形で句動詞の意味として使用されている表現は通常誤用と判断されるが、こういった表現は特に口語文で生じ、NEWS から主にデータが収集されている NOW Corpus でも、スポーツ記事における選

手のコメントなどで、*out* が抜け落ちて発話された文がそのまま引用されることがある)。

(5)

[NP_1 V *out* NP_2/ NP_1 V NP_2 *out*]

↔ a. [X_1 removes Y_2 by effort-consuming actions represented by *V-ing*] [REMOVAL]

↔ b. [X_1 obtains Y_2 by effort-consuming actions represented by *V-ing*] [OBTAINMENT]

(NP_1: the AGENT/ NP_2: something [often invisible and] hard to reveal)

(6)

REMOVAL	OBTAINMENT
root out [bias] (155)	*hammer out [agreement]* (513/ 1*)
wipe out [virus] (118/ 1*)	***gut out [win]* (135)**
sweat out [toxin] (50)	*thrash out [agreement]* (109/ 1*)
iron out [difficulty] (47)	*scratch out [win]* (60/ 3*)
***stamp out [bias]* (31)**	*dig out [truth]* (49/ 2*)
choke out [species] (22)	*iron out [agreement]*(41)
***comb out [lice & (their) eggs]* (21)**	***carve out [gain]*(40)**
***stomp out [virus]* (20/ 1*)**	*sniff out [truth]* (18)
***flush out [virus]* (18)**	*flush out [truth]* (15)
***tear out [poison]* (14)**	***grind out [success]* (15)**
thrash out [problem] (12)	*sift out [truth]* (9)
weed out [error & mistake] (9)	***sweat out [victory]* (7)**
***breed out [colour]* (8)**	***grit out [victory]* (6)**
	***smoke out [truth]* (5)**

(5a, b) は、いずれも同じ形式を共有し共起する動詞によって異なる意味の表現を派生させる、いわゆる多義リンク型の構文だが（坪井・早瀬 2019: 133)、(5a) の構文の要素となる動詞の多くが清掃または駆除に関わる動作を示す一方で、(5b) に組み込まれる動詞の多くは、生産または探索に関わる動作を表す。

たとえば、*dig, hammer, iron* などの行為は *gold* や *metal* といった鉱物・貴金属の採取・精製、*grind, sift, gut, smoke* などの行為は *flour* や *sausage, bacon* といった食品の加工に不可欠な作業である（また、*dig* は *sniff* などと同様、探索活動に必要とされる動作でもある)。

ただ、主要部に清掃や生産に関わる動作動詞を伴って句動詞表現が形成され、定着していったことが共時的なデータによって推測可能である一方で、英語話者は必ずしも *wipe* や *dig* といった主要部の動詞の意味や使用文脈についての知識を活性化しながら、それらの句動詞表現を用いているわけではないと思われる。

英語話者はこれらの句動詞表現を、句全体のまとまりとしての意味、つまり構文的意味を一つの単位として記憶し、その知識を活性化させて使用していると考えられ、生産的な語の組み合わせ、つまり構文に適合する文の組み合わせは、特に耳にしたりすることがなくとも、その意味が理解される（Jackendoff 2002）。[5]

たとえば、(7a) の *stomp out [virus]* のような新規的表現も、(7b) の *stomp out [cigarette]* といった既存の表現の「（タバコの吸い殻 [の火] ）を踏み消す」といった意味から「除去」の意味が想起され、「*virus* を死滅させる」という表現としての意味が類推によって得られる。[6]

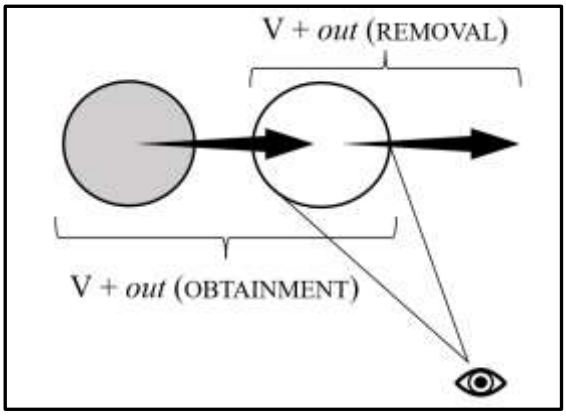
(7) a. Fauci says the key to **stomping out this virus** is not necessarily finding a vaccine but using the advances we've made so far to better advantage. (US 2015/ NOW Corpus)

b. …you need to **stomp out that cigarette** and go in there… (*Get On Up*, 2014/ The Movies Corpus)

また、V + *out* 句動詞構文の多義性の解釈には、主要部の動詞の多義性が「除去」および「獲得」の句動詞の意味の形成に寄与していることに加え、不変化詞 *out* も大きな役割を果たしていると考えられる。

Lindner (1982: 310-312) によると 、*dredge out [fact]*（真実を攫い出す）や *blot out [fact]*（真実をもみ消す）といった V + *out* の句動詞表現で多義性が生じるのは、(8) が示すように、隠されていた事象 *(fact)* が話し手の認知領域（目のアイコンは VIEW POINT であり、話し手の視点）の中に入り込む事態（[獲得] の解釈）でも、話し手の認知領域の外へその事物や事象が追いやられる出来事（[除去] の解釈）でも、不変化詞 *out* が事象の変化を表すのに同じように用いられるためである。[7] たとえば、(8) において、未知の存在であった *fact*（灰色の円で表された事象 [TRAJECTOR]）が矢印で示された経路を辿って話し手の認知領域に移行する場合、OBTAINMENT（獲得）の解釈が生じ、逆に周知の *fact* が認知領域の外へと追いやられる場合、REMOVAL（除去）の解釈が生じる。

(8)



(9a) の *iron out* は、困難な問題 *(difficulty)* が町の有力者たちによって、話し手や住民の意識の外に追いやられるような出来事を表すため、「除去」の意味として解釈され、どこかに糸口が存在する同意 (*agreement*) のような抽象概念が、句動詞が表す行為によって得られる出来事では、「獲得」の意味として解釈される (9b)。いずれにせよ、主要部の動詞 *iron* が "（衣類）

にアイロンをかける”という清掃行為と“（鉄）を打つ”という生産行為を表すだけでなく、「除去」又は「獲得」に至るプロセス（経路）が不変化詞 *out* によって明示されることにより、それぞれの句動詞の表す意味がより明確に理解されることになる。

(9) a. …they would have a representative in town to **iron out any difficulties**.
(NZ 2013/ NOW Corpus)
b. …Democrats stalled for time to **iron out the agreement** on the unemployment payments.
(US 2021/ NOW Corpus)

ちなみに、通時的には、*iron out [crease(s)]*（*iron* で皺をとる/ 除去）や *iron out [detail(s)]*（[文書などを細部まで] 仕上げる）[8] といった意味が生じたのち、(9a, b) のように両義に用いられるようになっており、具体的な事物の「除去」、「獲得」を示す表現が、抽象的な事象を示す表現へと変化していったことがデータ上でも確認できる。

(3b) の *sweat out* に OBTAINMENT の解釈が得られるのも、「汗をかいて努力する」ことが「生産」的行為ともみなすことができる一方で、その時点では話し手の認知領域にない目的語の *victory* という事象が、主語の努力によって、手の届く範囲まで引き寄せられうるプロセスが *out* によって明示されるためである、と考えられる。

3.2. 構文の拡がり

ここまで、（5a, b）のスキーマに沿って様々な用例が生じることを確認してきたが、更に興味深い事例への拡がりもみとめられる。たとえば、*breed*（[家畜] を繁殖させる）など、本来生産的な行為として捉えられる動詞が、不変化詞 *out* を伴い、「除去」の意味として使用されている句動詞もある。(10a) の *breed out [color]*（[民族の血脈]を根絶させる）は、Shakespeare が *King Henry V* (1623) で用いた *breed out*“ [アングロサクソン人との交配が]（生まれてくる子孫）を堕落させる (degenerate)”という句動詞表現になぞらえて、 [除去] の意味として使用されるようになった新規的表現である（用例は白人と結婚させることで純血のアボリジニの人口を減らすことを目的とした 1930 年代のオーストラリアの同化政策を論じたもの）。[9]

また、*make a living as X* といったイディオムとの BLENDING によって生じたと考えられる (10b) の *scratch out a living as X* のようなサブスキーマ表現では、*as* の斜格である X に、しばしば *dish washer* や *street vendor* など、*make* や *earn* を主要部とする表現に登場する X よりさらに不安定な職種を示す名詞を伴う。

(10) a. …his scheme to "**breed out the colour**" of Aborigines through planned intermarriage with whites.
(CA 2018/ NOW Corpus)
b. I had returned to self-medicating with street drugs, **scratching out a living as a dishwasher** at a fast food restaurant. (US 2012/ NOW Corpus)

さらに、「除去」の対象として生起する目的語が人の場合、V＋*out* 句動詞構文には非対格自動詞が生じることもある (11a-b)。非対格自動詞とは例えば、‘***I opened the door.***’と‘***The door opened***.’のように、目的語の事物に自発性がみとめられる際（つまり、ドアがひとりでに開

いたかのように感じられたときに)、本来他動詞の目的語である要素が自動詞の主語として用いられたりするものである (Yoshimura & Taylor 2013: 304)。(11b) において *a driver* が非対格自動詞の主語として使用されているのは、運転手が事故によって *wipe out* される対象（受動者）である一方で、主語の人物にも事故に対する責任があり（この文脈では *driver* は事故当時およそ 160 キロを出している)、その意味において少なからず自発性がみとめられるからである。

(11) a. …he either put himself in position to win with pit strategy or caused a wreck on a late restart that **wiped out the drivers** in front of him. (iWeb Corpus)

b. **A driver wiped out** right outside of Ackerman's business Bob's Auditorium on Thursday, taking out three parked cars… (US 2021/ NOW Corpus)

3.3. *Out* の背景化

科学やテクノロジーの発展によって、目的語の削除が労力を伴う行為とは必ずしもみなされなくなった句動詞構文では *out* を伴わない表現、つまり他動詞構文として使用されるようになった表現もある。句動詞表現 *wipe out [memory]* は、Early English Books Online [EEBO] Corpus において 1578 年から 1696 年までに 12 回、COHA では 1997 年までに、*out* のない他動詞用例が生じるまで 28 回使用されているが（つまり、1997 年に COHA で *out* のない他動詞用例が生じる以前に、2 つの通時的コーパスで句動詞として計 40 回使用されている)、NOW Corpus の 2022 年の英語圏のデータでは、*out* を伴う句動詞用例が 9 例に対し、他動詞表現が 52 例と、不変化詞を伴わない表現の方が一般的となっている。

(12a) で削除される *memory* は、コンピュータ上の記録容量であって、この事物を、マウスをクリックし、一瞬で「除去」する作業は、もはや労力を伴う行為とはみなせない（つまり、[4] の *dig* に対する *weeds* のように労力を示す不変化詞 *out* を必要としない)。また、(誘拐などの犯罪行為の過程で）薬物の投与によって人の記憶を消すという (12b) の文脈でも、薬を投与した人間が何らかの労力を費やしたのかどうか定かではない。[10]

(12) a. Additionally, we categorically refute the accusation that a member of our team deliberately **wiped the memory** of the customer's dashcam device. (US 2022/ NOW Corpus)

b. The drug must **have wiped my memory** that night. (*Law & Order*, 2012/ The TV Corpus)

4. 結語

本研究はここまで、共時コーパス・通時コーパスの両方を用いた実証研究によって、「除去」および「獲得」を表す句動詞表現が、現代英語において広く使用される構文であることを観察した。本稿の最後に、「除去」および「獲得」を表す V + *out* 句動詞表現は、句動詞特有の目的語を派生させるという構文として、他の不変化詞を伴う表現よりも高い生産性および汎用性を顕現することにも言及する。

たとえば、(13a) の *sweat off [weight/ pound]*、(13b) の *smile away [FEELING]*といった句動詞でも、句動詞特有の目的語を「除去」する意味を表す用例が生じるが (後者で FEELING にあたるのは、具体的には *embarrassment, anger, stress, worry* など)、NOW Corpus の英語圏のデータ

において、前者では 25 例（不変化詞なしで成立する用例も 4 例）、後者では 0 例、と生産性は高くない（ただし *laugh away [FEELING]*であれば、9 例成立している）。

(13) a. I **sweated off one pound** in the stream bath. (安藤 2011: 1598)

b. I heard the lining tear but **smiled away the embarrassment**.

(M. Connelly 2003, *Lost Light:* 6)

また、「除去」および「獲得」を表す V + *out* 句動詞構文は、様々な動詞を主要部に伴い多様な意味を表現できる、フォーマルな使用域でも用いられるといった点において、汎用性が高い。たとえば、*smile away* の類義表現として、*laugh away* は使用できるが、*grimace* や *frown* といった他の表情動詞を伴い類似した意味の表現が生じるわけではない。

一方で、V + *out* 句動詞構文は、清掃、生産、探索行為などに関連する多くの動作動詞を主要部とし、多様な意味を表現できる。また、通常、句動詞表現は、CONVERSATION や FICTION といった使用域で生じ (Biber et al. 1999)、書きことばにはあまり使用されない一方で、[11] V + *out* 句動詞構文は NOW Corpus（NEWS）のようなフォーマルな文体においても、(6) でみられるような高い生産性を顕現するのである。

いずれにしても、これら多義的に用いられる 2 つの句動詞構文は、高い生産性と汎用性に加え、BLENDING 表現や非対格自動詞文などのサブスキーマ表現も派生させており、「個々の構成要素から文全体の意味が推測できるものであっても、充分な使用頻度がみとめられる言語表現を構文とみなす」という Goldberg (2006: 6-7) の定義に照らし合わせても、いずれも独自の構文として認められるべきである。

* 本稿は日本英語学会第 41 回大会における口頭発表原稿に加筆・修正を加えたものである。発表会場でコメントをくれた先生方、特に司会の大谷直輝先生と、有益なコメントをくださった岩田彩志先生、伊藤隆男先生には深く感謝申し上げたい。

注

[1] 2 次調査と 1 次調査の間には半年以上の期間があるため、2 次調査における NOW Corpus からのデータでは、3 月 15 日以降にあらわれた用例はカウントしていない。

[2] *Sleep* は一般的に自動詞とみなされ、通常目的語をとらないが、*round* は場所表現を目的語にとる（他）動詞である (e.g., *The house disappeared from sight as we* ***rounded a corner***. [Cobuild]) 。

[3]「退去」の意味を持つ *storm out* や *ship out* などの句動詞では、どのように *leave* するか (e.g., *Sailors hung about while they waited to* ***ship out***. [Cobuild])、動作の様態や手段が主要部の動詞によって表され、「外出行為」の意味を持つ *eat out* や *sleep out* などの句動詞では、その行為が *home* でないところでなされる出来事が表される。また、「（行為の）完遂」の意味の *argue out*（議論し尽くす）、*hear out*（[話] を最後まで聞く）、*dry out* といった句動詞では、主要部の動詞が表す行為が完遂されたことが示される。いずれにしても、通常自動詞として使用される「退去」や「外出行為」の意味の句動詞（"*…we intend to* ***ship the product out*** *through Port Chalmers* [NZ 2016/ NOW Corpus]" のように使役他動詞として用いられることもあるが）、および主要部の動詞と伴う目的語が変わらない「（行為の）完遂」の意味の句動詞、のいずれの V + *out* 構文でも、句動詞特有の目的語はほとんど生じない。

[4] (6) のデータは NOW Corpus を使用し、<[X] [Y]> , <[X] * [Y]>, < [X] *out* [Y] > , < [X] *out* * [Y] > (X=主要部の動詞/ Y=特定の名詞) の 4 通りの検索方法で、*out* を伴わなければ、生じない V + *out* の用例を収集することによって作成された（[Y] に *out* が後続する用例は最初の 2 段階 [<[X] [Y]> , <[X] * [Y]>] の検索によって個別に収集）。ちなみに、これらの「除去」、「獲得」を表す V + *out* 構文では、目的語に *out* が後続する事例はあまり生じない（たとえば、[6] において 100 例以上の用例がみとめられる句動詞表現でも、目的語に *out* が後続する事例は、*wipe [virus] out* [8 例]、*root [bias] out* [2 例]、*gut [win] out* [7 例]、*hammer [agreement] out, thrash [agreement] out* [1 例] と少ない）。

[5] Jackendoff (2002) の「句動詞が一つのまとまりとして解釈される」という見方は、インフォーマントチェックでも支持され、また通次的な句動詞の意味の発達の点においても矛盾がみられない。たとえば、主に名詞として使用される *root* が動詞として使用される場合は、通時的に *root up* または *root out*（いずれも[植物の根] を引き抜く）といった不変化詞を伴う形が使用されており (OED)、その後生じた他動詞 *root*（[植物の根] を植え付ける）の意味では、(6) の *root out [bias]* の「除去」の意味と結びつかない（ちなみに、1800 年代には、*root out* の目的語、つまり「除去」の対象として、*crime, vice, error, enemy* といった名詞が生じている事例がみられる [COHA]）。

[6] この表現では、*cigarette* は消滅するわけではないので、完全な「除去」の意味で捉えられているわけではなく、不変化詞の *out* が、*stomp* という行為のあとの *cigarette* の結果状態（火の消滅）を表しているものと考えられる (Otani 2013)。ちなみに *stomp out [cigarette]* は 1993 年 (COHA) と、比較的新しい表現ではあるが、それでも、(7a) の *virus* を伴う初出とみられる表現 (2015) よりもかなり前から使用されている。

[7] Lindner (1982) の句動詞の多義性の考察は（当時としてはおそらく画期的で）かつ興味深いものであるものの、（かなり古い先行研究であるため）構文としての生産性、主要部の動詞の性質、句動詞の意味変化などについてのデータが不十分で、句動詞構文の記述としてあまり厳密なものではない。たとえば、*dredge out [fact]* は共時的・通時的にもほとんど使用されておらず、また *blot out* や *cross out* といった句動詞では事物や事象では主要部の動詞が表す行為によって（つまり擦ったり、斜線をいれたりする行為によって）事象や事物が認識しづらくする事態は表すものの、事象や事物自体は通常完全に「除去」されない（つまり、[5] や [8] の意味構造に厳密には一致しない）。したがって、本研究は不変化詞の意味によって、句動詞の意味がおおよそ推測できるという Lindner (1982: 306) の捉え方を完全に支持するわけではなく、あくまで主要部の動詞と不変化詞が融合した「構文」として句動詞の意味を捉え、またそのように形成された構文的意味も生産性の高い類似表現や社会的変化などの要因によって変化するという「構文文法」としての分析アプローチを採用する。

[8] *Iron* には「鉄板を被せる」という意味もあることから（OED には *ironed wheels* [鉄板で覆われた車輪] など、分詞形容詞によって名詞を修飾している例文が記載されているが、共時的・通時的いずれのコーパス・データにも、服や布以外の事物が *iron* の目的語になっている事例はほとんどみられない）、この表現は「生産」の意味とも捉えることができる一方で、*iron out [crease(s)]* から派生した、*iron out [crumpled paragraph]* (1859/ COHA)（まとまりのない文の構成を修正する [皺のある衣服のようにふぞろいの段落をならす]）、*have things ironed out* (1909/ COHA) （物事を整理する）といった「無駄なものを取り除くことで修正する」という「除去」

を意味する V + *out* 句動詞から発展したメタファー表現と考えることもできる。

[9] *Breed out [color]* は、2002 年公開のオーストラリア映画“*Rabbit-proof Fence*（裸足の 1500 マイル）”以降使用されるようになった句動詞表現と考えられる。映画自体では、“*The Aboriginal has simply* ***been bred out****.”* というアボリジニを主語とした受け身文で用いられているが、その後、マイノリティ人種全般の淘汰（除去）を意味するネガティブな句動詞表現として、*breed out [colour]* が広く使用されるようになっている。

[10] NOW Corpus の英語圏から抽出した 2022 年のデータでは、V + *out* の句動詞表現 64 例に対し、他動詞用例が 11 例と、現時点では句動詞表現の方が使用されるが、「獲得」を表す *carve out [reputation]* も科学やテクノロジーの発展によって他動詞用法が生じている例である。たとえば、“*…Johnny Wu* ***carved a reputation*** *for himself on Instagram…*(GB 2019/ NOW Corpus)” といった用例では、インスタグラムによって瞬く間に名声を手に入れた出来事が示されているが、このような用例では労力を伴う *out* を必ずしも必要としない。

[11] 句動詞は慣習的に書きことばとして敬遠されており、たとえば、Samuel Johnson や Noah Webster のような辞書学者は文体にこだわり、句動詞の形式や意味を辞書の中で記述することに否定的な見方を示していた (Thim 2012:221)。

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コーパス

Corpus of Contemporary American English (COCA) <https://www.english-corpora.org/coca/>

Corpus of Historical American English (COHA) <https://www.english-corpora.org/coha/>

Early English Books Online (EEBO) Corpus <https://www.english-corpora.org/eebo/>

iWeb Corpus <https://www.english-corpora.org/iweb/>
News on the Web (NOW) Corpus <https://corpus.byu.edu/now/>
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同語反復表現における粒度*

（Granularity in Tautological Expressions）

山本 尚子（Naoko Yamamoto）
大阪学院大学（Osaka Gakuin University）

キーワード：同語反復表現, 粒度, 構文, 関連性理論

1. はじめに

同一表現の繰り返しに関する日英比較について、例えば、フィルモア (1989: 27)は、日本語では繰り返しがよく起こる重要な「device」であるのに対して、英語では繰り返しという「device」は存在するものの、頻繁には使用されないと述べている。このような指摘は興味深いものであるが、(i) 英語とは違い、日本語では、繰り返しという「device」がなぜ頻繁に用いられるのか、(ii) その「device」にはどのような意味や働きがあるのか、(iii) 英語には繰り返しという「device」が存在するにもかかわらず、なぜそれを頻繁に用いることがないのか、といった疑問が未解決のまま残されている。

そこで、本稿は、そのような点を明らかにする第一歩として、同一表現を繰り返す同語反復表現の最小対の一つである「A ものは A」「A ことは A」（「美しいものは美しい」「美しいことは美しい」のように、A には形容詞が入る。）を分析対象とし、「粒度 (granularity)」という概念を用いて、当該反復表現が用いられる文脈の特徴を明らかにすることを目的とする。そして、「A ものは A」が用いられる文脈では、発話時点で話題になっている事象に関する粒度レベルが、当該発話の前後で、細かいものから粗いものへと変化していると特徴づけることができるのに対して、「A ことは A」が用いられる文脈では、発話時点で話題になっている事象に関する粒度レベルが、当該発話の前後で、粗いものから細かいものへと変化していると特徴づけることができることを主張する。

2. 先行研究検証

第 2 節では、「A ものは A」「A ことは A」の先行研究を概観する。当該反復表現を比較検討した数少ない先行研究として、大石 (2015)がある。[1]

(1) 支店だろうが、<u>うまいものはうまい</u>。
(2) スタンフォードのキャンパスは、<u>広いことは広い</u>んですが、少し殺風景です。

(大石 (2015: 39)、下線は引用者)

彼の分析に従えば、(1)(2)ではともに「うまい」「広い」という形容詞を繰り返すという冗

長性をもつ有標表現が用いられているので、Levinson (2000)の M 原理に従い、I 原理に基づき引き出されるステレオタイプ的な事態が否定されるという解釈が暗に示されていると考えられる。また、彼は、「A ものは A」と「A ことは A」の違いは、それらに含まれる「もの」と「こと」の基本的な意味に起因すると述べている。[2]「もの」とは、「変えることができない、不可変のこと」であるので、「A ものは A」では、予測されるステレオタイプ的な事態は、それに反する事態があるにもかかわらず保持される。それに対して、「こと」とは、「人間の力で果たすことのできる義務、意欲的に可能な行為」であるので、「A ことは A」では、予測されるステレオタイプ的な事態は結局否定される。

一見すると、このような分析は両者の違いをうまく説明しているように思えるが、次に述べるような 4 つの問題点がある。第一に、大石 (2015)が主張する Levinson (2000)の M 原理に基づく分析は、有標表現全般に当てはまるものであり、それだけでは、「A ものは A」「A ことは A」と、その他の有標表現の違いを説明することができない。

第二に、彼の分析では、(1)や(2)のように、当該反復表現が示されているだけで、それがどのような場面で用いられたものかについては具体的な言及がない。そのため、各事例における「予測されるステレオタイプ的な事態」がいったいどのようなものであり、それが何に関するものであると一般化できるのかはっきりとしない。

第三に、大石は、当該反復表現の共通点として、予測されるステレオタイプ的な事態が否定されることを挙げている。しかしその一方で、「A ことは A」では、予測されるステレオタイプ的な事態は結局否定されるのに対して、「A ものは A」では、そのような事態は結局保持される、つまり、否定されないと述べており、主張に矛盾が生じている。

最後に、先ほど触れた 3 つ目の問題点にも関連するが、大石 (2015)が主張する「否定されるステレオタイプ的解釈」が何から引き出されるのかが異なるため、厳密な意味でも、ステレオタイプ的に予測される事態の否定が、両者の共通点であるとは言えない。より詳しく彼の分析を見ていくと、「A ものは A」の場合は、例えば(1)の「支店だろうが」のように、前件に「が」という逆接の接続助詞が続いており、その部分から引き出されるステレオタイプ的事態が否定されていると考えられる。一方、「A ことは A」の場合は、例えば(2)の「広いことは広いんですが」のように、当該表現そのものに逆接の接続助詞「が」が伴われているため、当該表現によって伝達される内容そのものが否定の対象となっているように思われる。このように、「A ものは A」「A ことは A」それぞれの前後に接続助詞が伴われているため、否定されるステレオタイプ的事態が何から引き出されるのかが異なっている。確かに大石 (2015)が指摘するように、直感的に、当該反復表現の解釈プロセスには何らかの意味での「否定」が関わっているように思われる。だが、それが何に起因するかを特定するためには、まず「A ものは A」「A ことは A」そのものの意味を明らかにする必要があるように思われる。したがって、本稿では、前件、あるいは、後件を伴わず、単独で生起する「A ものは A」「A ことは A」を分析対象とする。

以上、本節では、「A ものは A」「A ことは A」に関する先行研究を簡潔に概観し、その問題点を指摘した。以下、第 3 節では、「粒度 (granularity)」という概念について、第 4 節では、「A ものは A」「A ことが A」が用いられる文脈の特徴について見ることにしよう。

3. 「粒度 (granularity)」について

第 3 節では、本分析を行う上で重要な概念である「粒度 (granularity)」について見ていく。「粒度」という概念は、会話分析や認知言語学などさまざまな分野で用いられている（Schegloff (2000)、Croft and Cruse (2004)、大谷 (2019)）が、概して、話し手が、世界を認識する上で、対象をどの程度詳しく捉えるかに関するものであると言える。つまり、物理的には同じ対象であったとしても、話し手がその対象を遠目から捉えれば、その概要を描写することになるが、その対象を至近距離から捉えれば、その細部を描写することになる。このような捉え方の違いは、言語表現の使い分けにも影響を及ぼす。

大谷 (2019)は、例えば、「犬」に対して、「動物」は対象を大雑把に粗く捉えた粒度の低い表現であるが、「犬」に対して、「ポメラニアン」は対象を詳細に捉えた粒度の高い表現であると述べている。また、次のような例を挙げ、捉え方の違いが、言語表現の使い分けに影響を及ぼすことを説明している。

(3) a. My family is fine.
b. My family are fine. (大谷 (2019: 102))

(3a)(3b)はともに「私の家族は元気だ」ということを表わしている。しかしながら、前者では、family を is で受けており、家族をひとまとまりとして、大雑把に捉えていると言える。それに対して、後者では、family を are で受けており、家族の構成員を細かく捉えていると言える。このように「私の家族は元気だ」という同じ事態であったとしても、family という対象をどの程度詳しく捉えるかに応じて、一つのまとまりとして大雑把に粗く捉え、その概要を描写することもあれば、複数の成員を持つものとして、その詳細を描写することもあるのだ。これらの例は、対象をどの程度詳しく捉えるかに関する粒度の違いによって、言語表現が使い分けられていることを示している。

以上のような概観から、言語表現には粒度レベルが粗いものから細かいものまでさまざまな表現があり、対象の捉え方の違いが言語表現の使い分けに影響を与えていると言うことができる。

4. 分析

4.1. 「A ものは A」

これまでの議論に基づいて、本節ではまず「A ものは A」が用いられる文脈の特徴を検討する。例えば、(4)を考えてみよう。この例では、ある夫婦が、子どもが寝静まったあとどのように過ごすかについて書かれている。

(4) …そのあとは夫婦二人の時間になる。夫はソファーに座って、夕刊を読みながら私と少し話をする。患者の話、新聞記事の話。そしてハイドンだかモーツァルトだかを聴く。私も音楽を聴くのは嫌いではない。でもいつまでたっても私にはハイドンとモーツァルトを識別することができない。私の耳にはどちらもほとんど同じように聞こえる。私がそう言うと、違いなんかわからなくたっていいさと夫は言う。<u>美しいものは美しい</u>、それでいいじゃないか、夫はそう言う。（BCCWJ、下線は引用者）

夫の発話「美しいものは美しい」は、例えば、「聴いている音楽はどれも美しい」といったことを示唆していると考えられる。確かにこの夫婦はともに、子どもが寝静まったあとに聴く音楽は美しいと考えている。しかしながら、妻は「聴いている美しい音楽の中でも、例えば、ハイドンやモーツァルトを識別できなければならない」と考えている。それに対して、夫は「聴いている美しい音楽の中であれば、例えば、ハイドンやモーツァルトを識別できる必要はない」と考えている。このような例に「粒度」という概念を当てはめてみると、妻は聴いている美しい音楽を、ハイドン、モーツァルトなど細かく捉えているのに対して、夫は聴いている美しい音楽を粗く捉え、「美しいものは美しい」と発していると言うことができる。つまり、当該発話の前後で、聴いている美しい音楽に関する粒度レベルが、細かいものから粗いものへと変化しているのである。

次に、(5)について見てみよう。この例は、先に示した(4)のような発話とは異なり、書き手によるモノローグという形式をとっているが、同じような特徴が見られる。

(5)…田舎町の、ほとんど無名の彫刻家を、このように発見した「僕」もまた、何らかの芸術に従事している人物らしいのだが、ともあれこの人たちにとって、美の再定義などありえない話題だっただろう。いいものはいい。それは戦争や敗戦とはかかわらない。

（BCCWJ、下線は引用者）

(5)の書き手は、本のところどころに引かれた傍線を見て、それを引いた人たちが、「知識人」や「ヒューマニズム」といった概念を再定義する必要に迫られていたことを痛感する。しかしその後、別のページに目を移したとき、あるエピソードを思い出し、「美」という概念を再定義することなどありえないと結論づける。そのエピソードとは、ある小説の登場人物である「僕」が、田舎町でほとんど無名の彫刻家の彫刻に美を見出すというものだ。このような文脈において、「いいものはいい」は、例えば、「いい作品はどれもいい」といったことを示唆していると考えられる。このような例を「粒度」という概念を用いて表すと、エピソードを思い出す前の書き手は、「ある概念は時代によってその都度、再定義する必要がある」と個々の概念を個別に細かく捉えているのに対して、エピソードを思い出した後の書き手は、「ある概念は、時代によってその都度、再定義する必要はない」と個々の概念を大雑把に粗く捉え、「いいものはいい」と発していると言うことができる。(4)と同様に、(5)においても、当該発話の前後で、ある概念の再定義の必要性に関する粒度レベルが、細かいものから粗いものへと変化している。

以上の考察から、「A ものは A」が用いられる文脈では、発話時点で話題になっている事象に関する粒度レベルが、当該発話の前後で、細かいものから粗いものへと変化していると特徴づけることができる。

4.2. 「A ことは A」

次に、「A ことは A」が用いられる文脈の特徴について検討したい。例えば、(6)を考えてみよう。この例の書き手は、パリからロンドンへ向かう道中で、イギリスの牧場を見たときの気持ちを書きつづっているが、その牧場は、フランスの牧場とは違い、感動を呼び起こすようなものではなかった。

(6) さわやかなる或はこころよいと云うような、かかる言語の真の意義は、フランスでなければ決して味わい得べきものでないとつくづく感じた。

英国人は定めしこの牧場を美しいと歌うであろう。美しい事は美しい。[3] 然し美しいのみではただちに爽やかな或は快いと云う事にはならぬ。見よ。この美しい牧場は若き悩みにつかれた夢見がちなる吾々には何の関係もない無感覚な冷い自然に過ぎないでは無いか。

（永井荷風『ふらんす物語』、下線は引用者）

このような文脈において、(6)の書き手は、「美しい事は美しい」という発話によって、例えば、「目の前に広がるイギリスの牧場は、イギリス人は美しいと言うであろうが、それは、爽やかでもなければ、快いものでもない」といったことを示唆していると考えられる。別の言い方をすれば、「目の前に広がるイギリスの牧場は美しいと認めざるを得ないが、ほかの点は十分ではない」といったことを示唆しているのである。このような例に「粒度」という概念を当てはめてみると、イギリス人は、目の前に広がるイギリスの牧場を大雑把に粗く捉え、美しさのみで描写している。それに対して、書き手は、目の前に広がるイギリスの牧場を詳細に細かく捉え、美しさだけではなく、爽やかさ、快さなど複数の点で評価し、「美しさ」以外の点は認められないと判断し、「美しい事は美しい」と発していると言える。要するに、(6)のような文脈では、当該発話の前後で、目の前に広がるイギリスの牧場に関する粒度レベルが、粗いものから細かいものへと変化しているのだ。

次に、(7)について考えてみよう。この例では、いとこ同士である、泉ちゃんと修くんが電話で話をしている。修くんは、いとこの名前とよく似た、泉の森公園という名前の公園が家の近くにあるにもかかわらず、なぜそのことを教えてくれなかったのかと、泉ちゃんに尋ねられ、それに答えている。

(7) 「…ぼくも、小学校の遠足で行ったことがあるくらい。ほんとうにただの公園だよ」

「地図で見たけど広いんでしょ？」

「広いことは広いよ。遠足で行くぐらいだから。でも特に何かがあるわけじゃないよ。キャンプ場があるけど、泊まれはしないみたいだし。乗り物とかそういうものはない。泉ちゃんのほうの葛西臨海公園みたいに観覧車があったりはしないよ。タダではいれるただの公園」

（小野寺史宜『みつばの泉ちゃん』、下線は引用者）

このような文脈において、修くんは、「広いことは広いよ」という発話によって、例えば、「泉の森公園は、泉ちゃんのように、地図を見て判断する人は広いと言うであろうが、それは、乗り物もなければ、観覧車もない」といったことを示唆していると考えられる。つまり、「泉の森公園は広いと認めざるを得ないが、ほかの点は十分ではない」といったことを暗に示しているのだ。通常、公園が広いことはいいことであるが、修くんにはそれが利点になっていないのである。このような例を「粒度」という概念を用いて表すと、泉ちゃんは、泉の森公園を大雑把に粗く捉え、広さのみで描写している。それに対して、修くんは、その公園を詳細に細かく捉え、広さだけではなく、乗り物の有無、観覧車の有無など複数の点で評価し、「広さ」以外の点では認めらないと判断し、「広いことは広いよ」と発していると言える。(6)と同様に、(7)のような例においても、当該発話の前後で、泉の森公園に関する粒度レベルが、

粗いものから細かいものへと変化しているのである。

これまでの考察に基づいて、「A ことは A」が用いられる文脈では、発話時点で話題になっている事象に関する粒度レベルが、当該発話の前後で、粗いものから細かいものへと変化していると特徴づけることができる。

4.3. 「A ものは A」と「A ことは A」の比較検証

以上のような議論は、「粒度 (granularity)」という概念を用いると、「A ものは A」「A ことは A」が用いられる文脈の特徴をうまく説明できることを明らかにした。ここで簡潔にまとめておくと、次のようになる。「A ものは A」の場合、それが用いられる文脈では、発話時点で話題になっている事象に関する粒度レベルが、当該発話の前後で、細かいものから粗いものへと変化していると特徴づけることができる。また、「A ことは A」の場合、それが用いられる文脈では、発話時点で話題になっている事象に関する粒度レベルが、当該発話の前後で、粗いものから細かいものへと変化していると特徴づけることができる。

このような考察結果から、一見多様な解釈を持つように思われる表現形式も、それが用いられる文脈の特徴を一般化できることがわかるが、A の部分に入る形容詞に着目しながら、両者を比較すると、その特徴がさらにはっきりとする。そこでまず、本節では、粒度に関する両者の相違点を明らかにするため、A の部分に同一形容詞「美しい」が入る(4)「美しいものは美しい」と(6)「美しい事は美しい」を比較検証する。便宜上、それぞれを(8)、(9)として再掲する。

(8) …そのあとは夫婦二人の時間になる。夫はソファーに座って、夕刊を読みながら私と少し話をする。患者の話、新聞記事の話。そしてハイドンだかモーツァルトだかを聴く。私も音楽を聴くのは嫌いではない。でもいつまでたっても私にはハイドンとモーツァルトを識別することができない。私の耳にはどちらもほとんど同じように聞こえる。私がそう言うと、違いなんかわからなくたっていいさと夫は言う。<u>美しいものは美しい</u>、それでいいじゃないか、夫はそう言う。(= (4))

(9) さわやかなる或はこころよいと云うような、かかる言語の真の意義は、フランスでなければ決して味わい得べきものでないとつくづく感じた。

英国人は定めしこの牧場を美しいと歌うであろう。<u>美しい事は美しい</u>。然し美しいのみではただちに爽やかな或は快いと云う事にはならぬ。見よ。この美しい牧場は若き悩みにつかれた夢見がちなる吾々には何の関係もない無感覚な冷い自然に過ぎないでは無いか。

(= (6))

先に示したように、「A ものは A」「A ことは A」が用いられる文脈ではともに、当該発話の前後で、粒度レベルに変化が生じている。前者の場合は、当該発話の前後で、粒度レベルが細かいものから粗いものへと変化している。それに対して、後者の場合は、当該発話の前後で、粒度レベルが粗いものから細かいものへと変化しており、その方向はちょうど逆向きになっている。この点が、粒度に関する両者の相違点であると考えられる。(8) (= (4))の「美しいものは美しい」が発せられる文脈では、聴いている美しい音楽に関する粒度レベルが、ハイドンやモーツァルトといった、複数の成員を持つものとしてその詳細を描写する、粒度

レベルの細かいものから、そういった成員を一つのまとまりとして大雑把に粗く捉えた、粒度レベルの粗いものへと変化している。一方、(9) (= (6))の「美しい事は美しい」が発せられる文脈では、目の前に広がるイギリスの牧場に関する粒度レベルが、美しさのみで大雑把に粗く捉えた、粒度レベルの粗いものから、美しさを含む複数の成員で詳細に細かく捉えた、粒度レベルの細かいものへと変化している。このように、当該発話の前後における粒度レベルの変化が、(8)の「美しいものは美しい」では、細かいものから粗いものという向きであるのに対して、(9)の「美しい事は美しい」では粗いものから細かいものという向きになっており、両者の方向性はちょうど逆向きになっている。

以上のような議論は、「A ものは A」と「A ことが A」が用いられる文脈では、粒度レベルの変化の方向性が逆向きになっていることを示している。そして、このことは、たとえ同じ形容詞を用いたとしても、(8')(9')が容認されないか、あるいは奇妙に思われることをうまく説明することができる。

(8') …そのあとは夫婦二人の時間になる。夫はソファーに座って、夕刊を読みながら私と少し話をする。患者の話、新聞記事の話。そしてハイドンだかモーツァルトだかを聴く。私も音楽を聴くのは嫌いではない。でもいつまでたっても私にはハイドンとモーツァルトを識別することができない。私の耳にはどちらもほとんど同じように聞こえる。私がそう言うと、違いなんかわからなくたっていいさと夫は言う。? 美しいことは美しい、それでいいじゃないか、夫はそう言う。

(9') さわやかなる或はこころよいと云うような、かかる言語の真の意義は、フランスでなければ決して味わい得べきものでないとつくづく感じた。

英国人は定めしこの牧場を美しいと歌うであろう。? 美しいものは美しい。然し美しいのみではただちに爽やかな或は快いと云う事にはならぬ。見よ。この美しい牧場は若き悩みにつかれた夢見がちなる吾々には何の関係もない無感覚な冷い自然に過ぎないでは無いか。

(8')は、(8)の「美しいものは美しい」を「美しいことは美しい」に置き換えたものであり、(9')は、(9)の「美しい事は美しい」を「美しいものは美しい」に置き換えたものである。例えば、(8')「美しいことは美しい」のような「A ことは A」の場合、それが用いられる文脈では、当該発話の前後で、粒度レベルが粗いものから細かいものへと変化する。それにもかかわらず、(8')では、「美しいことは美しい」が発せられる前では、聞き手である妻は、聴いている音楽を、ハイドン、モーツァルトなど細かく捉えていると考えられ、粒度レベルの変化の方向性とは異なるので、容認されないか、あるいは奇妙に思われると説明できる。このような説明は、(9')にも当てはまる。

最後に、A の部分に入る形容詞に着目しながら、「A ものは A」「A ことは A」の容認性の違いについて考える。まず「A ものは A」についてであるが、これまでの考察では、A の部分に入る形容詞は「美しい」「いい」といった、プラスの意味をもつものばかりであったが、マイナスの意味をもつ形容詞が入る場合も同じように説明することができる。例えば、(10)を見てほしい。この例は、娘に朝食をまずいと言われた母親が、その朝食を捨てると、娘が泣き出したというエピソードに対するコメントである。

(10) 言われたらショックだけど、子供にしたらまずかったんだと思う。子供と大人では、好み違うし。それに、まずいものはまずいよ。嫌いな食べ物、無理して食べれない。

（ママスタ『朝食まずいって言われたから捨てた』
https://mamastar.jp/bbs/comment.do?topicId=3688305、下線は引用者）

(10)の「まずいものはまずいよ」は、例えば、「まずい料理はどれもまずい」といったことを示唆していると考えられる。このような文脈において、他の投稿者は、発話時点で話題になっている事象、つまり、母親が作る料理を、栄養のバランスを考えた料理、手間暇をかけた料理など細かく捉えているのに対して、(10)の書き手は、母親が作る料理を大雑把に粗く捉え、「まずいものはまずいよ」と発していると言うことができる。この例から、「A ものは A」では、A の部分にはプラスの意味をもつ形容詞だけではなく、マイナスの意味をもつ形容詞が入る場合も容認されることがわかる。このことは、「A ものは A」の場合、形容詞 A がもつプラス・マイナスという意味において、形容詞 A は制約を受けないことを示している。

一方、「A ことは A」では、A の部分にマイナスの意味をもつ形容詞が入る場合の容認度はかなり低くなるように思われる。例えば、(11)のような夫婦のやりとりを見てみよう。

(11) 妻：これ作ってみたんだけど、ちょっと食べてみて？
夫：（妻が作った料理を口の中に入れる。）
妻：どう？
夫：a. おいしいことはおいしいよ。／b.？ まずいことはまずいよ。

これまでの考え方に従うと、このような会話における夫の発話((11a)(11b))は、発話時点で話題になっている事象、つまり、妻の料理を詳細に細かく捉え、形容詞 A で表わされる点だけではなく、見た目、火加減など複数の点で評価し、A 以外の点は認められないと判断し、当該発話を発していると説明することができる。しかしながら、(11a)のように「おいしい」というプラスの意味をもつ形容詞の場合は容認されるが、(11b)のように「まずい」というマイナスの意味をもつ形容詞の場合は容認されにくい。このことは、「A ことは A」の場合、形容詞 A がもつプラス・マイナスという意味において、形容詞 A は制約を受け、その制約は、形容詞 A はプラスの意味をもつものでなければならないというものであることを示している。

本節では、A の部分に入る形容詞に着目しながら、「A ものは A」「A ことは A」を比較検討し、以下の点を明らかにした。まず、当該発話の前後における粒度レベルの変化に関して、「A ものは A」が用いられる文脈では、細かいものから粗いものという向きであるのに対して、「A ことは A」が用いられる文脈では、粗いものから細かいものという向きになっており、両者の方向性はちょうど逆向きになっている。また、A の部分に入る形容詞に関して、当該反復表現には容認性の違いがある。形容詞 A がもつプラス・マイナスという意味において、「A ものは A」の場合、形容詞 A は制約を受けないのに対して、「A ことは A」の場合、その表現形式に現れる形容詞 A は、プラスの意味をもつものでなければならないという制約を受ける。

5. 結語

本稿では、同語反復表現の最小対の一つである「A ものは A」「A ことは A」（A には形容詞が入る。）を分析対象とし、「粒度 (granularity)」という概念を用いて、当該反復表現が用いられる文脈の特徴について検討した。これまでの議論に基づくと、第一に、「A ものは A」の場合、それが用いられる文脈では、発話時点で話題になっている事象に関する粒度レベルが、当該発話の前後で、細かいものから粗いものへと変化していると特徴づけることができる。それに対して、「A ことは A」の場合、それが用いられる文脈では、発話時点で話題になっている事象に関する粒度レベルが、当該発話の前後で、粗いものから細かいものへと変化していると特徴づけることができる。第二に、粒度に関する両者の相違点は、当該発話の前後における粒度レベルの変化の方向性がちょうど逆向きであるということである。最後に、「A ものは A」「A ことは A」の A の部分に入る形容詞に関して、両者には容認性の違いがある。形容詞 A がもつプラス・マイナスという意味において、「A ものは A」の場合、形容詞 A は制約を受けない。それに対して、「A ことは A」の場合、その表現形式に現れる形容詞 A は、プラスの意味をもつものでなければならないという制約を受ける。

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注

[1] 筆者が知る限り、「A ものは A」と「A ことは A」を比較検討した分析は、大石 (2015)のみである。だが、「A ことは A」に言及しているものとして、フィルモア (1989)、牧原 (2017)、山本 (2020)がある。

[2] 大石 (2015)は、大野 (2011)が述べる「もの」と「こと」の基本的な意味を参照している。

[3] 出典元である新潮文庫（平成 3 年出版、第 52 版）の表記をそのまま採用したため、「美しいことは美しい」ではなく、「美しい事は美しい」となっている。

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コーパス

現代日本語書き言葉均衡コーパス（BCCWJ）

例文出典

ママスタ『朝食まずいって言われたから捨てた』
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英語の直喩の典型的構文とジャンルによる選好性*

（The Typical Constructions and the Genre Preferences of Similes in English）

小松原 哲太（Tetsuta Komatsubara）
神戸大学（Kobe University）

キーワード：比喩, 構文, ジャンル, コーパス, 認知言語学

1. はじめに

比喩は日常語とは異なった聞きなれない語であるという一般的な見方に対して、認知言語学の概念メタファー理論は、比喩が私たちの使う言葉のなかに遍在していることを明らかにした (Lakoff and Johnson 1980, Gibbs 1994, Kövecses 2010, 鍋島 2016)。言語の表現形式よりも、その背後にある比喩的概念化に注目する概念メタファー理論では、比喩とは起点 (source) 領域と目標 (target) 領域の写像 (mapping) であるとされる (Lakoff 1993)。

修辞学の伝統的な定義では、比喩的意味をもつ表現法として直喩と隠喩が区別される。直喩 (simile) は「like や as などを使うことで、あるものを別の似ていないものになぞらえる」(Lanham 1991:140) 表現であり、「その比較が明示 (explicit) されることで隠喩 (metaphor) と区別される」(*ibid.*) とされる。典型例としては“O my Luve is *like* a red, red rose”(Robert Burns, A Red, Red Rose; cited in Lanham 1991:140) のような、いわゆる比較の構文がよく挙げられる。直喩の使用は文学の特権というわけではなく、均衡コーパスの調査でも直喩の広範な使用が確認されている (加藤・菊地・浅原 2020, 菊地 2022)。しかし、発達した比較の文法をもつ英語の研究でも、従来の言語学では、比較による比喩的意味の伝達はさほど注目されてこなかった。比喩研究に重点を置く認知言語学でさえも、比喩的伝達を支える文法の役割は概念メタファー理論ではほとんど注目されてこなかった。本論文では、特定の文法が比喩的意味と密接に関係していることを論じる構文文法的な視点に立つ比喩研究 (Israel et al. 2004, Dancygier and Sweetser 2014, Cuenca 2015, Harding 2017, 小松原・田丸 2019) を参照し、比喩的伝達のなかでも特に、like を用いた比較を表す文法的構文を用いる直喩の表現法を分析する。

これまでの直喩研究のなかで強い影響力をもつ Glucksberg and Keysar (1990), Chiappe and Kennedy (2000), Bowdle and Gentner (2005) などの心理言語学的研究は、ほぼ例外なく“My job is like a jail”(Glucksberg and Keysar 1990:4) のような [NP be like NP] （角括弧は構文を示す）という構文形式に焦点を当て、[NP be NP] の隠喩 (*e.g.*,“My job is a jail”) と比較している。しかし、Dancygier and Sweetser (2014:148) が述べるように、この like の前置詞句述語構文は直喩の一部にすぎない 。like と as を含む構文にかぎっても、以下のような直喩表現が存在する（例文の後の丸括弧内の SD は *Similes Dictionary* (Sommer 2013) を表す）。

(1) He is *like* a puppy with his sorrowful eyebrows and unkempt hair. (Lizzie Loveridge; SD:392)
(2) Thunder rolled *like* a cannon. (Anonymous; SD:512)
(3) Her voice *sounded as* brittle and sharp *as* a broken sliver of glass. (Graham Masterton; SD:540)
(4) Each class *seemed* endless to him, *as if* the hour were stuck to his back *like* his damp shirt.
(Helen Hudson; SD:512)

著者は別の論文 (小松原 2023) で、*Similes Dictionary* から無作為抽出した 370 例の直喩の用例の構文形式を調査した。その結果、like を含むものと含まないものを合わせて、最も高頻度の構文は、(2) のような様態副詞句構文 [NP VP like NP] (122 例) であり、2 番目に高頻度であった (1) のような前置詞句述語構文 [NP be like NP] (47 例) の約 2.6 倍の用例が観察された。この結果は、like を用いる直喩がよく使われるという従来の指摘は妥当であるものの、[NP be like NP] という構文の事例は、英語の直喩の典型ではないことを強く示唆している。

もし、従来の直喩研究の考察対象が、直喩の典型的事例ではなかったとすれば、これまでに得られた知見の妥当性は限定的なものとみなされざるを得ない。この点で、直喩の典型的構文が何かを明らかにすることは、直喩研究の基本的課題であると言える。

本論文では、直喩の典型的構文が様態副詞句構文 [NP VP like NP] であると仮定し、さらなるデータによって、頻度の観点からこの仮説の検証を行う。上記の調査で用いた *Similes Dictionary* には小説、詩などの文学テクストや金言、警句からの事例が収録されているため、抽出されたデータにはジャンルの偏りがあった。そこで本論文では、ジャンルに関する均衡性をもつ直喩のデータを対象として量的な分析を行い、最も高頻度の直喩の構文が like の様態副詞句構文であるかどうかを調査する。さらに、具体例の質的な分析にもとづき、高頻度の構文がもつ機能の観点から頻度傾向の動機づけを考察する。

2. 研究方法

第 1 に、大規模な英語の均衡コーパスである Corpus of Contemporary American English (COCA) を使用し、likeの直喩データを収集した。COCA に収録された 8 つのジャンルである、BLOG（GloWbE コーパスのブログ限定データ）、WEB（GloWbE コーパスのウェブ一般データ）、TV/MOVIES（OpenSubtitles から取られた TV、映画の字幕データ）、SPOKEN（Good Morning America などのテレビ、ラジオ番組の会話の書き起こしデータ）、FICTION（書籍、雑誌における短編や劇のデータ）、MAGAZINE（Men's Health など 100 以上の雑誌の混合データ）、NEWSPAPER（New York Times など 10 の新聞の混合データ）、ACADMIC（100 以上査読付き論文誌の分野混合データ）からそれぞれ、like の前置詞用法を 1,000 例無作為抽出した。

第 2 に、その中から手作業で直喩の用例（すなわち、比喩的意味をもつ用例）を同定した。1,000 例を順に観察していき、直喩の用例数が 50 例になったところで同定作業を中止し、50 例に達するまでの観察用例数を記録した。これを各ジャンルで繰り返し、8 つのジャンルで累計 2,700 例を観察して、400 例の like の直喩の用例を得た。

第 3 に、各用例の構文分析を行った。具体的には、各用例の like 句が (i) 述語補部（be, sound, feel などの動詞の補部になっているもの）、(ii) 副詞句（述語を副詞的に修飾するもの）、(iii) 形容詞句（名詞句を形容詞的に修飾するもの）のいずれであるかによって 3 種類に分類した。

特に、述語補部の用例については、コピュラ動詞の補部となる構文 [NP be like NP] の頻度を調査するために、述語動詞の種類も記述した。

3. 結果

表 1 は、COCA におけるジャンル別の like 前置詞の用例数と、各ジャンルで 50 例の直喩を抽出するまでに観察を要した用例数を示している。「直喩の抽出率」は、「直喩の抽出数」を「観察用例数」で割った値である。like が最も多く観察されたジャンルは TV/MOVIES であり、最も少なかったのは ACADEMIC であった。抽出率は FICTION が他と差を空けて高く、ACADEMIC が最も低かった。

表 1　ジャンル別の直喩抽出率

	BLOG	WEB	TV/M	SPOK	FIC	MAG	NEWS	ACAD	合計
用例数（千）	216	179	301	224	277	185	138	63	1,584
観察用例数	393	359	236	437	112	307	312	544	2,700
直喩の抽出数	50	50	50	50	50	50	50	50	400
直喩の抽出率	0.13	0.14	0.21	0.11	0.45	0.16	0.16	0.09	0.15

表 2 は、ジャンル別にみた直喩における like 句の統語的役割の度数分布である。総計を見ると、全体としては、 [NP VP like NP] に代表される副詞句の事例が最も多く、次に述語補部が多いことが分かる。 [NP be like NP] に代表される be 動詞の補部となる構文の事例は、述語補部のなかで最も多かった。しかし、副詞句の事例数は、be 動詞補部の約 2.4 倍であった。この結果は、*Similes Dictionary* の調査結果（約 2.6 倍）とほぼ一致しており、直喩の典型的構文が様態副詞句構文 [NP VP like NP] であるという仮説を支持するものである。

表 2　ジャンル別の直喩の構文頻度

	BLOG	WEB	TV/M	SPOK	FIC	MAG	NEWS	ACAD	総計
副詞句	22	28	18	17	35	34	24	35	213
述語補部	26	21	32	32	11	16	25	14	177
(be)	(11)	(10)	(17)	(20)	(5)	(5)	(13)	(6)	(87)
(look)	(6)	(3)	(9)	(4)	(3)	(6)	(4)	(3)	(38)
(feel)	(6)	(5)	(1)	(4)	(1)	(4)	(5)	(0)	(26)
(その他)	(3)	(3)	(5)	(4)	(2)	(1)	(3)	(5)	(26)
形容詞句	2	1	-	1	4	-	1	1	10
総計	50	50	50	50	50	50	50	50	400

興味深いことに、各ジャンルでも、総計とほぼ同様の傾向が見られた。すなわち、副詞句構文が最も多く、述語補部構文が次に多い、そして、述語補部のなかでは be 動詞補部が最も多い、という傾向である。最も顕著なのは FICTION で、副詞句の頻度は be 動詞補部の 7 倍であった。ただし、副詞句と be 動詞補部の頻度差は、FICTION に加えて、MAGAZINES（6.8

倍)、ACADEMIC（5.8 倍）では顕著であったが、WEB（2.8 倍)、BLOG（2.0 倍)、NEWS（1.8 倍)、TV/MOVIES（1.1）倍ではそれほど差が大きくなく、SPOKEN では be 動詞補部の頻度が副詞句よりも高かった。このことは、よく用いられる構文はジャンルごとに異なることを示している。また、be 動詞補部の頻度に着目すると、SPOKEN（20 例）が最も多く、TV/MOVIES（17 例）が次いで多かった。この 2 つのジャンルは会話や映画脚本の書き起こし等の話し言葉的な表現を主な対象としているという点で、話し言葉で be 動詞補部構文が選好されていることを示唆している。

4. 考察

ある直喩の構文には、その文法構造に対応した機能、すなわち意味伝達において果たしている役割があるはずである (Harding 2017:Ch. 2) 。副詞句構文の直喩は、どのような意味を伝えるために用いられており、述語補部構文とはどのように異なるのだろうか。以下では、副詞句構文と述語補部構文の具体例の考察にもとづき、本研究の調査で得られた結果の解釈を検討する。

4.1. 副詞句構文の機能

ほとんどのジャンルで副詞句構文が述語補部構文よりも好まれていたということには、意味伝達上の理由があるはずである。副詞句構文が、前置詞句述語構文と競合することが分かる例として、被修飾部の主語と like の目的語名詞句が写像関係にある (5)(7)(9) が挙げられる。(5) の写像関係は (6) のように表現することもできる。 (5) の述語 “is not static” は写像の根拠となる、科学と人生の類似性を表している。 (7) を (8) と比較すると分かるように、副詞句構文 (7) では “has many sides” という属性叙述が情報構造の上で前景化されるのに対して、前置詞述語構文 (8) では “is like a barrel” という比較判断が前景化され、比喩的な写像自体が意味伝達の主眼として解釈される。以上の考察から示唆されるように、前置詞述語構文は写像自体を前景化する機能をもつのに対して、副詞句構文は写像の根拠（すなわち、起点領域と目標領域の共通点）を前景化する機能をもつ。

(5) Science, *like* life, is not static. Technology, like methods, hypotheses, and perspectives, changes through time. (ACAD:Amer Indian Q)
(6) Science is *like* life: it is not static.
(7) A Fresnel lens often has many sides, *like* a barrel. Each is made up of pieces of cut glass. (MAG: Nat Geog)
(8) A Fresnel lens is *like* a barrel: it often has many sides.

しかし、 (9) のように、被修飾部の述語 (*e.g.*, “opened up”) が写像の根拠にはなっていない場合もある。 (9) では “the lake” と “an endless corridor” が写像関係にあることは明示的に表現されているが、その根拠となる湖の地理的な特徴と飛行機からの見え方は、複雑な構造をもつ前後の修飾節によって説明されている。 (9) を (10) と比較しても、その意味的な違いは明らかではない。

(9) When the plane cleared the island, the lake opened up before them *like* an endless corridor of water flanked by pine forest and rocky shore. (FIC: Bk: Practical Sins For Cold Climates)
(10) The lake was *like* an endless corridor of water flanked by pine forest and rocky shore.

被修飾部の主語と like の目的語名詞句が写像関係にあるという点では同じであるが、前置詞述語構文が代替表現にはならない場合もある。(11) では、修飾される述語 (*e.g.*,“are fired”) の概念領域が目標領域ではなく起点領域に属する。日本語の直喩の構文を類型化した小松原・田丸 (2019) は、比喩的な修飾部が隠喩的な被修飾部（例えば (13) の「彼は書斎に吸い付いて」）を精緻化するという点で、このような直喩を「隠喩支援構文」と呼んでいる。この“the words”と“bullets”の写像は、後続文脈のより具体的な比喩的描写によってその適切性が担保されており、(12) のように前置詞述語構文とその最小限度の説明として表現すると、比喩としてはやや不十分な印象を受けるように思われる。

(11) The words are fired *like* bullets, so fast you almost expect to hear a hail of shell casings clattering.
(NEWS: USA Today)
(12) ?The words are *like* bullets: they are fired.
(13) 彼は性の悪い牡蠣のごとく書斎に吸い付いて、かつて外界に向って口を開いた事がない。
（夏目漱石「吾輩は猫である」; 小松原・田丸 2019: 44）

写像される目標領域の要素が明示的に表現されておらず、文脈から含意される場合もある。このような場合は、前置詞述語構文を用いて同じ内容を表現することは難しい。 (14) の“a team”は“you”とその結婚パートナーを指す。 (15) の“a nightmare”は何かを思い出す時の状況を指すと思われる。like の目的語名詞句は、これらの例では写像を含意するためというよりは、この名詞句が喚起するフレームから示唆される、被修飾述語の様態を描写するために用いられていると考えられる。

(14) When you’re married, you should handle everything *like* a team, finances included.
(BLOG: getrichslowly.org)
(15) [...] it is dangerous to remember, because to remember is to repeat the past *like* a nightmare.
(ACAD: Geograph Rev)

副詞句構文の直喩の基本的な機能は、比喩の写像それ自体ではなく、写像の成立根拠となる目標領域と起点領域の共通点を具体化し、発信者と受信者のあいだで比喩的な推論を共有する点にある。 (14)(15) のような前置詞述語構文へのパラフレーズが難しい例から分かるように、副詞句構文が表す比喩的意味はつねに前置詞述語構文でも表現できるというわけではない。このことは、副詞句構文の直喩は、前置詞述語構文の直喩とは異なる機能をもつことを示唆している。

4.2. 述語補部構文の機能

述語補部構文のなかでも (16) のような be 補部構文は、副詞句に次いで多いという傾向が、

ほとんどのジャンルでみられた。例外は、MAGAZINES において述語補部が be よりも (17) のような look の事例がわずかに多く、SPOKEN では be 動詞補部が副詞句を上回ったという点である。

(16) CLIVE-DAVIS: Most importantly, I play my music very loud, and so there's no neighbors.
CYNTHIA-MCFADDEN: (Off-camera) You're *like* a rowdy teenager.
CLIVE-DAVIS: I'm like a rowdy teenager. (SPOK: ABC: Nightline)

(17) Cindy McCain *looks like* a traditional first lady, with her brightly colored feminine suits, the multistrand pearl necklace, the impeccable hair, and the omnipresent smile.
(MAG: Harpers Bazaar)

SPOKEN と TV/MOVIES における be 動詞補部の多さは、FICTION や MAGAZINES と比較すると顕著である。このことは、従来の研究で集中的に考察されてきた be 動詞補部の直喩は、話し言葉で顕著に選好されるジャンル特異的な構文形式であったことを示している可能性がある。では、SPOKEN では具体的にはどのように be 動詞補部構文が用いられているのだろうか。

(18) VICTORIA-KIRBY: [...] then whatever is left over when you peel them off, you just rub it in
AL ROKER: It's *like* a facial for a raccoon. (SPOK: NBC)

(19) I just had to be patient and go through. It's *like* of like being a mom. (SPOK: CBS_FaceNation)

(18)(19) のような代名詞 it を主語とする事例はよく見られるもので、SPOKEN では be 補部の事例 20 例のうち、6 例が [it's like X] という形式であった。(18) の it は VICTORIA-KIRBY の先行発話を指しており、その内容を比喩的に要約するような形の応答である。(19) も先行発話の比喩的要約であると言える。

(20) He is *like* a fine wine. Every day goes by, I get to appreciate his genius more and more.
(SPOK: Fox_MacCallum)

(16)(20) のように、人称代名詞が主語である事例も多く、SPOKEN で 5 例観察された。(16) では CLIVE-DAVIS の振る舞いへの評価を比喩的に行っている。(20) でも he を比喩的に評価し、その根拠が後続発話で述べられている。

以上のような SPOKEN の事例は、(10) のような文学的表現とは異なり、短い要約のような形式をもつ。代名詞のような前後文脈の概念内容に依存して解釈される語が主語となることが多い。1 つの節だけを取り出してみると、主語と目的語名詞句の比喩写像を表すだけのように見えるが、比喩としての解釈は 1 文では完結せず、実際の意味理解には複雑な写像の根拠が必要となることがよくある。このタイプの事例が頻出することが、SPOKEN というジャンルによるものであるかは別途検証が必要であるが、この構文特徴は、SPOKEN において be 動詞補部が選好される動機づけの一部であると思われる。

5. おわりに

本論文の調査から、like の比喩的用法のなかで最も頻度が高いのは、副詞句構文であることが分かった。この頻度の傾向は、ほぼ通ジャンル的に観察された。SPOKEN では例外的に前置詞述語構文、特に代名詞を主語とする be 動詞補部の構文が好まれていた。この構文は、前後文脈を受けてその内容を比喩的に要約する機能をもつことが多く、この構文特徴が SPOKEN における選好性の動機づけになっている可能性がある。

写像される概念領域が同一であれば、使用される構文が異なっていても同一の概念メタファーの事例であるということは確かにできる。しかし「同一の概念メタファー」という一般化は粒度の粗い意味分析であり、具体的な文脈のなかで伝達されるきめ細やかな意味の分析においては、異なる構文の比喩は異なる意味を伝達していると言える。従来の直喩研究では、この構文的な差異をほとんど考慮することなく、直喩の性質の一般化が試みられてきた。本論文では、英語の直喩の典型的構文が like の副詞句構文であることを論じた。従来の前置詞述語構文をベースにした直喩研究の知見が、この構文の事例にどれほど適用できるかを検討することが、今後の課題として残されている。

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コーパス

Corpus of Contemporary American English (COCA)

On the Historical Development of *So*-Inversion Constructions*

Ryoya Kobayashi
Kwansei Gakuin University

Keywords：*so*-inversion, polarity, verb movement, SAI

1. Introduction

English has so-called *so*-inversion constructions (henceforth, SICs), as exemplified in (1). In SICs, *so* in the clause-initial position possesses some additive meaning such as *also* and *too*, and Subject Auxiliary Inversion (henceforth, SAI) is obligatorily triggered, as the contrast in (2) shows.

(1) Frank adores dogs, and so does his wife. (Toda (2007: 188))

(2) a. *Leslie eats pretzels, and so Sandy does.
b. Leslie eats pretzels, and so does SANDY. (Culicover and Winkler (2008: 650-651))

SICs require an affirmative antecedent, but must also be affirmative themselves. Therefore, negations are not allowed to appear in SICs. Some relevant examples are illustrated in (3).

(3) a. *John does not play guitar and so do I not (play guitar).
b. *John doesn't play guitar and so do I.
c. *John plays guitar but so don't I. (Wood (2008: 304-305))

According to the Oxford English Dictionary (OED), the usage of *so* in SICs first appeared in around 888 CE, meaning that SICs were already observed in Old English (OE). Cichosz (2017) points out that *swa*, the predecessor of *so*, served as an adverb that could induce the Verb Second (V2) word order in early English.

This paper aims to clarify the overall picture of the historical development of SICs by conducting the quantitative research with historical corpora and provide a principled explanation for their developmental process under the recent framework of the minimalist program advocated by Chomsky (2013, 2015).

This remaining paper is organized as follows. Section 2 presents the quantitative results of the corpus research, and section 3 outlines the theoretical assumptions adopted by this paper. Section 4 explicates the analysis based on the empirical evidence presented in section 2 and the theoretical assumptions discussed in section 3. Section 5 addresses the peculiar properties of SICs in Present-day English (PDE)

and provides an account for them under the proposed analysis. Section 6 concludes the paper.

2. Corpus Research

To investigate the frequency of occurrences of SICs from OE to Late Modern English (LModE), I employed the following historical corpora: *The York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE), *The Penn-Helsinki Parsed Corpus of Middle English, 2nd Edition* (PPCME2), *The Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME), and *The Penn Parsed Corpus of Modern British English* (PPCMBE).[1,2] The survey distinguishes subject types (nominal subjects or pronominal subjects) to identify the syntactic position of the subject and verb. As pointed out by Fischer et al. (2000), Nawata (2009), and Haeberli and Ihsane (2016), both nominal and pronominal subjects occupy different syntactic positions in early stages of English, especially from OE to the first half of Middle English (ME). As mentioned in the introduction, negations do not appear in SICs; hence segregating subject types is useful for identifying word order between elements.

The results of early stages of English and those of ModE are shown in Tables 1 and 2, respectively. Some attested examples for each historical period are illustrated in (4) to (7).

Table 1: Quantitative results of SICs in OE to ME (based on OCOE and PPCME2).

	OE1-2	OE3	OE4	ME1	ME2	ME3	ME4
Nominal	43	67	25	62	21	71	69
Pronoun	0	3	2	8	11	38	81

Table 2: Quantitative results of SICs in EModE to LModE (based on PPCEME and PPCMBE).

	EModE1	EModE2	EModE3	LModE1	LModE2	LModE3
Nominal	60	57	28	37	22	46
Pronoun	83	54	19	26	13	30

(4) Swa doð ða selestan men;
So do the prudent men
'So do the prudent men.' (coboeth, Bo:39.130.15.2584)

(5) and so doth the sonne.
and so does the son (CMASTRO, 673.C2.385)

(6) and so did another disciple: (AUTHNEW-E2-P1, 18,1J.678)

(7) so doth your Majesty, (MAXWELL-1747-1,10.26)

Table 1 shows that, from OE1-2 to ME2, SICs with pronominal subjects are almost unattested. However, after ME3, when the distinction in subject position is considered lost, the number of occurrences in SICs with pronominal subjects begins to increase. In contrast, Table 2 indicates no significant difference in the number of occurrences between SICs with nominal subjects and those with pronominal subjects after Early Modern English (EModE). Interestingly, throughout all periods from OE to LModE, the majority of SICs are of the form with *do* and *be*, which is parallel to the SICs in PDE (Cichosz (2017)). The predecessors of modals in PDE were also likelier to occur in SICs in early English. However, ordinary

main verbs were also attested in each historical period, as shown in (8a). This point is clearly different from SICs in PDE.

(8) a. Swa se man swelteð, swa swelteð þa nytenu,
As the man died, so died the animal
'As the man died, the animal also died.' (cogregdC,GDPref_and_4_[C]:4.266.19.3876)
b. and so faillede þe kynges of Norþhombres.
and so failed the kingdomes of Northumbria
'and the kingdomes of Northumbria also fell.' (CMPOLYCH,VI,339.2491)
c. and so appereth the truthe of the Theoreme. (RECORD-E1-H,2.F4R.366)
d. So triumphs the Third Estate; (CARLYLE-1837-1,1,143.169)

Hosaka (2014) states that, in early English, *do* and *modals* were used only as main verbs and had not yet established the usage of auxiliary, unlike in PDE. It is also well known that early English shows the V2 phenomenon, which is standardly assumed to be derived by verb movement to C (Kemenade (1997), Fisher et al. (2000) and Haeberli and Ihsane (2016)). Accordingly, SICs in early English would have involved verb movement that passed the subject position.

3. Theoretical Assumptions

This section outlines the three theoretical assumptions adopted by this paper. The first assumption is the Labeling Algorithm (henceforth, LA) advocated by Chomsky (2013, 2015). LA exploits three strategies to determine the label of a syntactic object, as schematized in (9).

(9) a. $\{_{H}\ H, XP\}$ b. $\{XP_i\ \{_{Y}\ t_i\ YP\}\}$ c. $\{_{<F, F>}\ XP_{[F]}, YP_{[F]}\}$

The second assumption is the mechanism of polarity valuation proposed by Holmberg (2016). He argues that every finite sentence has an unvalued polarity feature ([±Pol]) merged on the highest head in the TP-domain, proposing that it enters into an Agree relation with a matching valued polarity feature only in syntax. In the case of a negative sentence such as *Mary should not buy this book*, the [±Pol] on T enters into an Agree relation with the Neg feature that *not* has and copies the negative polarity value of the negation, as a result of which the sentence is regarded as a negative. Extending Holmberg's proposal to the analysis of SICs, I propose that *so* as a polarity adverb (Wood (2008) and Hatakeyama et al. (2010)) with an affirmative polarity feature [+Pol] is merged into SPEC-C, entering into an Agree relation with T with [±Pol]. In SICs, the merger of *so* results in {XP, YP}. To prevent labeling failure, T is required to undergo movement to C for labeling via feature sharing with respect to the polarity features. Consequently, the relevant set is labeled as <Pol, Pol>. In short, T-to-C movement in SICs follows from the labeling requirement (see Kobayashi (2023) for details).

The third assumption is that deletion optionally applies based on the syntactic identity with the preceding context, as proposed in Hatakeyama et al. (2010). However, I argue that deletion is forced to apply when the pronunciation of the ellipsis site induces a derivational problem: labeling failure.

Following Maeda (2021), I assume that the labeling problem with {XP, YP} can be resolved by deletion. In $\{_{\alpha}$ XP, ~~YP~~$\}$, where the strikethrough indicates the ellipsis site, deletion applies to YP, rendering it invisible to LA. Consequently, the head of XP is selected as the label of α.

4. Analysis

4.1. SICs in Early English

Given the discussion in sections 2 and 3, I propose that SICs in early English with a main verb *do* is derived as follows.[3]

(10) $[_{\beta}$ So$_{[+Pol]}$ $[_{CP}$ do $_{(+v+T[\pm Pol]+C)}$ $[_{\alpha}$ DP$_{[\varphi]}$ $[_{TP}$ $t_{do(T)[u\varphi]}$ ~~$[_{v^*P}$ t_{DP} $[_{v^*P}$ t_{do} $[\ldots]]]$~~$]]]]$ β = <Pol, Pol>, α = <φ, φ>

Given that *do* in early English was used only as a main verb and the observation by Tanaka (2002) that the raising of an external argument is obligatory throughout the history of English, I assume that the subject DP in SPEC-*v** undergoes raising to SPEC-T.[4] In (10), Unvalued φ-features ([uφ]) on C enter into an Agree relation with φ-features on DP, and then are inherited by T, which results in labeling determination of α as <φ, φ> (Chomsky (2020)). *So* with [+Pol] is merged into SPEC-C, and this creates {XP, YP}. Since early English exhibits systematic verb movement to T, the main verb *do* undergoes movement to T. To circumvent labeling failure due to the merger of *so*, it raises further to C. This verb movement enables the members of β to enter into a Spec-head agreement relation in terms of polarity features. As a result, the problem with {XP, YP} can be resolved, and therefore the label of β is determined as <Pol, Pol>. At the S-M interface, deletion applies under the identity with the precedent context, with the result that an SIC with *do* is successfully derived.

SICs with *be* can be derived in almost the same fashion as (10), as shown in (11).

(11) $[_{\gamma}$ So$_{[+Pol]}$ $[_{CP}$ be $_{(+v\ +T[\pm Pol]+C)}$ $[_{\beta}$ DP$_{i[\varphi]}$ $[_{TP}$ $t_{be(T)[u\varphi]}$ ~~$[_{vP}$ t_{be} $[_{VP}$ t_{be} $[_{\alpha}$ t_{DP} XP$]]]$~~$]]]]$

γ = <Pol, Pol>, β = <φ, φ>, α = X

Assuming, in line with Moro (2000), that *be* takes a small clause as its complement, I argue that a small clause is created by the subject DP and the arbitrary element XP. It is of the form {XP, YP}, but the raising of the subject DP follows, rendering its copy invisible to LA. Hence, the label of α is determined as X. With the same derivational processes as (10), all the sets receive legitimate labels, and therefore the derivation converges, resulting in an SIC with *be*.

As for SICs with a pronominal subject, which were almost unattested in early English, I argue that their low frequency is attributable to the status of pronouns in early English. According to Kemenada (1997), pronouns in early English have a property as a clitic, which is adjoined to either the right or left side of a main verb.[5] Following this argument, I claim that inverted word order in SICs with a pronominal subject is derived when it is adjoined on the right side of a main verb, as shown in (12).

(12) $[_{\beta}$ So$_{[+Pol]}$ $[_{CP}$ do+clitic $_{(+v+T[\pm Pol]+C)}$ $[_{\alpha}$ t_{clitic} $t_{do(T)[u\varphi]}$ ~~$[_{v^*P}$ $\ldots]$~~$]]]$ β = <Pol, Pol>, α = T

Note that the label of α in (12) is unproblematically determined as T. I follow Koike's (2023) assumption that overt verb raising enables T to serve as a label in early English. Chomsky's (2015) presupposition that T is too weak to serve as a label is based on whether a relevant language has a rich verbal agreement system. In contrast to PDE, early English shows relatively rich verbal agreement (Nawata (2009)). Then, under the framework of LA, recapturing the idea that a language with rich verbal agreement can satisfy EPP via overt verb movement to T (Alexiadou and Anagnostopoulou (1998) and Tanaka (2002)), Koike (2023) proposes that V-to-T movement renders T strong enough to serve as a label. If this proposal is correct, T can serve as a label without an element in its SPEC.[6] Hence, the label of α is determined as T.

However, after ME2, pronominal subjects lost their clitic status, and the two distinct subject positions were integrated into SPEC-T (Haeberli and Ihsane (2016)). Therefore, from ME3 onward, any kind of subject occupies SPEC-T and always follows the main verb (or auxiliary) that moves to C. In subsequent eras, inversion is bound to be derived, regardless of the subject type.

4.2. SICs in Modern English Afterward

It is well known that English underwent a variety of linguistic changes from ME to EModE. One significant example among them is the loss of overt verb movement due to the loss of agreement morpheme (Nawata (2009)). According to Haeberli and Ihsane (2016), the decline of overt verb movement to the inflectional domain gradually started from ME, and its loss was almost complete in EModE. Along with the decline of overt verb movement, *do* and modals underwent grammaticalization and became auxiliaries. Consequently, they began to be inserted into T (Hosaka (2014)). I argue that these two diachronic changes in English interacted with each other and affected the syntactic derivation in SICs. Specifically, the T-to-C movement of a main verb, which had been induced by the labeling requirement, was replaced with that of an auxiliary directly inserted into T. Given the discussion above, I propose the following syntactic derivation of SICs in EModE afterward.

(13) $[_{\beta}\ \mathrm{So}_{[+\mathrm{Pol}]}\ [_{\mathrm{CP}}\ \mathrm{Aux}_{(\mathrm{T}[\pm\mathrm{Pol}]+\mathrm{C})}\ [_{\alpha}\ \mathrm{DP}_{[\varphi]}\ [_{\mathrm{TP}}\ t_{\mathrm{Aux(T)}[u\varphi]}\ \cancel{[_{v^*\mathrm{P}}\ t_{\mathrm{DP}}\ \mathrm{V}+v^*\ [\ldots]]}]]]]]$ β = <Pol, Pol>, α = <φ, φ>

In (13), the merger of *so* into SPEC-C creates {XP, YP}. For β to receive a legitimate label, only one option is available: feature sharing via prominent features. Since overt verb movement is obsolete, the main verb is not qualified to raise to C via T. Then, the auxiliary inserted into T undergoes movement to C, which results in establishing a Spec-head agreement relation between [+Pol] and [±Pol], enabling the label of β to be determined as <Pol, Pol> by sharing the polarity features. Finally, deletion of *v**P applies, and the derivation converges.

5. Peculiar Properties of SICs in PDE

As shown in (14), multiple auxiliaries can appear in SICs in PDE. In (14a), the two auxiliaries are adjacent, while in (14b), the subject intervenes between them. Under the proposed analysis, (14a) is derived as in (15).

(14) a. Bill must be a genius and so must be Ann. (Toda (2007: 190))

b. If our culture is noble, so will our art be. (COCA: 1999, NEWS)

(15) $[_{CP}\ C_{[\cancel{u\varphi}]}\ [_{\beta}\ So_{[+Pol]}\ [_{TP}\ must_{(T[\pm Pol][\cancel{u\varphi}])}\ [_{v}P\ be_{(+v)}\ [_{VP}\ t_{be}\ [_{\alpha}\ DP_{[\varphi]}\ \cancel{XP}]]]]]]$ β = <Pol, Pol> , α = D

The underlying structure is the same as (11), with the assumption that *be* takes a small clause as its complement. I maintain that the subject DP remains within the small clause and that *so* with [+Pol] is merged into SPEC-T, not into SPEC-C, instead of the subject DP. *So* establishes a Spec-head agreement relation with T regarding the polarity features in the first-merged position, which results in the label of β being determined as <Pol, Pol> via feature sharing. [uφ] on C do not induce any problems, because they hold an Agree relation with φ-features on the subject DP and get valued and deleted. However, a problem arises concerning with labeling of α. In this case, I claim, following Maeda (2021), that deleting a member of the set renders the deleted one invisible to LA. In (15), deletion applies to XP, rendering it invisible to LA. Thus, α receives D as its label, and the derivation converges.[7]

It should be pointed out that the T-to-C movement does not occur in (15). Recall that the T-to-C movement in SICs follows from the labeling requirement. In (15), labeling via feature sharing of the polarity features proceeds in the TP-domain. Thus, the T-to-C movement is unnecessary. If *so* were merged into SPEC-C and the T-to-C movement took place, the relevant structure would be (16).

(16) $[_{\gamma}\ So_{[+Pol]}\ [_{CP}\ must_{(T[\pm Pol]+C)}\ [_{\beta}\ t_{must(T)}\ [_{v^*P}\ be_{(+v)}\ [_{VP}\ t_{be}\ [_{\alpha}\ DP_{[\varphi]}\ \cancel{XP}]]]]]]$ γ = <Pol, Pol>, β = ?, α = D

In (16), the label of γ can be determined as <Pol, Pol> via feature sharing of the polarity features, but that of β cannot, because the subject DP remains in-situ. If Chomsky's (2015) assumption that T in English is too weak to serve as a label is true, SPEC-T must be filled with an element that can participate in labeling via feature sharing with T. SICs such as (14a) may then be derived by postulating that the subject occupies SPEC-T and amalgamated auxiliaries raise to C (Hatakeyama et al. (2010)). However, as shown in (17), English does not allow the movement of multiple auxiliaries in the environment where canonical SAI is observed. Therefore, it is unreasonable to make such an ad hoc assumption only for deriving a case of SICs. Thus, the derivation in (15) is preferable.

(17) a. Have you been working late?

b. *Have been you working late? (Neymeyer (1998: 47-48))

On the other hand, the derivation in (14b), where multiple auxiliaries are not adjacent, proceeds as in (18). In this case, the subject DP and *so* occupy SPEC-T and SPEC-C, respectively. The derivation converges with the deletion of VP at the S-M interface.

(18) $[_{<Pol,\ Pol>}\ So_{[+Pol]}\ [_{CP}\ will_{(T[\pm Pol]+C)}\ [_{<\varphi,\ \varphi>}\ DP_{[\varphi]}\ [_{TP}\ t_{will(T)[\cancel{u\varphi}]}\ [_{v^*P}\ be_{(+v)}\ \cancel{[_{VP}\ t_{be}\ [_{XP}\ t_{DP}\ XP]]}]]]]]$

Let us next discuss the phonological stress of the subject DP in SICs. We know that the subject DP in SICs receives phonological stress, regardless of the subject type. Under the proposed analysis, the application of deletion results in the subject DP appearing in the clause-final position. Thus, the sentence

stress rule conditions proposed in the literature (see Cinque (1993) and Culicover and Winkler (2008)) can be satisfied in any derivations. However, an interesting difference is observed with respect to the subject type in SICs. The contrast between (19a) and (19b, c) demonstrates that nominal subjects are available in any context, while pronominal subjects can occur only in SICs with a single auxiliary.

(19) a. John can speak French, and so can {Ann / she}. (Hatakeyama et al. (2010: 28))
b. Leslie had been there, and so had been *I / Sandy. (Culicover and Winkler (2008: 651))
c. *Leslie had been there, and so had been SHE. (Kobayashi (2023: 141))

This contrast is attributable to the distinctive syntactic positions of the subject, which affects its phonological stress and semantic interpretation. Specifically, I argue that the subject that occupies SPEC-T just receives default/neutral stress, while the subject within *v*P receives not only non-default/contrastive stress but also a focus interpretation. (Niinuma and Park (2004) and Culicover and Winkler (2008)). There is a consensus about focus: a focus of any type carries new information, by definition (Kiss (1998) and Zimmermann (2008)). Importantly, a subject within *v*P must be an element that can be qualified to receive both contrastive stress and a focus interpretation. According to the Mapping Hypothesis proposed by Diesing (1992), a subject within *v*P that is mapped onto the nuclear scope of the sentence is assigned a focus interpretation at the C-I interface. If this hypothesis is correct, no elements interpreted as old information appear within *v*P, because they are incompatible with a focus interpretation. Under the proposed analysis, the subject in (19a) occupies SPEC-T, while the subject in (19b, c) remains within *v*P. Thus, pronominal subjects are available only in the former case because assigning a focus interpretation to the subject remaining in-situ is incompatible with the common property of pronominal subjects, namely, old information.

The examples in (20) and (21) empirically support the proposed analysis, suggesting that the subject is located in different syntactic positions in accordance with the type of SICs.

(20) a. Believe me, I can sniff one a mile away. And so can you, can you not? (COCA: 2008, MOV)
b. Mosquitoes come and go feely, but so do fireflies, sparking brief green constellations in the dark. (COCA: 2007, FIC)
(21) a. *John had been there, and so had been Sandy, hadn't she?
b. *John had been there, and so had been Sandy, singing songs with him.
(Kobayashi (2023: 135))

The contrast between (20a) and (21a) shows that tag questions are available in canonical SICs but not in SICs with multiple auxiliaries. Given that a tag pronoun corresponds to the element that occupies SPEC-T in the matrix clause (Culicover (1992)), the contrast suggests that the tag pronoun in (20a) corresponds to the subject in SPEC-T, whereas that in (21a) does not, because the subject remains in-situ. Furthermore, the contrast between (20b) and (21b) demonstrates whether a participial phrase can be adjoined to SICs, suggesting that the subject in canonical SICs can serve as a controller of PRO in a participial phrase, while that in SICs with multiple auxiliaries cannot. Suppose that participial phrases

are adjoined to TP (Gyoda (1999)). Then, the contrast indicates that the subject position in canonical SICs is higher enough to c-command PRO, while that in SICs with multiple auxiliaries is lower than PRO; hence their subject cannot c-command it. This implicates the subject in the latter remaining within *v*P. In short, the contrast between (20) and (21) suggests that SICs have distinct subject positions depending on their type, empirically supporting the proposed analysis.

6. Conclusion

I attempted to clarify the historical development of SICs by conducting corpus research and accounted for it under the recent framework of minimalist program. In SICs in early English, a main verb underwent head movement to C via T and contributed to labeling via feature sharing of the polarity features. However, the loss of overt verb movement in English rendered this derivation unavailable. Consequently, after EModE, the role of participating in labeling that was served by a main verb was replaced by modals which underwent grammaticalization and became directly inserted into T.[8]

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NOTES

[1] The historical periods of English are standardly assumed as follows: Old English (OE) (700-1100), Middle English (ME) (1100-1500) (Early Middle English (EME) (1100-1300), Late Middle English (LME) (1300-1500)), Modern English (ModE) (1500-1900) (Early Modern English (EModE) (1500-1700), Late Modern English (LModE) (1700-1900)), and Present-day English (PDE) (1900-).

[2] The texts in the historical corpora used in this research are distributed over the following periods: OE1(-850), OE2(850-950), OE3(950-1050), OE4(1050-1150), ME1(1150-1250), ME2(1250-1350), ME3(1350-1420), ME4(1420-1500), EModE1(1500-1569), EModE2(1570-1639), EModE3(1640-1710), LModE1(1710-1779), LModE2(1780-1849), and LModE3 (1850-1920).

[3] In this paper I postulate that the copy created by head-movement is visible to LA. Chomsky (2015) assumes that the copy of R(oot) with φ-features inherited by *v** is eligible for labeling via feature sharing with an internal argument. This suggests that the copy created by head movement be visible to LA. Therefore, I argue that labeling problems do not arise concerning the T-to-C movement. See also Epstein et al. (2016) for how the visibility of copy can be defined.

[4] Under the framework of LA, Tanaka's (2002) observation can be captured in terms of the labeling failure of the set that contains an external argument (Koike (2023)). If an external argument remained in-situ, the relevant set would be of the form {XP, YP}. However, the members of the set, or DP and *v**P, do not have matching features to share for labeling, so there is only one way to avoid labeling failure: movement of either of the members. Hence, it is obligatory for the external argument to raise.

[5] Kemenade (1997) argues that pronouns as a clitic must be adjoined on the right side of a main verb when the first constituent is an operator, such as a *wh*-phrase or negation. On the other hand, when the first constituent is a topic, two options are available, that is, adjunction to either the right or left side of a main verb. Since *so* in SICs refers back to the precedent context and is thus regarded as a topic, it falls under the latter category. The low frequency of SICs with pronominal subjects in early English might

be attributable to the possibility that two options for adjunction are available.

[6] See Koike (2023) for empirical support for this proposal.

[7] The sentence would be ungrammatical due to labeling failure if deletion did not apply to a member of the small clause, as shown in (i).

(i) *Bill must be a genius, and so must be Ann a genius. (Kobayashi (2023: 133))

[8] Although the subjects in (20) and (21) are in the non-final positions, these examples do not undermine the argument discussed here. Following Niinuma and Park's (2004) argument based on Selkirk's (1995) claim, I further claim that arguments can affect the sentence stress assignment, but adjuncts cannot, because adjuncts create the domain that is independent from an element outside of it.

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On the Reduction of the Clause Structure of Reduced Relative Clauses Showing OV Word Order in Old English*

Katsuya Sugiura
Aichi Gakuin University

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1. Introduction

This paper discusses the reduced relative clauses enclosed in square brackets in (1). In the following, the antecedents are underlined and the objects of the verb in the reduced relative clause are shown in bold.

(1) Look at <u>the boy</u> [playing **tennis** over there].

The arguments of this paper are threefold: (i) The present participle that post-modifies a noun in Old English (OE) is a verb, not an adjective. (ii) The object of the present participle of reduced relative clauses that show OV word order is discourse-given, serving as a topic. The object is then moved to the specifier of TopP, which is above *v*P. (iii) The disappearance of reduced relative clauses in Middle English (ME) showing OV word order is an example of the reduction of the clause structure claimed by Nawata (2022, 2023), Ogawa (2019a, 2019b), and Tanaka (2016, 2017, 2019), in that their syntactic structures were reduced from TopP to *v*P.

This paper is organised as follows: Section 2 revises previous research on reduced relative clauses and argues that the present participle of reduced relative clauses in OE is a verb; Section 3 discusses the information structure of reduced relative clauses showing OV word order; Section 4 proposes a syntactic structure and derivation for reduced relative clauses showing OV word order; and Section 5 describes the contribution of this study and discusses a remaining issue.[1]

2. Reduced Relative Clauses in OE

Ono and Nakao (1980: 437) state that in OE, post-modification was rare except when the participle was accompanied by a modifier and in verses or literal translations of Latin. Niwa (1990) also argues that the present participle in reduced relative clauses in OE does not have the ability to take an accusative object as its complement; therefore, it is an adjective. Based on Niwa's argument, Sugiura (2014, 2015) argues that the present participle in OE exhibits the same inflection as an adjective; therefore, it was an adjective. (2) is an example from YCOE in which the present participle *lifigendan* premodifies *fæder*

and the inflectional ending *-an* of *lifigendan* is a weak singular dative adjective inflection.

(2) to his lifigendan fæder
to his living father
'to his living father' (O3, cocathom2,+ACHom_II,_15:160.335.3547)

However, I obtained examples of present participles post-modifying nouns from a YCOE corpus search, as in (3). Following corpus tagging, I assume that the present participles assign accusative Case to the objects because ***Scyppend*** in (3a) and ***tacna & wundra*** in (3b) are tagged with accusative Case.

(3) a. þa eaðmodan heortan & þa forhtgendan & þa bifigendan & þa
those humble hearts and those fearing and those biving and those
cwacigendan & þa [ondrædendan **heora Scyppend**], ne forhogaþ þa næfre God
quaking and those dreading their Creator, not for-hogian those never God
'those humble hearts, those fearing, those shaking, those quaking, and those dreading their Creator, they never despise God' (O2, coblick,HomU_20_[BlHom_10]:107.9.1366)

b. for þan ðe he is alysend. & hælend [wyrcende **tacna & wundra** on heofenan & on
for the that he is alesen and Saviour working token and wonder on heaven and on
eorþan].
earth
'for that he is God and Saviour making token and wonder on heaven and earth.'
(O3, cocathom1,+ACHom_I,_37:504.227.7487)

Based on this, I investigated the distribution of reduced relative clauses in OE using the YCOE to clarify the actual situation. In this survey, texts written originally in English were investigated, excluding those translated from Latin. Reduced relative clauses were obtained by extracting constructions in which the present participle tagged with PTP-NOM/ACC/DAT/GEN directly followed a noun or demonstrative. Those with a comma between the antecedent and the present participle were excluded because they could be absolute participial constructions. Sequences of a noun and a present participle appearing in *there* constructions or *with*(*out*) constructions were also excluded. Table 1 presents the results of this investigation. Two examples of dative objects are in OV word order, and the examples will be provided in Section 3.

Table 1: Distribution of Reduced Relative Clauses in OE[2]

	EOE	LOE
Accusative Object	2 (VO: 1, OV: 1)	4 (VO: 1, OV: 3)
Dative Object	0	2 (OV: 2)

Based on the results of the investigation, it can be concluded that reduced relative clauses are observed in OE, and the present participles in OE are verbs because of their ability to assign an accusative Case.

3. OV Word Order and Information Structure

This section discusses reduced relative clauses with OV word order. In Section 3.1, I provide examples of reduced relative clauses showing OV word order in OE and ME, I consider their information structure in Section 3.2.

3.1. Reduced Relative Clauses with OV Word Order in OE and ME

Reduced relative clauses with OV word order in OE and ME were collected using YCOE and PPCME2, and the search results are shown in Table 2. Examples are given in (4) and (5).

Table 2: Distribution of Reduced Relative Clauses Showing OV Word Order in OE and ME[3]

	EOE	LOE	M1	M4
Accusative Object	1	3	1	1
Dative Object	0	2		

The four examples in (4) are reduced relative clauses of an accusative object with OV word order.

(4) a. <u>Ða scipliðende</u> [**þæt** geherende] behydelice hi mearcedon ðone Dæg
Those sailors that hearing carefully they marked the Day
'Those sailors hearing that, carefully they marked the day'
(o2, comart3,Mart_5_[Kotzor]:My18,A.17.833)

b. Þa færlice æfter þæs engles spræce wearð gesewen <u>micel meniu heofonlices werodes</u>
Then suddenly after that Angel's speech were seen great many heavenly band
[**God** heriendra & singendra].
God worshiping and singing
'Then suddenly after that Angel's speech, great many of a heavenly band worshiping God and singing were seen.' (o3, cocathom1,+ACHom_I,_2:194.128.389)

c. Hwæt <u>ða Herodes cyning</u> [**þis** gehyrende] wearð micclum astyred & …
What the Herodes king this hearing was much astirred and …
'What! the king Herodes hearing this was much disturbed and …'
(o3, cocathom1,+ACHom_I,_5:217.13.897)

d. Hwæt <u>ða Herodes cyning</u> [**þis** gehyrende] wearð micclum astyred & …
What the Herodes king this hearing was much astirred and …
'What! the king Herodes hearing this was much disturbed and …'
(o3, cocathom1,+ACHom_I,_7:232.17.1198)

In (4a), the demonstrative ***þæt*** precedes the present participle *geherende*, and [***þæt*** *geherende*] post-modifies the preceding noun phrase <u>*Ða scipliðende*</u>. <u>*Ða scipliðende*</u> *[**þæt** geherende]* is a left-dislocated noun phrase and *behydelice hi mearcedon ðone Dæg* is a main clause, in which *hi* is a resumptive pronoun that refers to the left-dislocated noun phrase. Since left-dislocated noun phrases are very

frequently modified by full relative clauses in OE, I judged [***þæt*** *geherende*] to be a reduced relative clause.

In (4b), I consider ***God*** an object of *heriendra*, with [***God*** *heriendra & singendra*] modifying the preceding noun phrase *micel meniu heofonlices werodes* from behind.

Examples (4c, d) are the same constructions. I interpret *gehyrende* as 'hearing.' Although [***þis*** *gehyrende*] is ambiguous as to whether it is a participial construction or a reduced relative clause, I judge it to be the latter because it is part of the preceding noun phrase *ða Herodes cyning* following the tagging in the YCOE corpus.

The two examples in (5) are reduced relative clauses of a dative object with OV word order.

(5) a. Seo endlyfte tid bið seo forwerode ealdnyss [**þam deaðe** genealæcende]. …
That eleventh time is that forward age that death approaching. …
'The eleventh time is the early age approaching that death.'
(O3, cocathom2,+ACHom_II,_5:44.97.959)

b. swa ðu bist nu Godes bearn [**Gode** geefenlæcende]. …
so you are now God's child God resembling
'so you are now God's child resembling God. …'
(O3, cocathom2,+ACHom_II,_31-32:244.98.5434)

In (5a), the noun phrase *seo forwerode ealdnyss* is post-modified by a reduced relative clause [***þam deaðe*** *genealæcende*]. The demonstrative of the noun phrase ***þam deaðe***, which is an object of the present participle *genealæcende*, is the dative of the demonstrative *se*. In (5b) the noun phrase *Godes bearn* is post-modified by a reduced relative clause [***Gode*** *geefenlæcende*]. I judged the noun ***Gode*** to be a dative form of *God* according to the tagging.

Finally, the two examples in (6), which were retrieved from PPCME2, are reduced relative clauses showing OV word order in ME. In the corpus investigation of PPCME2, I obtained reduced relative clauses with OV word order by extracting constructions in which the RRC-tagged construction directly follows a noun phrase or demonstrative.

(6) a. Hie is icleped sarinesse, tristicia mortem operante, 'sarinesse [**deað** wurchende],'[4]
He is named sorryness, tristicia mortem operante, 'sorryness death working,'
'He is named sorryness, tristicia mortem operante, "sorryness causing death,"
(CMVICES1-M1,3.13)

b. he cowde more temperatly bere hymself in all aduersyte than hys mayster & souerayne
he could more temperately be himself in all adversity than his master and sovereign
[**hym** hauynge in seruytude].
him having in servitude
'he could more temperately be himself in all adversity than his master and sovereign having him in servitude.' (CMFITZJA-M4,B3R.142)

From the corpus investigation, it was concluded that reduced relative clauses showing OV word order are observed in OE and have almost disappeared in ME or have disappeared by the end of OE, as they are rarely observed in ME.

3.2. Information Structure of Reduced Relative Clauses in OE and ME

Let us now turn our attention to the objects of the present participles in the reduced relative clauses in (4), (5), and (6). They all consist of one or two words, and appear to be old information. In the following section, I consider the information structure of the object of the present participle in reduced relative clauses showing OV word order in OE and ME.

There have been many previous studies of word order changes from OV to VO, including Pintzuk (1999) and Pintzuk and Taylor (2006). More recently, many studies have focused on the information structure of objects, that is, whether the object is old or new information, with Struik and van Kemenade (2020, 2022) being the most recent.

They investigated the relationship between the information structure and OV word order. Specifically, Struik and van Kemenade (2022: 85) investigated the word order of auxiliaries, non-finite verbs, and their objects in finite clauses in OE and ME and made the following claims: (i) approximately 94% of discourse-new objects appear in VO word order; (ii) approximately 74% of discourse-given objects appear in OV word order; and (iii) regardless of whether the object is discourse-given or new, the longer the object, the more likely it is to be in VO word order. Based on these results, they concluded that OV word order occurs when the object is given in the discourse.

Struik and van Kemenade (2022: 96) then assume, based on Gundel et al.'s (1993) givenness hierarchy, that demonstrative pronouns such as *this* and *that* and noun phrases with the demonstratives such as *this* + N and *that* + N are given objects because "definiteness is marked by a demonstrative pronoun/determiner," but that noun phrases with a definite article, such as *the* + N, can be either given or new. This study follows them with the additional assumption that personal pronouns, such as *him* or *her*, can be given objects.

Following Struik and van Kemenade (2020: 8-9), this study classifies discourse-given information into three types: *identity*, *inferred*, and *assumed*. "*Identity* refers to objects that have been mentioned before in the discourse;" *inferred* means that "a referent has not been mentioned before, but can be inferred from another, closely related constituent;" and "[*assumed*] objects are objects that are part of world/encyclopedic knowledge or are situationally evoked."

Let us confirm the information status of the objects in the present participles of the reduced relative clauses in (4), (5), and (6) according to the above assumptions. The demonstrative pronouns ***þæt*** in (4a) and ***þis*** in (4c, d), the noun phrase with a demonstrative ***þam deaðe*** in (5a), and the personal pronoun ***hym*** in (6b) are *identity*. The nouns ***God*** in (4b), ***Gode*** in (5b), and ***deað*** in (6a) are *assumed* because ***God***/***Gode*** 'God' and ***deað*** 'death' are part of world knowledge.

Therefore, I argue that the objects of the present participles in the reduced relative clauses in (4), (5), and (6) are topics because they are all discourse-given objects. Recall also that the objects are all light elements of two or fewer words.

4. The Reduction of the Clause Structure of Reduced Relative Clauses Showing OV Word Order

Based on the discussion up to Section 3 and modifying Struik and van Kemenade's (2022) analysis, I propose that the object of the present participle in reduced relative clauses that show OV word order undergoes topicalization and moves to the specifier of TopP above *v*P. I also propose that the clause structure of reduced relative clauses was reduced from TopP to *v*P in ME. First, I discuss the syntactic structure of reduced relative clauses with OV word order in Section 4.1, and then the reduction of their clause structure in ME in Section 4.2.

4.1. The Syntactic Structure of Reduced Relative Clauses Showing OV Word Order

Since Rizzi (1997), the cartographic approach, in which the left periphery of CP is subdivided into functional categories such as ForceP, TopP, FocP and FinP, has been widely accepted. In addition, since Jayaseelan (2001), other research methods have also been proposed that assume functional categories related to discourse, such as TopP and FocP, in the left periphery of *v*P (Maeda (2010), Tanaka (2015, 2017)).

In this section, I will modify Struik and van Kemenade's (2022) analysis by introducing Jayaseelan's (2001) cartographic approach to *v*P. Struik and van Kemenade adopted a VO base word order and argued that OV word order arises as a result of the leftward movement of a discourse-given object. They postulated that the [Ref] feature is a feature of a demonstrative involved in the anaphoric reference. The demonstrative with the [Ref] feature is then moved to the specifier of DP, as shown in (7a). They proposed that the object DP with the [Ref] feature is driven to the specifier of *v*P by the edge feature carried by the head of *v*; thus, OV word order is derived, as shown in (7b) (pp. 96-99, 104).

(7) a. $[_{DP}\ \mathrm{Dem}_{[Ref]}\ [_{D'}\ D^0\ [_{n*P}\ t_{Dem[Ref][u\varphi]}\ \mathrm{NP}_{[i\varphi]}\ ]]]$

b. $[_{vP}\ \mathrm{DP}_{[Ref]}\ [_{v'}\ \mathrm{V}\text{-}v\quad t_{DP}\ ]]]$ (cf. Struik and van Kemenade (2022: 99, 104))

Since Struik and van Kemenade (2022) do not assume a functional category for discourse above *v*P, I will modify their analysis by adopting a cartographic approach following Jayaseelan (2001) that subdivides the left periphery of the *v*P. Specifically, I follow Jayaseelan (2001), Tanaka (2015, 2017), Chigchi (2017), and others in assuming a functional category, TopP, in the left periphery of *v*P that takes on a topic-related role.

It is then assumed that the given objects with an [iRef] feature move to the specifier of TopP by Agreeing with the head of TopP with the [uRef] feature. Based on the above assumption, the syntactic structure of reduced relative clauses showing OV word order in OE and ME is shown in (8):

(8) $[_{TopP}\ \mathrm{Obj}_{[\cancel{iRef}]i}\ [_{Top'}\ \emptyset_{[\cancel{uRef}]}\ [_{vP}\ [_{v'}\ \mathrm{V}\text{-}\textit{ende}/\text{-}\textit{ynge}\ t_i\ ]]]]$

The syntactic structure and derivation of the reduced relative clause showing OV word order in OE and ME and its antecedent are shown in (9), where the syntactic structure of reduced relative clauses proposed by Sugiura (2019) is applied. The antecedent noun phrase is merged in the specifier of *v*P and then moved to the specifier of NP.

(9) $[_{DP}$ Det $[_{NP}$ Subj$_j$ $[_{N'}$ Ø $[_{TopP}$ Obj$_{[\cancel{iRef}]i}$ $[_{Top'}$ Ø$_{[\cancel{uRef}]}$ $[_{vP}$ t$_j$ $[_{v'}$ V-*ende*/-*ynge* t$_i$]]]]]]]

In this way, we obtain the structure in which the antecedent is post-modified by a reduced relative clause of OV word order.

4.2. The Reduction of the Clause Structure

Given the syntactic structure of reduced relative clauses in OE proposed in (8), it is necessary to examine historical changes in the clause structure of reduced relative clauses since OE. Sugiura (2014, 2015), who investigated the historical development of reduced relative clauses, proposed that they were *v*P when they appeared in ME and expanded to AspP in Modern English (ModE), leading to Present-day English (PE). Sugiura (2022) also argued that some reduced relative clauses have a TP structure in PE because some verbs appear to the left of adverbs.

Combining these arguments with those of the present paper up to Section 4.1, it can be concluded that the reduced relative clause was TopP in OE but has been reduced to *v*P in ME. In what follows, I consider the reduction in clause structure.

The reduction in clause structure in ME is due to the disappearance of reduced relative clauses with OV word order. With respect to the factors behind the disappearance of TopP in reduced relative clauses, this study follows Struik and van Kemenade (2022: 99, 109). Specifically, since *se*-form demonstratives such as *þæt* were grammaticalized as an article and merged into the head of DP instead of moving to the specifier of DP, the object DP was no longer associated with the [Ref] feature. The same explanation seems to be possible for *þes*-form demonstratives such as *þis*. As a result, the movement of the object DP to the specifier of TopP was impossible, leading TopP to disappear. With the disappearance of TopP, the movement of nouns without an article, such as *God*/*Gode* and *deað*, into the specifier of TopP also disappeared.

5. Contribution and a Remaining Issue

I claim that the disappearance of reduced relative clauses showing OV word order is an example of the reduction of clause structure argued by Nawata (2022, 2023), Tanaka (2016, 2017, 2019), and Ogawa (2019a, 2019b). Although many historical studies have discussed the extension of clause structure (Fanego (2004)), few have discussed the reduction of clause structure. Therefore, I believe that the structural change from TopP to *v*P due to the loss of the reduced relative clause showing OV word order proposed in this paper contributes to research in the field by providing a new example of clause structure reduction.

Finally, I briefly discuss a remaining issue: Why did reduced relative clauses showing OV word order disappear much earlier than finite clauses showing OV word order? It has been argued that the word order change from OV to VO in the history of English was completed in the 14th century for finite clauses (but in the 16th century for quantitative and negative objects) and in the 16th century for infinitival clauses (Fischer et al. (2000), Tanaka (2016)). If this is correct, we need to consider the difference in the timing of the disappearance of reduced relative clauses and finite clauses showing OV

word order.

In Section 4.2, I argued that the reason for the impossibility of moving the object to the specifier of TopP was the grammaticalization of demonstratives into articles; they merged into the head of DP instead of moving to the specifier of DP. The argument in Section 4.2 seems to answer the question, but I would like to pursue another possibility. Specifically, I assume that the factors are the present participle itself and the lightness of the object.

The detailed results and discussion of the corpus investigation will be discussed in a separate paper, but the findings can be briefly summarised as follows: (i) Present participles showing OV word order in finite clauses were productive in EOE, but declined over LOE. (ii) They nearly disappeared in ME. (iii) The objects of present participles showing OV word order in finite clauses are not heavy and carry old information.

From the above discussion, the following conclusion can be drawn. The decrease in the number of present participles showing OV word order in finite clauses affected the distribution of reduced relative clauses showing OV word order in OE and ME. In addition, the present participles with OV word order originally tended to take light objects that carried old information. Therefore, it is hypothesised that reduced relative clauses showing OV word order disappeared in ME due to different and independent factors from those of finite clauses showing OV word order.[5]

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NOTES

[1] The corpora used in the research are as follows: *The York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE) and *The Penn-Helsinki Parsed Corpus of Middle English* (PPCME2). The periodization of the corpus is as follows: O1: -850, O2: 850-950, O3: 950-1050, O4: 1050-1150, M1: 1150-1250, M2: 1250-1350, M3: 1350-1420, M4: 1420-1500 (EOE: O1 and O2, LOE: O3 and O4).

[2] The total word count is 88,981 for EOE and 477,616 for LOE. The six examples of LOE are all from cocathom1 and cocathom2. Considering their affixal nature, I have excluded object pronouns (van Kemenade (1987)). I follow the corpus tagging about whether the object noun is accusative or dative.

[3] I have excluded one example of a reduced relative clause with a pronominal object in OE due to its characteristics as an affix, but included an example (6b) of the one in ME.

[4] *Tristicia mortem operante* in (6a) is Latin and *"sarinesse deað wurchende"* is a possible literal translation.

[5] The possibility that present participles showing OV word order in finite clauses are adjectives will be considered in a separate paper.

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CORPORA

The Penn-Helsinki Parsed Corpus of Middle English (PPCME2)

The York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE)

古英語における与格前置受動文の派生について*

（On the Derivation of Dative-fronted Passives in Old English）

飯田 昇汰（Shota Iida）
名古屋大学大学院（Nagoya University）

キーワード：二重目的語構文, 動詞第二位現象, 埋め込み話題化, 代名詞前置, 受動文

1. はじめに

古英語において、対格直接目的語と与格間接目的語をとる二重目的語構文の受動文には(1)と(2)に示す 2 つの形式が存在する。以下、主格項と与格項をそれぞれ太字と斜体で示す。[1]

(1) **Ealle sæfixas** syndon *eowrum handum* betæhte.
all sea-fish are your hands entrusted
'all fish in the sea are entrusted to your hands.' (cootest,Gen:9.2.374 / O3)

(2) Forþam ic secge þe, *hyre* synt **manega sinna** forgyfene, …
therefore I say you her are many sins forgiven, …
'Therefore, I said to you, many sins are forgiven for her, …'
(cowsgosp,Lk_[WSCp]:7.47.4195 / O3)

(1)は主格の主題項を主語とする「主題受動文」であり、(2)は主題項を主語とするが、与格項が見かけ上の主語位置に現れる「与格前置受動文」である。先行研究では、与格前置受動文において与格項は話題化を受けており、動詞第二位(Verb Second; V2)語順を示すと指摘されているが、それを支持する量的データは与えられていない。本稿では、YCOE を用いて当該受動文の例を収集し、主節と従属節のどちらにおいても実際に V2 語順が優勢である一方で、同時に動詞第三位(Verb Third; V3)語順も一定数観察されることを示す。さらに、Haeberli et al. (2020)による古英語の既知話題としての目的語代名詞前置に関する語順の一般化の観点から、調査によって得られた結果を精査し、前置された与格項が確かに話題要素として振る舞うことを実証する。最後に、一般に話題化などの主節現象が許されないとされる従属節における与格前置受動文の派生について議論し、それは当該受動文の T が既知話題を牽引する話題素性を持つことで派生されると提案する。

2. 与格前置受動文における与格項について

本節では、与格前置受動文における与格項の特性と、当該受動文の派生に関する先行研究の指摘を概観する。前述のとおり、Kemenade (1987)や Koopman (1990)などの先行研究は、与

格前置受動文の与格項は話題化を受けた要素であり、その結果として V2 が生じると指摘している。さらに Allen (1995)の観察によると、(1)や(2)のような二重目的語構文の受動文における与格項は、等位主語削除(Coordinate Subject Deletion)によって第二等位項としての節内において削除されることがない。等位主語削除が主語に対してのみ適用可能であるとすると、(2)において与格項は主語位置への移動の結果として定形 be 動詞前位に生じているのではないことがわかる。加えて、Allen は対応する能動文における与格項の話題化と与格前置受動文がともに 14 世紀半ばまでには消失したことを指摘しており、このことは与格前置受動文の与格項が話題要素であることを示唆する。

これらの観察を考慮し、Iida (2023)は Haeberli et al. (2020)による(3)の節構造を採用して、主節において与格前置受動文が(4)のように派生されると提案している。

(3) $[_{CP2}$ XP C2$_{About/Contr/Shift}$ $[_{CP1}$ SU1 C1$_{Fam}$ $[_{TP}$ SU2 T …]]](cf. Haeberli et al. (2020: 418))

(4) $[_{CP2}$ C2 $[_{CP1}$ Dat$_{[Fam]}$ *be*-T-C1$_{[Fam]}$ $[_{TP}$ Nom *be*-T $[_{vP}$ … Dat$_{[Fam]}$ V-en …]]]] (cf. Iida (2023))

(3)における CP1 は談話的旧情報で先行文脈の話題を継続する働きを持つ既知話題(Familiar Topic)を収容する投射であり、CP2 はそれ以外の新情報の話題(Aboutness Topic や対照話題(Contrastive Topic)、転換話題(Shifting Topic))を収容する投射である。(4)の派生では、T が主題項と一致しそれを牽引する一方で、与格項は C1 の持つ話題素性[Fam]の照合のため CP1 指定部へと移動する。さらに定形 be 動詞は T を経由して C1 へと移動し、V2 語順が派生される。

この分析は先行研究によって示された与格前置受動文の諸特徴を説明するが、与格前置受動文が V2 語順を伴うことや与格項が既知話題であるという仮定に対しては、それを裏付ける量的な証拠は提示されていない。次節では歴史コーパスを用いた調査結果に基づいて、これらの点を確かめる。

3. コーパス調査

3.1 与格前置受動文と V2/V3

Mitchell (1985: 455, §1092)や Visser (1963: 621, §682)の二重目的語構文を取る動詞のリストを参考とし、YCOE を用いて二重目的語構文の受動文の例を収集した結果、合計 617 例が得られた。それらのうち、与格項に定形動詞(Vf)が後続し、それらに動詞の過去分詞形(Vn)が後続する与格前置の形式 (Dat < Vf < Vn)を抽出すると、合計 213 例が得られた。結果は次の表 1 にまとめられる。

表 1: 古英語における与格前置受動文の用例数 [2]

	V2	V3		その他	
	Dat-Vf	XP-Dat-Vf	Dat-XP-Vf	… Dat …Vf	合計
主節	56 (51.9%)	27 (25.0%)	17 (15.7%)	8 (7.4%)	108
従属節	57 (54.3%)	26 (24.8%)	11 (10.5%)	11 (10.5%)	105

表 1 からわかるように、与格前置受動文は主節か従属節かを問わず V2 語順が優勢であるが、V3 語順も一定数観察される。(5a, b)に主節の V2 語順と V3 語順の例、(6a, b)に従属節の V2 語順と V3 語順の例を示す。

(5) a. Ond *him* wæs seald **seo bysen** on gewrite þæs seonoðes, …
and him was given the precept in writing the synod …
'And he was given the precept in writing of the synod, …'
(cobede,Bede_4:20.314.30.3174 / O2)

b. **Ealle þing** *me* synt gesealde fram minum Fædyr;
all thing me are given by my father
'All things are given to me by my father' (cowsgosp,Mt_[WSCp]:11.27.697 / O3)

(6) a. … forðam *him* bið buton gewyrhtum forgifen **hiora yfel** …
… because him is without desert given their evil …
'… because their evil is given to him undeservedly …'
(coboeth,Bo:38.119.19.2377 / O2)

b. … oð *him* **se mæsta dæl** wearð underþieded,
… until him the most part was subjugated,
'… until most part of it was subject to him,' (coorosiu,Or_1:10.28.22.552 / O2)

この結果は、与格項を話題要素として前置して V2 語順を派生する(4)の分析を支持する。しかし V3 語順については、前置要素は談話上の位置づけによって異なる位置を占めるとし、さらなる分析を与える必要がある。紙幅の都合により前後の文脈を省略するが、例えば(5b)における先頭の主格項 *Ealle þing* は、新情報として導入され、それと対比をなすペアがなく、後続文脈のために話題を転換する働きもないことから、Aboutness Topic であると考えられる。したがって、(5b)は(7)のように分析される。

(7) [$_{CP2}$ **Ealle þing**$_{[About]}$ C2$_{[About]}$ [$_{CP1}$ *me*$_{[Fam]}$ synt-T-C1$_{[Fam]}$ [$_{TP}$ …]]]

3.2 既知話題としての与格項

Haeberli et al. (2020: 407, fn.9)は、古英語における前置した目的語代名詞の語順の制限として「既知話題の目的語代名詞は主語代名詞を越えて移動することができない」という一般化を示している。本節では、この一般化に基づいて前置与格項が既知話題として振る舞うことを実証することを試みる。

まず、Haeberli et al. (2020)は上述の一般化において与格前置受動文を考慮していない。その理由は、基底位置において与格項は主格項より高い位置を占めると考えると、本来的に与格項の移動が主格項を越えることはないからである。実際 Kemenade (1997)や Ohkado (1998)によれば、古英語において受動文の主語は vP 内の基底位置に留まることができるため、その考えは正しいと思われる。本調査においても主語が vP 内に留まる例は 89 例得られた。(8)はその一例である。

(8) …, *þam* beoð sona forgifene **heora synna** gewiss;
… them were soon forgiven their sins certainly
'…, their sins are soon forgiven for them certainly' (coaelhom,+Ahom_7:53.1089 / O3)

しかし重要なことに、その 89 例のいずれにおいても代名詞主語は生じない。したがって、独立の要因によって代名詞主語は基底位置から移動しなければならず、その移動先において主格項は与格項より高い位置を占めると考えられる。よって、本論では代名詞主語を伴う与格前置受動文もまた、前述の Haeberli et al.による一般化の対象であると想定する。

調査で得られた 617 例の受動文のうち、主格項(S)と与格項(O)のどちらも代名詞である場合の相対語順は、次の表 2 にまとめられる。V は定形動詞を表す。

表 2: 二重目的語構文の受動文における代名詞主語(S)と代名詞目的語(O)の相対語順 [3]

	SOV	OSV	SVO	OVS	VSO	VOS
主節	2	1	9	1	4	0
従属節	18	0	6	0	0	0

調査の結果、2 例を除く全ての例で与格代名詞は主語代名詞に後続することがわかり、よって当該受動文における与格代名詞は既知話題の目的語としての振る舞いを示すことがわかる。(9)は SOV 語順の一例であり、そこでは主格項 *hit* 'it'と与格項 *him* 'them'の両方とも先行文脈の要素を指示する既知話題である。(9)において該当部分は角括弧で示され、与格項と主格項それぞれについて、それと同一指示である前後の文脈中の句は下線付きの斜体と太字でそれぞれ示されている。

(9) Sæde *him* þæt swa hwylcum dæge swa **hie þæs treowes bleda æton**,
said them that so whichever day as they this tree fruits devoured
þæt *hie* wæron syþþan þam gelice þe *hie* geworhte. [Ac **hit** *him*
that they were later that alike which them created but it them
wearð biterlice forgolden on hyra life ge eac æfter, …]
was bitterly repaid in their life and also afterwards …
'and said to them that on whichever day they devoured fruits of the tree, they later became similar to the one which created them. But it was repaid to them bitterly during their life and also afterwards, …'
(coverhom,HomS_34_[ScraggVerc_19]:41.2445-43.2446 / O3)

一見すると Haeberli et al. (2020)の一般化に従っていない OSV 語順と OVS 語順の 2 例は、それぞれ(10)と(11)に示されるが、いずれも与格項が既知話題ではないという点で例外的である。(10)では、前置された与格項 *us* 'us'は、斜体で示された与格名詞句 *na eallum folce* 'not all people'と対をなす対照話題であると考えられる。(11)では、先行する文の文末の名詞句 *þæs*

unholdan cyninges ‘the hostile king’を指す与格項の *him* ‘him’は、先行文脈における話題である *heo* ‘they’に代わって、新たな話題として導入された転換話題である。[4]

(10) and [*us* **he** wæs geswutelod;] *na eallum folce*, ac we ðe æton mid him,
and us he was manifested; not all people but we who ate with him
‘And he was manifested to us; not to all the people, but to us who ate with him …’
(coaelhom,+Ahom_9:158.1371 / O3)

(11) Woldon **heo** & wendon, þæt **heo** þær meahton deagle & beholene beon
desire they and think, that they there could hidden & concealed be
from onsyne *þæs unholdan cyninges*. [*Him* ða wæron **heo** þær
from vision the hostile king. him then were they there
gemeldode;] & *se cyning* **heo** ofslean het.
betrayed & the king them slay ordered
‘They think and desire that they could be hidden and concealed from the eyes of the hostile king. They were then betrayed to him there; and the king ordered them to be slain.’ (cobede,Bede_4:18.308.11.3118-13.3120 / O2)

これらの代名詞前置を伴う V3 語順は次のように分析される。まず、(9)の SOV 語順の例は 2 つの既知話題の多重話題化を伴い、(12)のように構造的に上位の主格代名詞が CP1 指定部へ移動した後、下位の与格代名詞が Richards (1997)の意味における Tucking-in によって内側の CP1 指定部へ移動する。

(12) $[_{CP2}$ C2 $[_{CP1}$ **hit**$_{[Fam]}$ *him*$_{[Fam]}$ wearð-T-C1$_{[Fam]}$ $[_{TP}$ **hit** T $[_{vP}$ v *him* forgolden]]]]

一方で、例外とした(10)の OSV 語順の例では、与格代名詞が対照話題を収容する CP2 指定部へ、主格代名詞が既知話題を収容する CP1 指定部へそれぞれ移動することで派生される。

(13) $[_{CP2}$ *us*$_{[Contr]}$ C2$_{[Contr]}$ $[_{CP1}$ **he**$_{[Fam]}$ wæs-T-C1$_{[Fam]}$ $[_{TP}$ **he** T $[_{vP}$ v *us* geswutelod]]]]

4. 従属節の与格前置受動文

与格前置受動文は与格項の話題化を伴い、多くの場合 V2 語順を呈するが、V2 が主節現象であることを考慮すると、従属節においても主節と同程度に当該受動文が観察されることはさらなる説明を要する。

この問題について取り組む前に、表 1 で提示した従属節の事実を再度整理したい。たとえ従属節であっても、架橋動詞の補部節や一定の類の動詞に選択される節は主節現象を許すと言われている。例えば Hooper and Thompson (1973)によれば、伝達動詞類(Class A)、思考動詞類(Class B)、半叙実の認識動詞類(Class E)の動詞に選択される補部節においては主節現象が許される。したがって、これらの動詞類に選択される補部節は主節と同じ構造を持ち、そこに

生じる与格前置受動文は主節の場合と同様に派生されるので、本節では扱わない。[5]

さらに Haegeman (2003)によると、現代英語の従属節内において、項の前置に比べて付加詞の前置は容認されやすい。このことを考慮し、定形動詞前位の付加詞を無視して整理した従属節のデータが表 3 にまとめられる。なお、ここでは便宜上 V2, V3 という表記を用いるが、付加詞を無視しているため必ずしも実際の語順を反映するものではないことに注意されたい。

表 3: 古英語の従属節における与格前置受動文の分布 (改訂後)

	V2	V3		
	Dat-Vf	Nom-Dat-Vf	Dat-Nom-Vf	合計
従属節	55 (65.5%)	19 (22.6%)	10 (11.9%)	84

以下では、表 3 のデータに基づいて議論する。4.1 節では、これらの従属節内の与格前置受動文の存在が提起する問題について詳細に議論し、4.2 節ではその問題を解決するための提案とそれに基づく分析を提示する。

4.1 問題点

例えば(14)に示す従属節内の与格前置受動文において、従属接続詞 *gif* 'if' が補文標識として併合され、定形 be 動詞が T まで移動すると考えると、その構造は(15)のようであると考えられる。(15)では T の解釈不可能な φ 素性([uφ])が vP 内の名詞句と一致し主格を付与する一方で、与格項が TP 指定部を占め、(14)の語順が説明される。すると、主節であれば CP 領域に移動する与格項の話題要素としてのステータスがどのように説明されるのかが問題である。

(14) …, gif *him* bið **seo heofenlice lar** oftogen;
… if him is the heavenly instruction withdrawn
'… if the heavenly instruction is withdrawn from him'
(cocathom2,+ACHom_II,_41:306.54.6953 / O3)

(15) [$_{CP}$ gif-C [$_{TP}$ *him* bið-T$_{[u\varphi][EPP]}$ [$_{vP}$ … **seo heofenlice lar** oftogen…]]]

Yanagi (2017)などの先行研究は、与格項が TP 指定部に移動して T の[EPP]を満たすことができると主張する。しかし T の[uφ]と一致するのは主語であるため、そのような派生は素性適合の効果を最大化することを求める最大化の原理(cf. Chomsky (2001))に違反する。

この問題を解決するために(15)よりも豊かな構造を仮定したとしよう。例えば従属接続詞の C が補部に CP 構造をとり、動詞移動が下位の C を標的とすることが可能であると仮定すると、従属節内部において XP-Vf-Nom の V2 語順が一般に観察されると予測する。しかし Salvesen and Walkden (2017)や Walkden and Booth (2020)は従属節においてそのような語順は稀であることを経験的に示しているため、そのような接近法は望ましくない。[6]

以上の議論より、従属節内の与格前置受動文は、最大化の原理を満たすよう、T の[uφ]の一致とは独立した仕組みで与格項を話題要素として TP 指定部に牽引する必要がある。次節では、この問題に対する解決策を示し、従属節内の与格前置受動文に対して分析を与える。

4.2　提案

上述の問題を解決するために、本稿では(16)のように提案する。

(16)　古英語の T は通常[uφ]とそれに連動する[EPP]を備えるが、受動・非対格の vP を選択する T は[uφ]と[Fam]を備えることもできる。

(16)が述べるように T が[uφ]と[Fam]を持つことができる理由は、古英語の言語類型的特性と、受動文や非対格動詞を伴う文における低い主語の存在に関連づけられると主張する。これまで見てきたように、古英語では V2 の第一構成素を牽引するのは談話素性である一方で、主語を TP 指定部に牽引するのは T の[uφ]と連動する[EPP]である。Miyagawa (2005)によれば、前者の談話素性の働きは談話階層言語の特徴であり、後者の EPP の働きは一致基盤言語の特徴である。さらに上で述べたように、受動や非対格の文脈においては主語移動が随意的であることを考慮すると、これらの文脈では T の[uφ]が[EPP]を伴う必要がないことが経験的に示唆される。以上の議論から本稿では、古英語は談話階層言語から一致基盤言語への過渡期にあり、主語移動が随意的である受動や非対格の文脈においては、[EPP]が[uφ]と連動する必要がなく、代わりに [uφ]と共に[Fam]を T が備えることができると主張する。

この提案に基づけば、(14)の文は(17)のように分析される。

(17)　[$_{CP}$ gif-C [$_{TP}$ *him*$_{[Fam]}$ bið-T$_{[uφ][Fam]}$ [$_{vP}$ … **seo heofenlice lar**$_{[iφ][uCase]}$ oftogen…]]]

(17)において、T は主語名詞句と φ 素性において一致する。この時、最大化の原理に従って、一致相手の名詞句が[Fam]を備える場合はそれを牽引し T の[Fam]を照合するが、そうでない場合にはそれは vP 内に留まる。後者の場合、T が備える[Fam]の照合のため与格項が TP 指定部へと移動することで与格前置受動文が派生される。この分析に従えば、最大化の原理に従う仕組みのもとで、与格項の話題要素としての特性を捉えることができる。[7]

最後に、T が持つ話題素性の種類について議論する。(16)において、T が備えうる話題素性は既知話題に関連する素性であると主張した。Miyagawa (2017)によると、日本語では通常主節現象が許されない叙実動詞の補部節内でも既知話題と対照話題の話題化が可能であり、同じ談話階層言語の特徴を持つ古英語においても同様に分析することは妥当であると思われる。

さらにこの主張の妥当性を確かめるため、本発表で採用する節構造において既知話題以外の話題は節の上位に生じることを考慮し、V3 語順の従属節における(従属接続詞を除いた)節先頭要素に注目してその談話上のステータスを調べた。該当する 29 例のうち、節先頭に代名詞を伴う場合の 14 例(48.3%)において、その節先頭要素は全て既知話題であった。一例が(18)に示されるが、そこでは節先頭の主格代名詞とそれに続く与格代名詞がそれぞれ先行文脈におけると下線付きの太字で示した内容と *he* ‘he’を指す既知話題である。

(18)　Ðæt is ðæt <u>*he*</u> ða Godes gifa ðe <u>*he*</u> onfeng ge on cræftum ge on æhtum
that is that he the God’s gifts that he received and in virtues and in wealth
ðæt <u>***he*** **ða** **ne** **becnytte** **on** **ðæm** **sceate** **his** **slæwðe,** **&** ***he*** **for** **his**</u>
that he them not tie in the cloth his sloth and he for his

swongornesse hie ne gehylde, [ðylas **hit** *him* sie eft witnod.]
laziness them not keep lest it him be afterwards reproached
'that is, let him not tie up in the cloth of his sloth the divine gifts which he has received, both in virtues and in riches and not hide them through his laziness lest he be reproached for it afterwards' (cocura,CP:9.59.14.372 / O2)

また節先頭に名詞句が生じる残りの 15 例について、その定性を確かめると、8 例が(19)のように節先頭に定名詞句を伴う。(19)のような例においても(18)と同様に、節先頭の定名詞句とそれに続く与格代名詞の両方が、先行文脈に現れる要素を指示する既知話題である。

(19) Þa cwæð he, cwystuþu magon *þæs brydguman bearn* fæstan swa lange
Then said he wheather can the of.bridegroom sons fast so long
swa **se brydguma** myd *him* ys. Soþlice þa dagas cumaþ [þonne **se**
as the bridegroom with them is truly the days come when the
brydguma *him* byð afyrred,] þonne fæstæð *hig* on þam dagum.
bridegroom them is taken.away then fast they in those days
'Then, he said, "Can you make the sons of the bridegroom fast while he is with them?" But truly the days will come when the bridegroom shall be taken away from them, and then they will fast in those days.' (cowsgosp,Lk_[WSCp]:5.34.3971-35.3973 / O3)

これらの事実は T が備える話題素性は既知話題に関連する素性であるという主張を支持する。結果として、(18)-(19)のような従属節内の V3 語順は既知話題の多重話題化の例として、(12)と同様に Tucking-in を利用して派生される。[8]

5. 結語

本稿ではコーパス調査によって、与格前置受動文は与格項の話題化を伴う V2 語順が優勢であるが、V3 語順も一定数観察されることを示した。さらに、古英語における前置した目的語代名詞の語順に関する経験的一般化の観点から、調査によって得られた受動文中の与格項の振る舞いを調べることで、与格前置受動文においてそれが既知話題として前置されることを実証した。最後に、通常は主節現象を許さない従属節中における V2, V3 語順の例について、T が[uφ]と共に[Fam]を備えることができると提案し説明を与えた。

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注

[1] 本稿において提示される古英語の用例は古英語コーパス YCOE (*The York-Toronto-Helsinki Parsed Corpus of Old English Prose*)を用いて収集されたものである。コーパステキストの時代区分は次のとおりである。O1 (-850), O2 (850-950), O3 (950-1050), O4 (1050-1150)。

[2] XP には主格項のみでなく非項の要素も含まれる。「その他」は非項の要素も含めて 3 つ以上の要素が定形動詞に先行する場合である。また定形動詞前位の要素に関して、V2/V3 の派生とは独立に節の周縁部に併合されうる間投詞や代名詞によって再述される左方転移名詞句はカウントしていないことに注意されたい。

[3] 定形動詞に後続する代名詞については、いわゆる演算子前置の文脈において動詞が C2 まで移動するか、代名詞が TP 内の位置を占めるかのいずれかにより派生されると考えられる。詳細な分析は今後の研究課題とする。

[4] (11)において主格代名詞 *heo* 'they'は明らかに既知話題であり C1 を占める定形動詞に後続しているが、Haeberli et al. (2020)の観察によると、このような OVS 語順は稀である。ここではその主語は例外的に TP 指定部に留まっていると分析する。

[5] 対象とした母型動詞は次のとおりである。Class A (*secgan* 'say', *cweþan* 'say'), Class B (*geliefan* 'believe', *wenan* 'think', *þencan* 'think', *þyncan* 'seem', *understandan* 'understand', *ongietan* 'understand, perceive'), Class E (*witan* 'know', *findan* 'find', *hieran* 'hear', *oncnawan* 'recognize, perceive', *tocnawan* 'know, recognize')。なお、母型動詞が否定される場合にはその補部節で V2 が許されないという主張を考慮し(cf. Meinunger (2004))、そのような例は排除しない。

[6] 実際には、受動文や非対格動詞を伴う文の場合は主語が vP 内部に留まることができるため、いわゆる accidental V2 として XP-Vf-Nom 語順が一般に観察される。しかし、これを豊かな節構造の点で説明しようとすると、それらの文脈においてのみ従属節の構造が豊かであると規定しなければならない点が問題となる。

[7] この提案の帰結として、従属節における場所句倒置の例にも同様の説明を与えることができる。例えば(i)のような非対格動詞を伴う場所句倒置は、場所句が話題要素として TP 指定部に移動し、主語名詞句が元位置で認可されることによって派生されると説明される。

(i) þy læs þe eow on hand becume seo lease gesetnys
lest you in hand come the false account
'lest the false account should come to your hand' (Ohkado (1998: 69))

[8] 従属節の V3 語順の 29 例中 7 例は先頭に不定名詞句を伴うが、その名詞句が既知話題として前置するかどうかは問題である。一つの可能性として、当該従属節が例外的に豊かな節構造を持つことが考えられるが、この点に関しては与格前置受動文以外の場合も含めた一般的な語順パターンを調べて探求する必要がある。また、同じ 29 例中 6 例において代名詞または定名詞句の与格項が主格項に先行する(cf. (6b))。この場合は例外的に Tucking-in を利用しない分析を与える必要があるが、それを可能にする条件の詳細は今後の研究課題として残される。

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A Covert Head-Movement Approach to Binding Phenomena

Toshifusa Oka
Fukuoka University of Education

Keywords：Minimalist Program, binding conditions, covert head-movement, PIC

1. Towards a Unified Explanation for Binding Phenomena

The binding theory, which was build up mainly by Noam Chomsky and Howard Lasnik (Chomsky (1981, 1986), Chomsky and Lasnik (1993), Lasnik (1989)), specifies three conditions:

(1) A. If α is an anaphor, interpret it as coreferential with a c-commanding phrase in D.
B. If α is a pronoun, interpret it as disjoint from every c-commanding phrase in D.
C. If α is an r-expression, interpret it as disjoint from every c-commanding phrase.
(Chomsky and Lasnik (1993))

In this paper I do away with all of them and put forward a unified way to derive their effects. My basic ideas are as follows:

(2) Disjointness Condition (DC)
Two arguments are interpreted as disjoint from each other unless they have undergone a coreference process.
(3) Coreference Anaphora Rule (CAR)
Interpret two arguments as (totally or partially) coreferential when the structural requirement is met.
(4) Bound Variable Anaphora Rule (BVAR)
Optionally reinterpret a relation of coreference anaphora as a relation of bound variable anaphora.

For any two arguments, the disjoint reference is the default interpretation. To be interpreted otherwise, they need to undergo some syntactic process, which we will see below.

2. Minimalist Apparatus: Set-Merge, Phase, and PIC

In this section I introduce some crucial apparatus under Minimalist Program, a research program with which Noam Chomsky has been advancing the field (see Chomsky (1995) and his subsequent works). (Note that I do not share all the assumptions with him.)

Two lexical items undergo Set-Merge, yielding $\{H_1, H_2\}$. This derived set is a minimal complex

Syntactic Object (SO), and represents the most local relation between two heads, namely a sister-relation. It is a syntactic sister-relation that serves as the target of morphological and interpretive operations such as feature agreement, Case-assignment, θ-marking, adjunct modification, *wh*-interpretation, quantifier interpretation, coreference interpretation, and so on.

The notion of *sister* is extended in two ways. One is by Phase Impenetrability Condition (PIC). See the following, where ▢ expresses invisibility under PIC:

(5) a. $\{H_1, \{H_2, \alpha\}\} \rightarrow \{H_1, \{H_2, \boxed{\alpha}\}\} \rightarrow \{H_1, \{H_2\}\} \Rightarrow \{\{H_1, H_2\}\}$

b. $\{\{H_1, \alpha\}, \{H_2, \beta\}\} \rightarrow \{\{H_1, \boxed{\alpha}\}, \{H_2, \boxed{\beta}\}\} \rightarrow \{\{H_1\}, \{H_2\}\} \Rightarrow \{\{H_1, H_2\}\}$

Suppose that in (5a) H_2 is a phase head. Then PIC renders α invisible. Assume that for the relevant computation, $\{H_2, \alpha\}$ is counted as $\{H_2\}$, and even as H_2. Then $\{H_1, \{H_2, \alpha\}\}$ is counted as $\{H_1, H_2\}$. Now H_1 and H_2 are regarded as indirect sisters, which I represent as $\{\{H_1, H_2\}\}$ for convenience. In (5b) H_1 and H_2 are phase heads, so that they become indirect sisters. This extended notion of sister is necessary for the operations I will discuss below.

Let us see, for example, how θ-marking is applied in (6a):

(6) a. The boy gave the book to the girl.

b. $[_{v*P}$ $[_{DP}$ the$_1$ $[_{NP}$ boy]] [v* $[_{VP}$ $[_{DP}$ the$_2$ $[_{NP}$ book]] [GIVE (to)$[_{DP}$ the$_3$ $[_{NP}$ girl]]]]]]

c. $[_{v*P}$ the$_1$ [v* $[_{VP}$ the$_2$ [GIVE the$_3$]]]]

The example contains the v*P structure shown in (6b), where the labels v*P, VP, DP and NP are just for illustration. D (*the*) is a phase head and NP has therefore been made invisible by PIC, so that (6b) can be regarded as in (6c), without recourse to Labeling Algorithm. (I assume that the preposition *to*, whose semantics is determined by *GIVE*, can be syntactically disregarded.) Now *GIVE* and *the*$_3$ are (indirect) sisters. Through this relation, *GIVE* assigns a goal-role to *the*$_3$, which is interpretably equivalent to *[*$_{DP}$ *the*$_3$ *[*$_{NP}$ *girl]]*. Similarly, *GIVE* assigns a theme-role to *the*$_2$ under sisterhood, assuming that *GIVE* is a phase head and *the*$_3$ is made invisible by PIC. Also, the phase head *v** assigns an agent-role to *the*$_1$ under sisterhood after *[the*$_2$ *[GIVE the*$_3$*]]* is made invisible by PIC.

Consider next how "head-movement" is implemented under minimalist assumptions. When we say that H_1 moves to H_2 inside the complex SO α, what happens is that H_1 and H_2 are set-merged to yield $\{H_1, H_2\}$ bedsides α in in the workspace (WS). (Let us eliminate the notion of pair-merge from the theory since it is an undesirable addition under Strong Minimalist Thesis.) Consequently, we have two independent SOs in WS, α being kept intact. No effect will be observed if no further operations apply. External systems can get access to $\{H_1, H_2\}$ to apply morphological operations such as Agree. If $\{H_1, H_2\}$ undergoes word-formation and is realized in the position of H1 in α in externalization/linearization, then the head-movement is overt. If $\{H_1, H_2\}$ is realized in H2's position or simply eliminated, then the head-movement is covert. We will immediately see how the process of covert head-movement plays a crucial role for coreference interpretation.

3. Condition C effects

Let us discuss first how Condition C effects are derived.

(7) a. * John/he loves John (Underlines represent coreference.)
b. [John's/his mother] loves John
c. * John/he believes that Mary loves John
d. [John's/his mother] believes that Mary loves John

The paradigm found in (7) shows that CAR, which is defined as in (3), successfully applies when the relevant two DPs are not in a c-command relation. How does this happen?

Suppose that proper names (more generally, R-expressions) and pronouns have DP structures such as [$_{DP}$ D [$_{NP}$ John/John's]] and [$_{DP}$ D [$_{NP}$ he/his//him]]. Suppose also that when two Ds are in a sister relation, the necessary structural requirement is satisfied for CAR to apply to them. However, two Ds are usually too far from each other to be sisters. Now consider the following derivation:

(8) C …… [$_{DP1}$ D_1 …] …… [$_{DP2}$ D_2 …] ……

D_1 and D_2 are respectively moved (i.e., set-merged) to C, yielding {C, D_1} and {C, D_2}. Here I propose another way of extending the notion of sisterhood. Suppose that when we have {C, D_1} and {C, D_2}, C behaves as a medium or connector to create an indirect sister relation {{D_1, D_2}}. It is to this sister relation that CAR applies to give coreference between the DP headed by D_1 and the one headed by D_2. Intuitively, the two instances of (covert) head-movement we see here can be regarded as a kind of operator-movement. Becoming indirect sisters by the medium of C is equivalent in a sense to the absorption that is usually found between a moved *wh*-phrase and a *wh*-phrase in situ.

The problem now is why this derivation is unavailable when the two DPs are in a c-command relation. As the illustration in (8) suggests, it is natural to think that it is an intervention effect (or a superiority/minimality effect) that is relevant here. When DP_1 c-commands DP_2, D_1 is counted as c-commanding D_2 thanks to PIC. Minimal Search should be understood to block C from probing and selecting both D_1 and D_2 when D_1 intervenes between C and D_2, assuming that intervention is defined in terms c-command.

No matter how the idea is implemented, it is desirable not to rely on features, which will simply take over the job that indices did. One possible way for Minimal Search to work is as follows. Suppose C searches for a D to merge with. The search domain is inside the complement of C. While searching from the top down, C checks step by step. If C finds and selects D_1, the search ends there. This means that C has decided not to search any deeper. This decision is carried over to a new search that is launched by the same motivation, namely, by the desire for coreference in this case. The deeper domain is excluded from the search domain when C activates a second search. Therefore, D_2 cannot be found by C. If, on the other hand, C goes through D_1 in the first search, reaching and selecting D_2, then, the search path consisting of the already checked positions is excluded from the search domain of

the second search. As a result, D_1 is outside the search domain and cannot be found. Regardless of whether C selects D_1 or D_2 in the first search, the other comes out of the search domain of the second search. There is no way for C to attract both for coreference, leading to a Condition C effect. In the case in which D_1 does not c-command D_2, the searching path to reach D_1 is not totally included in the path to D_2, so that D_1 and D_2 do not exclude each other from the search domain of the second search. Thus, no Condition C effect arises in this case.

Minimal Search has the property of narrowing down the search domain in this way. This property follows from an economy principle to avoid repeating the same operation. There could be different ways to understand the basic nature of Minimal Search and its working mechanism, but it is important to note that no matter how the intervention effect is accounted for, it will directly yield the Condition C effect which we want to derive in the present framework.

4. Condition B effects

Condition B states that pronouns cannot be locally bound. Compare (9) with (7):

(9) a. * John/he loves him
b. [John's/his mother] loves him
c. John/he believes that Mary loves him
d. [John's/his mother] believes that Mary loves him
e. John/he loves his dog
f. [John's/his mother] loves his dog

When there is no c-command relation between the pronoun and its antecedent, the derivation proceeds in the way we saw in the previous section. Problematic is the case in which there is a c-command relation. As already seen, the structures of R-expressions and pronouns are the same: $[_{DP}$ D $[_{NP}$ John]] and $[_{DP}$ D $[_{NP}$ him]]. D can function as an operator in both cases. A difference is that unlike proper names/R-expressions, pronouns have the potential to function as a clitic. Suppose that this property is somehow (by incorporation/amalgamation or in some other way) inherited by D. Then we will be able to have the following derivation for (9c):

(10) [D_1 he/John] v* believes $[_{CP}$ C_{that} Mary loves [D_2 him]]

(cliticization) (operator-movement)

D_2 (covertly) head-moves to C, which is regarded as an operator-movement. The D_2 (covertly) cliticizes to v* by Set-Merge, yielding {v*, D_2}. As already discussed, v* and its externally θ-marked D, namely D_1, are in an indirect sister relation {{D_1, v*}}. Now the sisterhood is further extended by transitivity to yield an indirect sister relation {{D_1, D_2}}. CAR successfully applies to this relation, enabling the pronoun to be coreferential with the c-commanding antecedent. In contrast, (7c) cannot have the corresponding derivation since R-expressions do not have the property of cliticization. The

difference between Condition C and Condition B is now reduced to the basic lexical properties of R-expressions and pronouns: the former can only behave as an operator, but the latter can behave as an operator and as a clitic at the same time.

As can be seen in (9e), the local domain in which pronouns must be free is defined not only in terms of CP but also in terms of DP. Consider the following derivation for (9e):

(11) [D_1 he/John] v* loves [$_{DP}$ D [[D_2 his] dog]]

(cliticization) (operator-movement)

The operator-movement scopes over DP as well CP. Thus, D_2 is first head-moved to D as an instance of operator-movement, and then cliticized to v*, just as in the derivation in (10). The fact that CP and DP become local domains for pronouns is now given a natural explanation based on the scope considerations. The example in (9a) has no CP or DP inside, so that it cannot have the derivation like (10) or (11), yielding a Condition C effect.

The host of cliticization can be V (or R) as well as v*. Consider the following:

(12) a. John told Bill that Mary loved him

b. [$_{v*P}$ [D_1 John] [v* [$_{VP}$ [D_2 Bill] [TELL [$_{CP}$ C … [D_3 him]…]]]]]

(12a) has the v*P structure (12b). D_3 is first moved to C as an operator-movement, and then criticizes to v* from there, satisfying the locality condition for cliticization. D_3 and D_1 become indirect sisters to undergo CAR, enabling *him* to be coreferential with *John*. If D_3 criticizes to the root *TELL* instead, then D_3 becomes a sister to *TELL* and an indirect sister to D_2 because *TELL* and D_2 are already indirect sisters (remember the discussion concerning θ-marking). CAR successfully applies and *him* becomes coreferential with the object *Bill*. These considerations suggest a possibility that Cross-linguistic observations concerning subject-orientation and anti-subject-orientation will be accounted for by the obligatoriness and impossibility of cliticization to v*.

5. Mitigation of Condition B and C Effects by Focalization

In this section I will provide a supporting argument for my proposal. It is well-known that Condition C effects are mitigated by (covert) focalization. The following data is from Nediger (2017: 115-116):

(13) a. Only *JOHN* likes *John*.

b. Even *JOHN* hates *John*.

c. (Nobody thinks *John* is polite.) *JOHN* thinks *John* is polite.

(14) a. *John* only likes *JOHN*.

b. *John* even likes *JOHN*.

c. (*John* doesn't like anybody.) *John* likes *JOHN*.

What is particularly interesting here is that Condition C is allowed to be violated regardless of which of the two R-expressions in a c-command relation is focused. Suppose that the D of the focused DP is subject to focalization, which is a (covert) movement to C. Focalization has a different motive from movement for coreference, so that they do not interact to induce an intervention effect. Now, for CAR to apply, we can have the derivations roughly illustrated in (15).

(15) a. C [D JOHN] [D John] b. C [D John] [D JOHN]

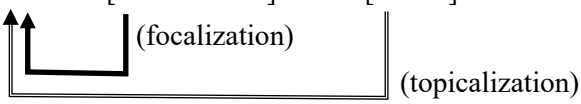
Although the two Ds move with different motives, they end up being indirect sisters to satisfy the syntactic requirement for CAR. Informally speaking, focalization allows the focused D to free ride for coreference.

Focalization also mitigates Condition B effects, as is pointed out by Heim (1993/1998: 212, 217):

(16) a. (Everybody hates Lucifer.) Only <u>he himself</u> pities <u>him</u>.
b. Look, if everyone hates Oscar, then it surely follows that <u>Oscar (himself)</u> hates <u>him</u>.

Very interestingly, Heim (1993/1998: 244) notes: "For instance, Evans (1980) and others have conjectured that prima facie Condition B violations improve when the previous discourse provides an antecedent that both potentially offending NPs can be anaphorically linked to. … As Hans Kamp (p.c.) pointed out to me, this appears to be crucial. For instance, if we have not been talking about Lucifer before, an utterance of *Only Lucifer pities him* (or of *Only he pities him*, using the first pronoun with a demonstrative reference to Lucifer) is quite bad under a coreferential reading." This suggests to me that the sentences in question do not only involve focalization but also topicalization. Suppose that covert topicalization is a covert movement of D to C, just like covert focalization. Then the derivations will be roughly as follows:

(17) C [D Lucifer/he] [D him]



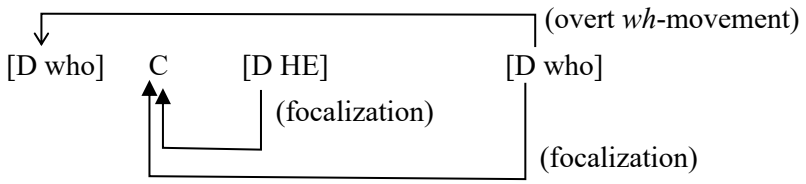
Since Focalization and Topicalization have different driving forces, there arises no intervention effect here. As for the Condition C cases in (13) and (14), it will be reasonable to think that the non-focused R-expression is a hidden topic. Its D is covertly moved to C not by the need for coreference but by topicalization. The examples in (13) and (14) are derived in the same way as those in (16), though both involve troublesome c-command configurations.

It is pointed out by Cable (2008: 3,11) that focalization cannot mitigate a strong crossover violation:

(18) *Who$_1$ does only HE$_1$ (HIMSELF) still think Mary likes t_1?

If *wh*-movement necessarily involves covert focalization, then we will have the following derivation:

(19)



Here the two Ds interact with each other under focalization, yielding an intervention effect.

Usual strong crossover violations will be explained along the same line. Let us remove the focus from (18) to yield, **Who$_1$ does he$_1$ still think Mary likes t$_1$?* If the pronoun were topicalized, the sentence would be all right. But the topic reading is unavailable because the pronoun is interpreted as a variable bound by the *wh*-phrase. It follows from these considerations that the pronoun in a strong crossover example is not subject to operator-movement for coreference. I suspect that a movement for coreference is allowed only if another movement for coreference follows, or Absorption, which connects two Ds in a sister relation for coreference, is inapplicable to the pair of a focused D and a non-topic D. I will leave it open what mechanism works here.

6. Condition A effects

Let us finally consider Condition A, focusing ourselves on the locality shown by reflexives:

(20) a. John$_1$ thinks that Bob$_2$ told Max$_3$ about his$_{1,2,3}$ sister
b. John$_1$ thinks that Bob$_2$ told Max$_3$ about himself$_{*1,2,3}$

A reflexive (pronoun) is a minimal form created by simply combining *self* with an existing personal pronoun for the language to express the thought, "do something to oneself." The internal structure of *himself* is in parallel with that of *his sister*:

(21) a. his sister: [$_{DP1}$ D$_1$ [$_{NP}$ [$_{DP2}$ D$_2$ his] sister]]
b. himself: [$_{DP1}$ D$_1$ [$_{NP}$ [$_{DP2}$ D$_2$ him] self]]

In both cases it is D$_2$ that is subject to covert head-movement. Thus, the part of operator-movement is illustrated as follows:

(22) a. John thinks [C$_{that}$ Bob told Max about [$_{DP1}$ D$_1$ [$_{DP2}$ D$_2$ his] sister]]
OK OK
b. John thinks [C$_{that}$ Bob told Max about [$_{DP1}$ D$_1$ [$_{DP2}$ D$_2$ him] self]]
OK

If D$_2$ operator-moves to D$_1$ and cliticizes to v* or V in the embedded clause, then the binding by *Bob* or *Max* will be available. If D$_2$ successive-cyclically moves to C via D$_1$ and cliticizes from there, then the

binding by *John* should be available. The fact that unlike *his*, *himself* cannot be bound by *John* suggests that the successive-cyclic operator-movement is blocked in (22b). D_2 freezes in the position of D_1 in the case of *himself*. If so, why is this so?

Since just *self* is added, if the reason comes only from the lexical property of *self*, that will be ideal. It follows from the semantics of *self* that DP_1 is interpretively identical to DP_2 in reference. To be identical, D1 and D2 must undergo CAR. (Probably, the notion of identity here involves "coboundness" in the sense of Heim (1993/98) rather than coreference since reflexives are usually subject to bound anaphora interpretation. The application of CAR is a necessary preparatory step for cobinding in the present framework. Though the detailed discussion needs a mention of BVAR (4), I will leave it to a different opportunity.) D_2 moves to D_1 using its operator-movement ability, so that D_2 and D_1 become sisters to undergo CAR, which is regarded as an instance of Absorption. The operator-movement is completed in the position of D_1, which means that D_1 and D_2 cannot exercise their operator-movement ability anymore. Now D_2 is only left with its cliticization ability. From the position merged with D_1, D_2 can only locally cliticize to v* or V inside the embedded clause. DP_1 functions as a barrier to the movement of the D_2. This is the reason why reflexives are locally bound.

One may wonder why reflexives have the structure $[_{DP1}\ D_1\ [_{NP}\ [_{DP2}\ D_2\ \text{him}]\ \text{self}\ ]]$ rather than $[_{NP}\ [_{DP2}\ D_2\ \text{him}]\ \text{self}\ ]$. If DP_1 over NP were missing, there would be no barrier to movement of D_2, allowing long-distance binding. The question to ask is more general: why are nominal expressions are DPs, not NPs? The answer is: because D is necessary for structural Case-assignment. Structural Case is assigned by functional heads such as T (and/or C) and v* in combination with φ-feature agreement (Agree). Such functional heads delete their φ-features against D and assign structural Case to D. D is an essential partner of T/v*. Then, a prediction is that nominal expressions should be able to be bare NP, when Case-assigning functional heads are missing. In the next section we will see some of such cases and discuss what will happen to reflexives and pronouns there.

7. Breaking of Complementarity

Conditions A and B make us expect a complementary distribution of reflexives and pronouns. However, it has been pointed out in the literature that there are contexts where the complementarity breaks. One of such contexts is the one in which reflexives and pronouns are in a locative or directional PP. The following data is from Reinhart and Reuland (1993: 686):

(23) a. Lucie$_1$ explained Max to *her$_1$/herself$_1$.
b. Lucie explained Max$_2$ to *him$_2$/himself$_2$.
(24) a. Max$_1$ saw a ghost next to him$_1$/himself$_1$.
b. Max$_1$ pulled the cart towards him$_1$/himself$_1$.
(25) a. *Lucie$_1$ said that I explained Max to herself$_1$.
b. Lucie$_1$ said that Max saw a ghost next to herself$_1$.

The examples in (23) are as we expect, but in (24) both a pronoun and a reflexive unexpectedly appear in the same position. Furthermore, in (25b) a reflexive is long-distance bound.

In (23) and (25a) the preposition *to* has no substantial semantic content, and its presence is determined by the verb *explain*. The complement of *to* is not θ-marked by *to* but by the root verb *EXPLAIN*. However, it is assigned a structural Case. The source of this Case is v* of *explain*, and the preposition *to* appears for enabling the morphological realization of the Case. (One may assume that *to* covertly incorporates to v* to become a medium between v* and D.) The complement of *to* must be DP, and it behaves as we expect, whether it is a pronoun or reflexive. In (24) and (25b), in contrast, *next to* and *towards* are independent prepositions with their own semantic contents, and they assign an inherent Case. Their complements can be optionally DP or NP, because no functional head requires a D to agree with. The reflexive in (25b) can be bare NP, namely [$_{NP}$ [$_{DP2}$ D_2 him] self], and D_2 can undergo successive-cyclic operator-movement for long-distance binding, behaving in the same way as DP pronouns.

If a pronoun appears in (24), it can be optionally bare NP, namely, [$_{NP}$ him] rather than [$_{DP}$ D [$_{NP}$ him]]. In this case there is no D that obligatorily functions as an operator when it moves. The NP pronoun can only function as a clitic. It cliticizes without operator-movement, allowing local binding. If the reflexives in (24) are NP, namely [$_{NP}$ [$_{DP2}$ D_2 him] self], D_2 must operator-move first, but the only possible operator site is C. As a result, they cannot be locally bound, because of an intervention effect, just as DP pronouns. However, the reflexives choose to be DP, which is also allowed, the local binding will be possible as we expect.

As far as the breaking of complementarity is concerned, the case of *picture* nouns has been most extensively discussed in the literature. If we want to deal with this case along the same line, the mechanism of structural Case-assignment must be extended to cover nouns (and, probably, adjectives as well). Structural Case is a property not only of T and v* but also of n* and a*, where n* and a* are externally θ-marking functional heads for nouns and adjectives. If a noun/adjective contain n*/a*, then it assigns an external θ-role and structural Case. Otherwise, it assigns inherent Case, allowing an NP complement (as well as a DP complement). Regardless of whether the assigned Case is structural or inherent, its morphological realization is supported by a preposition. Thus, we can make the same explanation. Pollard and Sag (1992) point out, however, that *picture* nouns show some unexpected behaviors. Moreover, Chomsky (1986) argues for a different approach to the non-complementarity for *picture* nouns, which is not incompatible with my framework so that it will not make much sense if I push forward my analysis here. I will simply leave it to the future research.

Another context to consider is concerning the conjunction structure. The following data is from Reinhart and Reuland (1993: 670):

(26) a. Max boasted that the queen invited Lucie and himself for a drink.
b. *Max boasted that the queen invited himself for a drink.

The conjunction in (26a) are structurally ambiguous as shown in the following:

(27) a. [[$_{DP}$ Lucie] and [$_{DP1}$ D_1 [$_{NP}$ [$_{DP2}$ D_2 him] self]]] (DP-DP conjunction)
b. [$_{DP}$ D [[$_{NP}$ Lucie] and [$_{NP}$ [$_{DP2}$ D_2 him] self]]] (NP-NP conjunction)

If the reflexive *himself* is NP as in (27b), it behaves in the same way as DP pronouns, allowing long-distance binding.

8. Summary

The results are summarized as follows:

General Principles	Lexical properties	Complex (*-self*) or not	NP or DP (Inherent Case or Structural Case)	Binding Condition effects
(2) DC (3) CAR (4) BVAR	Pronouns (personal and reflexive): able to cliticize	*"himself"*	NP	B
			DP	A
		"him"	NP	A
			DP	B
	R-expressions: unable to cliticize	*"John"*	DP	C

Finally, I hope that my proposal will give you a new framework to look at the rich cross-linguistic and intra-linguistic variation in binding phenomena that has been discussed in the previous research.

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語を味わい尽くす——「多面的な理解」の実践——

（Savoring a Word to the Full—A Multifaceted Approach Out of the Armchair）

平沢 慎也（Shinya Hirasawa）
慶應義塾大学（Keio University）
鈴木 亨（Toru Suzuki）
山形大学（Yamagata University）
柴田 元幸（Motoyuki Shibata）
東京大学名誉教授（University of Tokyo, Professor Emeritus）
堀田 隆一（Ryuichi Hotta）
慶應義塾大学（Keio University）
関山 健治（Kenji Sekiyama）
中部大学（Chubu University）

キーワード：*you*, 構文, アメリカ文学, 英語史, 辞書学

1. はじめに（企画・司会：平沢慎也）

ある程度発達した分野ならばどんな分野でもそうかもしれないが、言語学・英語学でも、発表や論文は自分が専門とする理論的立場からのみ集中的に行ない、そこから外れた、しかしながら重要だと思われる事実や発想の扱いについては「今後の課題とし」たり「別稿に譲」ったりするのが慣例である。これはこれで当然ながら意義あることなのだが、一方で、今後の課題にもせず別稿にも譲らなかったらどうなるのか、見てみたい気持ちもある。

そんな気持ちで 2022 年秋から企画・準備を始めたのが本シンポジウムである。はじめは「ある同じ 1 つの語について、異なる分野の先生方に思う存分語ってほしい」ということだけを決めて、現代英語構文の専門家として鈴木亨先生に、英日翻訳の専門家として柴田元幸先生に、英語史の専門家として堀田隆一先生に、辞書学の専門家として関山健治先生に、ご登壇をお願いした。ご快諾いただいた後、先生方の間で何度か話し合いを重ねていただき、「ある同じ 1 つの語」が——魅力的な候補がいくつも並ぶ中——二人称代名詞 you に決定した。

本シンポジウムは 2023 年 11 月 4 日に日本英語学会「公開特別シンポジウム」として対面・オンラインのハイブリッド形式で行なわれた。ご参加いただいた約 150 名の方々にはこの場を借りて再度御礼申し上げる次第である。理論的にかっちりとした結論があるわけではない、言ってみれば言語との戯れのような営みは、今どきの学界では流行らないのかもしれないが、もしもそんな一時を楽しく感じてくださった方には、you に限らず色々な語で、こうした多面的理解の実践の輪を広げていってもらえたらさらに嬉しい。各発表の概要は以下の通り。

2. When you think X, you think Y の周辺―談話・語用論的機能と主語代名詞 you の選好（第 1 発表：鈴木亨）

本発表では、ややくだけたスタイルで見られる When you think X, you think Y（以下 WYTXYTY）という、「よくある言い回し」であるとすら認知されていないマイナーな表現において、代名詞 you が選好される背景にはどのような動機づけがあるのかについて考察した。

(1) a. When you think Rocky, you think Stallone. (COCA, BLOG)
b. Because when you think penguins, you think cold weather, you think ice… (COCA, SPOK)

この表現の形式上の特徴として、you think という主語・述語の反復と、本来自動詞である think の疑似他動詞用法（鈴木 2022）の２点が挙げられる。一方、意味解釈上は、話題 X に関して、典型例として Y を導入するという機能がある。ところが、実際の使用文脈を精査すると、「X といえば Y ですよね」と言いつつ、直後に「実は（Y ではなく）Z について考えてほしい」というように逆接的展開となる事例が多いことがわかる。

COCA を利用したコーパス調査の結果、WYTXYTY には、動詞 think の自他選択、think 以外の動詞の使用と文構造、主語代名詞の選択などに関して、かなり多様なかたちで変異型が存在し、意味機能も必ずしも均質的ではないことがわかった。WYTXYTY が単独で確立した構文であるというよりも、互いに関連づけられた表現のネットワークとして、プロトタイプ・カテゴリーの特性を示していると考えられる (Taylor 2015)。

WYTXYTY における代名詞 you の総称用法は、話し手と聞き手をそれぞれ一体視する we や they とは異なり、話し手のみを切り離し、聞き手に対し非対称的な立場から新奇な情報を提示する機能を持つと考えられる。その成立背景として、WYTXYTY が、テレビのレポーターによる報道や商品の宣伝のような特定場面において構文化が進んでいるジャンル依存の表現である可能性を指摘した。

3. 文学の中の you―現代アメリカ小説を中心に（第 2 発表：柴田元幸）

アメリカ文学を中心に、英語文学での you の使い方の有名な例、印象的な例をいくつか紹介した。特に系統的な論を打ち立てたわけではない。

一般的な「人」を指す意味の you は、どちらかというと現代的な響きがあるが、*OED* では 16 世紀なかばから用例があり（ただし「16 世紀なかば」以前にも多く用例が見出されることは堀田先生が詳しく論じられた）、『ガリバー旅行記』(Jonathan Swift, *Gulliver's Travels*, 1726) などにも例が見られる。が、作品中頻繁に、かつ作品の「声」の重要な部分として you が使われるのは、『白鯨』(Herman Melville, *Moby-Dick*, 1851) あたりが最初ではないか。

イギリス文学が「書かれている」（written）ものだとすればアメリカ文学は「語られている」（spoken）度合いが強い。もちろん「書く」にしても「読み手」は想定されているわけだが、「語る」ときに想定される「聞き手」の方がより生々しく想定されるのではないか。つまり「語る」ときには、ほぼ自動的に you が仮想されているのではないか。

そういう「語る」アメリカ文学で一番有名な書き出しが、*Moby-Dick* の“Call me Ishmael.”である。You は直接出てこないが、命令文なのでここには主語 you が隠れている。「語られ手」

が暗に想定されているのである（にもかかわらずこの大長篇でイシュメールは一度しか他人にイシュメールと呼ばれない、という皮肉がここには隠れている）。

もうふたつ有名な書き出しを挙げれば、『ハックルベリー・フィンの冒険』(Mark Twain, *Adventures of Huckleberry Finn*, 1884/5) と『キャッチャー・イン・ザ・ライ』(J. D. Salinger, *The Catcher in the Rye*, 1951) の二作もまた you で始まる。“You don't know about me, without you have read a book by the name of 'The Adventures of Tom Sawyer,' but that ain't no matter.” “If you really want to hear about it, the first thing you'll probably want to know is where I was born ...” どちらも仮想された「君」に語りかけるという体裁をとっているが、ハック・フィンの場合は「君」が「まあいてもいなくてもいいんだけどね」といった余裕を感じさせるのに対し、『キャッチャー』のホールデン少年は、「君」の内面に攻撃的にずかずか入り込んでいく感があるものの、読む進めると、インチキな（phony）な「奴ら」に囲まれて切実に「君」を必要としている少年の孤独が見えてくる。

このほか、一貫して二人称で語ることで自己の希薄さを表現した『ブライト・ライツ、ビッグ・シティ』(Jay McInerney, *Bright Lights, Big City*, 1984) や、『幽霊たち』(Paul Auster, *Ghosts*, 1986) に出てくる「人でなし！」「死ね！」とでも訳すべき“You!”などを紹介した。

4. you の総称的用法はどこから来たのか？（第 3 発表：堀田隆一）

本発表では、現代英語の 2 人称代名詞 you の総称的用法（「一般の人」ほどを表わす）について英語史および歴史語用論の観点から考察し、関連する諸問題にも言及しつつ、同用法の発達に関する仮説を提案する。まず重要な論点として、2 人称代名詞の総称的用法（例：You learn to accept these things as you get older.）は英語史の古い段階からあったのか、あるいは途中から発達してきたのかという問題がある。OED によれば、you のこの用法は初期近代英語期、より具体的には 16 世紀なかばに初出するとされるが、MED や他の文献が指摘している通り、すでに中英語期に（それも初期中英語期に）明らかな例が確認される。また、2 人称単数代名詞 thou についても、OED では語義として立項されていないものの、歴史的に同用法は確認され、最も早い例としては you とともに初期中英語期にさかのぼる。古英語で you/thou に同用法があったかどうかについては未調査だが、英語史の最古期からあったという可能性も否定できない。古いテキストにおける文中の you/thou の指示対象をどのように理解すべきかという解釈の問題が常について回るとはいえ、2 人称代名詞の総称的用法の起源（あるいは少なくとも種というべきもの）は、予想以上に古い可能性がある。

関連する別の問題として、他の総称的用法を示す代名詞との使い分けと、その歴史をめぐる論点がある。現代英語には we、they、one などの代名詞にも総称的用法が認められる（例：We live in an age of great changes. / They say it's going to rain today. / One has to learn to control oneself.)。先行研究によれば you も含めた各々の代名詞には元来の人称のもつ原義と余韻が残存しているとされるが、これらの代名詞の総称的用法は独立して発達してきたのか、あるいは相互に関与しながら発達してきたのか。you と one の使い分けの歴史に鑑みると、後者の過程が示唆される。

最後に you の総称的用法の発達過程について一連の仮説を提案する。(i) 本来は目の前にいる聞き手（2 人称）を指す代名詞として機能したものが、不特定の読み手をも指すようになり、そこから仮想的文脈における不特定の誰か、さらに「一般の人」ほどを意味する総称

的用法が発達してきたのではないか。(ii) 単数形 thou と複数形 you の関係については、一人一人の「あなた」を指す用法の繰り返し適用、あるいはメトニミーに基づく「近似複数」という捉え方を足がかりにして理解することが可能である。(iii) 総称的用法の you が用いられてきた典型的なレジスターとして説教、ことわざ、レシピなどが挙げられるが、これらのレジスターでは内容の一般性や普遍性こそが身上であり、とりあえず主語などとして立てた 2 人称代名詞の指示対象が不特定多数の指示対象へと広がっていくことは自然の成り行きと考えられる。このようなレジスターから出発して、総称的用法が他のレジスターにも拡大し、一般化していったのではないか。

5. "You"は「あなた」か？：自然な英語と日本語を意識した学習英和辞典をめざして（第 4 発表：関山健治）

本発表では、学習英和辞典における人称代名詞 you の扱いについて、主に用例の日本語訳の観点から考察を行った。

ほとんどの学習英和辞典では、見出し語の重要度ランクに応じて記述の内容や分量を変える編集方針をとっており、一般的に高頻度語、重要語ほど記述量も多くなる。一方、人称代名詞は、英語と日本語の語義がほぼ 1 対 1 で対応していることもあり、基本動詞や前置詞、接続詞といった機能語に比べれば学習上の困難点は少ない。そのため、従来の学習英和辞典では同ランクの基本語よりも分量は少なく、その扱いは十分であるとは言えなかった。

多くの英和辞典執筆者、編集者が英語の人称代名詞を記述する際に腐心するのは、語義の記述内容というよりも、用例の日本語訳をいかに自然な日本語で表現するかという点であろう。英語の you は、相手との親しさや力関係に関係なく中立的に用いられる一方で、日本語の「あなた」は省略されることが多く、使用する場合には社会的距離が大きな相手や公式の場面に限定されるなどの制約が多い。一方で、初学者にとっては多少ぎこちない日本語訳であっても、用例の英文の直訳であるほうが理解しやすいこともあり、辞書執筆者は、自然な日本語と英文の理解しやすさのどちらを優先するかのジレンマに直面することになる。

従来の学習英和辞典は、母語である日本語の習得がほぼ完了した中学生以上を対象としているため、自然な日本語を意識した用例訳をするということに関しては十分な考慮が払われてこなかったといっても過言ではない。たとえば、*You don't have to eat it all.*のように、日本語では主語を省略するほうが自然である英文においても、初学者への学習上の配慮もあってか「あなたは全部食べなくてもいいですよ」のように、不自然な日本語になることに目をつぶって主語を補った用例訳を付している辞書も散見される。

一方、小学校の学習指導要領の改訂に伴い、外国語科目が教科化されたことと合わせ、近年では小学生向けの英和辞典が新たに刊行されている。既刊の中学生向け英和辞典の記述内容をもとに収録語数を減らした辞書も多いため、小学生向け辞書の用例訳に不自然な日本語が使われていることも多い。

たとえば、小学生向けの「英和辞典 A」では、you が含まれる用例が 413 例あるが、その中の 75 例（18.2%）の用例訳に「あなた」が含まれている。高校生向けの「英和辞典 B」では 1244 例のうち 110 例（8.8%）、一般向けの「英和辞典 C」では、3700 例中 219 例（5.9%）、日本語学者が校閲に携わっている「和英辞典 A」では 10965 例中 342 例（3.1%）に過ぎないことからも、小学生向け英和辞典の「和」の部分に関して再検討する必要があるように思われ

る。

近年では、文法訳読式の英語の授業が鳴りを潜め、和訳の不自然さを指摘される機会が少なくなっている。特に初学者向けの学習英和辞典は、母語が発達途上である小学生が自主学習で利用することを想定し、英語だけでなく、日本語の部分においても母語話者による校閲を行い、英語に加え、日本語の力も伸ばすことのできる辞書が求められている。今後は、上述の「和英辞典 A」のように、日本語と英語の専門家が共同執筆、編纂した辞書が、とくに入門期の学習者を対象とした学習英和辞典にも求められるであろう。

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深層学習時代の言語研究*

（Linguistic Studies at the Era of Deep Learning）

大谷 直輝（Naoki Otani）
東京外国語大学（Tokyo University of Foreign Studies）
永田 亮（Ryo Nagata）
甲南大学（Konan University）
高村 大也（Hiroya Takamura）
産業技術総合研究所（Agency of Industrial Science and Technology）
川崎 義史（Yoshifumi Kawasaki）
東京大学（The University of Tokyo）
持橋 大地（Daichi Mochihashi）
統計数理研究所（The Institute of Statistical Mathematics）
大関 洋平（Yohei Oseki）
東京大学（The University of Tokyo）
堀川 友慈（Tomoyasu Horikawa）
NTT コミュニケーション科学基礎研究所（NTT Communication Science Laboratories）

キーワード：深層学習，大規模言語モデル，計算言語学，言語理論，脳科学

1. はじめに

本シンポジウムでは、自然言語処理・計算言語学・深層学習・脳科学の研究者から、各分野における近年の言語やヒトの言語処理に関する研究成果の報告を受けながら、言語分析の様々な側面において、BERT や GPT-3 等の大規模言語モデルが活用できる可能性がある現代における言語学の研究方法について検討を行った。具体的には、シンポジウムの以下の 3 つの目的と関連づけながら、各発表では、人間が持つ知の性質を様々な角度から検証する認知科学の学際的な研究の方法を検討・提示した。

① 深層学習を用いた研究手法の紹介：自然言語処理・計算言語学・深層学習・脳科学の研究者から、各分野の近年の研究成果に関する報告を受けながら、学際的な言語研究を行うための方法論を紹介する。
② 言語研究のサイクルに対する深層学習の貢献：実証的な言語研究を行う際に必要となる、理論的な仮説立案と実証的な検証の研究サイクルにおける様々な段階で、自然言語処理や深層学習が役に立つことを示す。
③ 言語研究における深層学習の位置づけ：各言語理論において、深層学習がどのように位置づけられるかを検討し、人間が持つ言語知識や言語能力の解明に、深層学習の知見を生かせる可能性を検討する。

2. 各発表の要旨

2.1 言語分析の研究サイクルの必要性と現状（担当：大谷直輝）

本発表では、シンポジウム全体の導入として、実証的な言語研究を行う上で、研究のサイクル「①データの収集・構築 → ②記述・分類・分析 → ③仮説の構築 → ④仮説の検証 → ⑤検証結果に基づいた各段階の精緻化」の構築が重要であることを示すとともに、1) サイクルの各段階の言語研究における現状と問題点の精査を行い、各段階で研究をより緻密に行う上で、深層学習が貢献できる可能性を検討した。Paul J. Hopper は、2007 年の論文で、コーパスの普及にともない、21 世紀の言語学は「信頼できるデータとは何か」、すなわち、作例基盤か実例基盤かという観点に基づき再編される可能性を示唆したが、近年急速に発展している、深層学習に基づく大規模言語モデルが理論・部門・現象を問わず言語分析の様々な面で活用できるようになった現在、データ的な対立の先にある「実証的であるかどうか」という方法論における問いが言語学において大きな柱になる可能性を示した。

また、現在の深層学習に対する言語学の態度と、1960 年代に起こったコーパス言語学を取り巻く状況が類似していることを指摘した。そのうえで、かつては、言語研究とは無関係とみなされ無視や非難をされてきたコーパスに基づく分析が、コーパスの構築を続け、コーパスデータの理論的な位置づけの検討することで，現在では主要な言語研究手法になっている現状を踏まえ、深層学習を言語理論の一つである，用法基盤モデル（the usage-based model）（Langacker 1988）に位置づけることを試みた。

2. 2 深層学習時代の言語研究（担当：永田亮、高村大也、川崎義史）

本発表では、シンポジウムの導入と基礎という位置づけで、深層学習とは何か、言語研究にどのように利用できるのかをテーマに講演を行った。導入として、深層学習一般の話から入り、続いて言語データの処理において重要な役割を果たす言語モデルについて話した。基礎として、言語モデルを含む深層学習を利用した言語研究の実例を広く概観した。

導入部分では、深層学習は数値変換機構と捉えられることを主に説明した。例えば、画像認識は、入力データとして与えられた画素値（光の強さや色などの情報）を ID 番号（認識対象のカテゴリに対応する）に変換する数値変換として捉えられることを解説した。また、言語データは数値データではないため、単語に ID を割り当てることで深層学習の枠組みで取り扱う方法を紹介した。その過程で、入力単語列から次の単語を予測する仕組み、言語モデルを導入し詳しく説明した。言語モデルは、ChatGPT をはじめとする言語生成 AI に使われるだけでなく、そこから得られる副産物が言語研究に有益であることを述べた。

導入部分を受けて、基礎部分では、言語モデルをはじめとする深層学習を利用した言語研究の実例を紹介した。まず、ツール的な側面として、言語モデルから得られる単語ベクトルや文ベクトルを用いることで、柔軟な用例検索、事例グルーピング、意味変化の可視化などが可能となることを説明した。更に、研究事例として、better-off 構文の意味用法変化（永田他 2022）、英語の過去形習得のモデリング（Kirov et al. 2018）、第二言語習得の認知モデリング（Oba et al. 2023）、ロマンス諸語を対象にした通時的形態変化のモデリング（川崎 2023）を紹介した。

2.3 Infinite SCAN：意味の数とその時間変化を同時に推定する統計モデル（担当：持橋大地）

自然言語処理の分野では、機械学習の技術の発達に伴って、従来言語学者が発見的に行ってきたような言語学的研究を大規模なコーパスから統計的に行う研究が増加している。筆者はこれまで、国立国語研究所の新領域創出型共同研究「現代語の意味の変化に対する計算的・統計

力学的アプローチ」（2019〜2021 年度）において、国立国語研究所、産業技術総合研究所などの研究者を含む横断的なチームで近代語・現代語の意味の変化を統計的にとらえる研究を行ってきた。表記や文法のように変化が明らかなデータと異なり、ある言葉の意味の変化は、その単語の周辺に現れる単語の分布の変化として間接的にしか観測できないため、難しい問題である。本講演ではこのために行った、Infinite SCAN（井上他 2022）と名付けた研究について紹介した。これは潜在トピックモデルの時系列拡張である SCAN (Frermann and Lapata 2016) において、意味の数が既知であるという非現実的な仮定を不要にしたものである。意味 1、意味 2、... の相対的な確率分布が時間発展して変わるとき、無限次元の離散分布を表すディリクレ過程の stick-breaking 表現をガウス分布のマルコフ確率場と組み合わせて Gibbs サンプリングを行うことで、意味の変化とその総数を統計的に同時推定可能にする。

言語学的な分析を機械学習によって行う最先端のモデルとして、さらに Holographic CCG（山木他 2023）とよぶ講演者らによるモデルについて解説した。CCG(組み合わせ範疇文法)はその表現力の高さと論理式との親和性から、自然言語処理においても注目が高まっている文法モデルである。深層学習による埋め込みベクトルが基本となる現代の自然言語処理においては、構文中の各句構造にも埋め込み表現が得られることが理想的であるが、このための CVG (Socher et al. 2013) とよばれる方法は子ノードの埋め込みから親ノードの埋め込みを計算するために、文法規則毎に巨大な行列を推定する必要があり、実質的に非常に低次元の場合しか適用できないものになっていた。講演者らはこの問題に対し、ホログラフ埋め込み (Plate 1995) と呼ばれる数学的な合成演算を句構造に対して再帰的に適用することで、上記のような行列を不要にし、同時に世界最高精度の CCG 構文解析が可能であることを示した。

このように、最先端の自然言語処理は従来言語学者が手動で行ってきた分析を置き換えつつあり、客観的なデータとモデルによって網羅的な分析が可能になっている。英語学および言語学においてもこうした方法が有効だと考えられ、相互の歩み寄りの必要性を指摘して講演のむすびとした。

2.4 深層学習時代の統語論（担当：大関洋平）

本発表では、深層ニューラルネットワークによる統語論に対するアプローチを紹介した。まず、はじめに自然言語に対する科学的なアプローチである統語論・認知科学と工学的なアプローチである自然言語処理を概観した上で、人間の言語知能を計算論的に解明したり（自然言語処理→統語論・認知科学）、自然言語処理の問題点を解決したりするためには（統語論・認知科学→自然言語処理）、統語論・認知科学と自然言語処理を融合する必要があることを主張した。そして、計算統語論の方法論を、(1) 文脈自由文法や深層ニューラルネットワークなどの計算モデル、(2) 容認性判断や眼球運動などの人間データ、そして，(3) サプライザルやエントロピーなどの情報理論的評価尺度の 3 ステップに分けて説明した。

次に、深層ニューラルネットワークに統語構造を融合することで、深層学習時代においても統語論が重要な役割を果たすことを示した。具体的には、再帰的ニューラルネットワークと統語構造を融合した言語モデルである再帰的ニューラルネットワーク文法、再帰的ニューラルネットワークと極小主義を融合した言語モデルである極小主義－再帰的ニューラルネットワーク文法、そしてトランスフォーマーと統語構造を融合した言語モデルであるトランスフォーマー文法などの統語的言語モデルを紹介し、一致や中央埋め込みなどの統語現象において、より小規模なデータで非統語的言語モデルの性能を上回ることを指摘した（Noji and Oseki 2021, Yoshida and Oseki 2022）。

加えて、深層ニューラルネットワークを形式言語で評価することで、最先端のトランスフォーマーがチョムスキー階層において正規言語しか処理できないことを示した。具体的には、自然言語に実在する統語現象を抽象化することで正規言語、文脈自由言語、そして弱文脈依存言語などの形式言語を生成し、再帰的ニューラルネットワークは部分的に文脈自由言語を処理できる一方で、トランスフォーマーは文脈自由言語以上を処理できないことを指摘した（Someya, Yoshida and Oseki 2023）。最後に、昨今の統語論は計算言語学と親和性が高く、新しい計算統語論の可能性が広がっていることから、統語論・認知科学と自然言語処理が協働する重要性を述べ、本発表を締め括った。

2.5 大規模言語モデルで読み解くヒト脳の意味情報表現（担当：堀川友慈）

近年、自然言語処理の分野で深層学習技術が発展し、さまざまな課題においてヒトと同等以上の性能を示す大規模言語モデルが登場しつつある。これに伴い、脳科学の分野では、大規模言語モデルが獲得する内部表現を利用して、ヒトの認知情報処理機能を支える脳の仕組みを明らかにしようとする試みが増えてきている。本発表では、大規模言語モデルを用いてヒトの言語機能に関わる脳の働きを調べるアプローチの有用性について議論するため、古典的な研究アプローチから最新の研究アプローチにわたって、ヒト脳の言語情報処理メカニズム研究の動向を概観した。まず、ヒト脳における言語情報処理に関連する部位を調べるための古典的アプローチとして、意味や言語構造について実験的に制御された言語刺激を提示することで、文レベルの複雑な意味を処理する脳部位を同定した研究（Fedorenko et al. 2010）や、異なる長さの意味構造をもつ言語刺激を用いて、ヒト脳における言語関連部位の階層的な反応性の違いを明らかにした研究（Lerner et al. 2010）について紹介した。その後、最新の研究アプローチの例として、大規模言語モデルの特徴量を活用して言語課題中の脳活動を精度よく予測するモデルを構築可能であることを示した研究（Schrimpf et al. 2021）について紹介し、そのような脳活動予測モデルを活用することで、脳の言語情報処理の階層性に関わる古典的研究の結果を再現可能であることを示した研究（Jain et al. 2023）や、脳活動予測を介してヒトが聞いているスピーチの意味内容を再構成可能であることを示した研究（Tang et al. 2023）について紹介した。最後に、講演者自身の研究として、ヒトの知覚・認知状態を脳から解読する「脳情報デコーディング」の技術に、大規模言語モデルを組み合わせることで、ヒトが見たり想像したりしている映像の詳細な意味情報を脳から解読する研究（Horikawa 2023）を紹介した。これらの話題を通して、近年の大規模言語モデルの発展が、ヒト脳の感覚・認知情報処理メカニズムを理解するためにいかに有用であるかについて議論を行った。

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Comparative Constructions in English and Other Languages *

Duk-Ho An
Konkuk University
Toshiko Oda
Tokyo Keizai University
Linmin Zhang
NYU Shanghai
Osamu Sawada
Kobe University

Keywords：comparatives, English, cross-linguistic data

1. Introduction

Comparative constructions have rich cross-linguistic variations. In this symposium, lecturers from Japan, China, and Korea discussed comparative constructions in English, Korean, Japanese and Chinese.

2. (Lecture 1) Reduced NP Comparatives in Korean (Duk-Ho An)

In this talk, based on An (2020), I discussed the properties of a novel type of comparative construction in Korean, called Reduced NP Comparatives (RNC). An example of RNC is given in (1).

(1) John-uy sengcek-un Mary-pota cohta.
John-GEN grade-TOP Mary-than good
'John's grade is better than Mary.'
(intended) 'John's grade is better than Mary's grade.'

A characteristic property of RNC is that the relevant NPs are not the types of elements that one would normally compare, e.g., in (1), the NPs in question are the antecedent *John-uy sengcek* 'John's grade' and the pivot *Mary*. Thus, it is a curious property of RNC that the NP that carries the comparative marker *pota* 'than' is actually incomparable with the antecedent NP. However, it is important to notice that the real comparison in (1) is between John's grade and Mary's grade, as the translation of the sentence shows.

I argued that there is a mismatch between the pivot, i.e., the element that carries the comparative marker *pota* 'than' on the surface, and the standard, i.e., the element that is compared with the antecedent with respect to the property that the predicate denotes. Thus, it is reasonable to assume that the pivot is derived from the underlying standard in some way. Given this, the gist of the analysis I proposed can be

represented as in (2).

(2) [$_{ANT}$ [$_{COR}$ John]-uy sengcek]-un [$_{STA}$ [$_{PIV}$ Mary]-~~uy sengcek~~]-pota cohta.
John-GEN grade-TOP Mary-GEN grade-than good

In a nutshell, the idea is that in (2), the standard NP undergoes deletion, leaving a subpart of it on the surface, which becomes the pivot and carries the comparative marker. I argued that which portion of the standard can be deleted and which portion of the antecedent can be the correlate all depend on the notion of (in)comparability between the relevant NPs.

One additional question that I discussed was whether the deletion operation depicted in (2) is an instance of NP-ellipsis, the availability of which has been controversial in the literature on Korean. I discussed in particular Park's (2016) proposal that NP-ellipsis is possible in Korean in some limited contexts and provided several counterarguments for her analysis, confirming my earlier proposal (An 2013) that NP-ellipsis is not available in the language. This means that the deletion operation in RNC is an independent phenomenon whose availability is specifically contingent on the formation of a comparative construction as in many other comparative constructions cross-linguistically.

3. (Lecture 2) Contextual Comparison Revisited (Toshiko Oda)

This lecture mainly discussed phrasal comparatives in Japanese whose structures are essentially identical to those in Korean presented in Lecture 1. Unlike Lecture 1, this lecture pursued a semantic analysis following a framework by Hohaus (2015), which the lecturer calls "contextual comparison."

In contextual comparison, a standard degree of comparison is not compositionally provided but rather contextually provided. In (3) in English, for instance, the standard degree of comparison is invisible. Hohaus proposed a framework in which *compared to Taro* contributes a presupposition that a relevant comparison is made with Taro. Because of the presupposition, the invisible standard degree of comparison for *higher* with an index, say d_7, is understood as Taro's test score.

(3) Compared to Taro, the test score Hanako obtained is higher.

The first assumption made in the lecture is that *Taro yorimo* in (4) is an equivalent of *compared to Taro*, because the translation of (4) by *more than* produces only odd meaning. Its truth conditions by Hohaus's framework are given in (5). The *yorimo*-phrase adds a presupposition so that the standard degree is understood as Taro's test score.

(4) Hanako-ga totta tensuu-wa Taro yorimo takai.
Hanako-NOM obtained score-TOP Taro YORIMO high
Lit. 'The score that Hanako obtained is higher than Taro.'
(Compared to Taro, the test score Hanako obtained is higher.)

(5) $\lambda s: s \in \mathrm{MIN}(\lambda s^*.\exists x_{<e>}, \exists \mu_{<s,<e,d>>}[\mu(s^*)(x) \geq \mu(s^*)(\mathrm{Taro})]).\ \mathrm{MAX}(\lambda d.$ the score that Hanako obtained is d-high in s) > g(7, <d>)

The second assumption made by the lecturer is that the smallest interpretation is chosen for μ among multiple possibilities. This is justified by Kennedy's (2007) *Interpretive Economy*, an economy principle under which non-assertion semantics must be minimized in truth conditions of a sentence.

It is yet to be seen whether the semantic analysis in this lecture and the syntactic analysis in Lecture 1 are in conflict or they can be merged into one.

4. (Lecture 3) The semantics and Pragmatics of Multi-Head Comparatives (Linmin Zhang)

In this talk (see [https://lingbuzz.net/lingbuzz/007777] for the manuscript), Zhang discusses the semantics and pragmatics of multi-head comparatives. Multi-head comparatives are considered "conceptually rather complicated" (see von Stechow 1984, Hendriks 1994), and within the existing formal semantics literature, a thorough investigation is still missing. As illustrated in (6) and (7), a multi-head comparative contains two comparative expressions and one *than*-clause. Intuitively, sentence (6) is interpreted as denoting an overall increase of consumption, while sentence (7) is interpreted as denoting an increase of productivity.

(6) More dogs ate more rates than cats ate mice.
Underlying degree QUD: how dogs consume more preys than cats do?

(7) Less land produces more corn than ever before.
Underlying degree QUD: how corn productivity is better now than before?

Zhang proposes that multi-head comparatives are the comparative form of cumulative-reading sentences. While cumulative-reading sentences mean a multi-dimensional measurement, multi-head comparatives mean a multi-dimensional comparison (e.g., along the dimensions of agent cardinality and theme cardinality for (6)).

This connection between multi-head comparatives and cumulative-reading sentences captures existing observations in the literature: our intuitive interpretation of a multi-head comparative involves (i) comparisons along multiple dimensions and (ii) mutual restrictions between agents and themes at the matrix and the *than*-clause level.

Furthermore, Zhang points out that the pragmatics in interpreting cumulative-reading sentences (see Krifka 1999, Zhang 2023) should also be carried over to multi-head comparatives. Thus, pragmatically, Zhang proposes that although a multi-head comparative involves comparisons along multiple dimensions, there is a single underlying degree question-under-discussion (QUD). Comparisons along multiple dimensions are not mutually independent, but address an interplay between comparisons along multiple dimensions, and it is this interplay that resolves the underlying degree QUD.

The formal analysis presented in this talk combines Brasoveanu (2013)'s work on cumulative-reading sentences and Zhang and Ling (2021)'s work on comparatives and is implemented within a dynamic semantics framework. In particular, the multi-dimensional comparisons are considered tests in dynamic semantics, applied after the selection of maximally informative discourse referents involved in

sentence interpretation.

The existence of multi-head comparatives in human language sheds light on how human cognition deals with complex mathematical operations that involve measurement and comparison along multiple dimensions. The analysis developed in the current work suggests a new degree-QUD-based perspective on informativeness and how this perspective explains our intuition in sentence interpretation. Zhang thanks Takeo Kurafuji and Yusuke Yagi for their constructive comments and questions after the talk.

5. (Lecture 4) The Ambiguous Negative Comparison: With Special Reference to the Japanese *Kurabe Mono-ni Nara-nai* 'Cannot be Compared' (Osamu Sawada)

In this paper, Sawada discusses the semantic ambiguity of the Japanese comparative expression *kurabe mono-ni nara-nai* 'cannot be compared'. *Kurabe mono-ni nara-nai* 'cannot be compared' is different from ordinary comparatives in that its meaning is ambiguous concerning whether, in terms of a certain scale, the subject *x* is much higher or much lower than the object *y*. While example (8) conveys that Siberia (subject) has a much **higher** degree of coldness than *Hokkaido* (object), which leads to a "much more" reading, example (9) conveys that Taro (subject) has a much lower degree of strength than a professional (object), which results in a "much less" reading:

(8) Samu-sa-ni kanshite-wa Siberia-wa Hokkaido-to-wa kurabe mono-ni
cold-ness-to regarding-TOP Siberia-TOP Hokkaido-to-TOP compare thing-to
{nara-nai /*naru}.
can.be-NEG /can.be
'lit. Regarding the coldness, Siberia cannot be compared to Hokkaido.'
("*Much more" reading*: Siberia >!!$_{cold}$ Hokkaido)

(9) Taro-wa (ama-de tsuyoi-to i-ttemo) puro-no
Taro-TOP amateur-in strong-that say-even.if professional-GEN
senshu-to-wa kurabe mono-ni {nara-nai /*naru}.
player-with-TOP compare thing-to can.be-NEG /can.be
'lit. Even though Taro is a strong amateur, he cannot be compared to professional players.'
("*Much less" reading*: Taro <!!$_{strong}$ professional)

Sawada argued that the two kinds of intensified meaning can be derived from the interaction with negation and the notion of category. More specifically, he claimed that *kurabe mono-ni naru* (without negation) presupposes that a target and a standard belong to the same comparison class (e.g., Klein 1980, 1991; Kennedy 2007; Solt 2009) and entails that they belong to the same category and can be compared in terms of a scale *S*. In the literature, the notion of comparison class is often discussed in the semantics of relative gradable adjectives, such as *tall*, but Sawada claims that it is also involved in *kurabe mono-ni nara-nai* to explain the fact that if a target and a standard are not the same kind (e.g., a tree vs. a human in terms of height), the sentence with *kurabe mono-ni nara-nai* becomes unnatural.

As for the notion of category, Sawada claimed that it plays an important role in creating a gap between a target and a standard. If *x* and *y* are in the same category, then they belong to the same group

in terms of level. By adding negation, the sentence entails that *x* and *y* are not in the same category (although they are in the same comparison class). This induces a large gap between *x* and *y*. Crucially, whether *x* or *y* is much higher in terms of degree depends on world knowledge. Example (8) is interpreted as a "much more" reading because Siberia is located north of Hokkaido, and example (9) is interpreted as a "much less" reading because Taro is being compared to a professional. This paper shows that natural language can convey a meaning of comparison without explicitly representing a relative relationship.

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New Emerging Prospects in the Generative Tradition*

Yosuke Sato
Tsuda University
Hiromune Oda
The University of Tokyo
Yuta Tatsumi
Meikai University
Yusuke Yagi
University of Connecticutt

Keywords：generative typology, syntactic vs. semantic reconstruction, exceptional case marking in Japanese, interspeaker variation

1. Introduction

This workshop revisited insights regarding data types, research methods and modes of inquiry that have long been overlooked in the literature to identify key emerging prospects that will characterize the future direction of the generative enterprise. Talks by four speakers showcased a different selection of deep insights from the prior literature and show how they keep enlightening their own latest research. Their talks were designed not only to show what is so exciting about their own research but also to include practical suggestions on how new generations of researchers in the generative program can go about doing fruitful research. Below is a concise summary of the talks.

2. Invitation to Generative Typology: What's Interesting Is What's Impossible

Hiromune Oda discussed how to conduct typological research in generative linguistics. Many impossible properties of language were discovered in the study of English in the early generative literature, but it has been observed that there are actually crosslinguistic variations in impossible properties of language, which are called parameters in the generative tradition. However, the parameters were discussed based on a handful of languages in many cases, mainly from the perspective of Indo-European languages. In order to have a more comprehensive picture of what is (im)possible in language, however, we need to take a wider range of languages into consideration. Oda talked about a way to conduct typological studies in generative linguistics, i.e., generative typology. Specifically, he introduced Baker and McCloskey's (2007) Middle Way approach, in which one picks, say, 20 languages from different language families and establishes a descriptive generalization in the form of implicational hierarchy; if a language has X, the language also has Y. Thus, generative linguistics, which is mainly concerned with impossible grammars,

can deal with implicational hierarchy, which can be deduced from syntactic mechanisms proposed in the generative literature, a point he illustrated with his typological generalizations regarding extraction out of coordinate structures and the availability of Japanese-type indefinite pronouns. The analytic results show that typological studies can shed light on generative linguistics, and vice versa.

3. What does Semantics Tell Us about Scope and Reconstruction?

Yusuke Yagi argued that Japanese scrambling can be interpreted by *semantic reconstruction* (Cresti 1995; Rullman 1995). When a syntactic object α moves to a higher position, semantic reconstruction of α is motivated when (i) the scope of α is reconstructed, and (ii) *syntactic reconstruction* is banned for an independent reason (Lechner 1999; Keine & Poole 2018). One such configuration is observed in VP-scrambling. The in-situ position of VP-scrambling is known to be an *anti-reconstruction position* (Tada & Saito 1991), to which syntactic reconstruction is impossible. However, the scope of a VP-scrambled element can be reconstructed, as shown in (2), supporting the process of semantic reconstruction. Another such configuration is obtained when syntactic reconstruction would cause a condition C violation, as in (2), where the ∀> ∃ reading must be due to semantic reconstruction.

(1) Taroo-ga nanika-o$_i$ dono-gakusei-ni-mo t_i miseta.
Taro-Nom something-Acc every-student-Dat-all showed
'Taro showed every student something.' (∀>∃, ∃>∀)

(2) [Taroo$_j$-ga kaita ronbun-no doreka]-o$_i$ kare$_j$-wa dono-gakusei-ni-mo t_i miseta.
Taro-Nom wrote paper-Gen some-Acc he-Top every-student-Dat-all showed
'Some paper(s) Taro wrote, he showed to every student.' (∀>∃, ∃>∀)

The observations above motivate semantic reconstruction for scrambling in Japanese. It has an interesting methodological import: the scope of a scrambled element is irrelevant to its syntactic height. The robustness of semantic reconstruction also suggests that it is less constrained than previously thought, which in turn calls for (re)investigation of the interaction between movement and its interpretation.

4. Cross-Clausal A-Dependencies in Japanese: An Encouragement of Research with Self-Motivation

Yuta Tatsumi's talk concentrated on Japanese Exceptional Case-Marking (ECM)/Raising-to-Object (RTO) constructions. Researchers have offered different mechanisms of cross-clausal case licensing. This issue has also been investigated in languages other than Japanese. However, there are some other issues that have received less attention in the field. This talk discussed those unpopular issues and highlighted the importance of looking at things from different angles with fresh eyes, especially for new generations of researchers. The first issue discussed was the semantics of Japanese ECM/RTO constructions. It has been observed that interrogative complements disallow exceptional case-marking in Japanese (Takemura 1975, Tomoda 1976). Previous studies have focused mainly on exceptional case-marking with affirmative *to*-complements, and the anti-interrogative property of Japanese ECM/RTO has been underestimated. Takemura and Tomoda also reported that ECM/RTO constructions have a semantic import not observed in non-ECM/RTO counterparts. In addition to the semantic issues, it is

still unknown whether there are so-called ECM/RTO predicates or ECM/RTO complements as a natural class in Japanese. In this talk, Tatsumi made two observations, based on data including more than one hundred clause-embedding predicates. Firstly, ECM/RTO in Japanese is generally allowed with clause-embedding predicates that can take *to*-complements. Secondly, *to*-complements that freely have an overt nominative subject allow ECM/RTO, regardless of the case-marking pattern of the matrix predicate. These observations, he concluded, led to new questions about the source of exceptional case-marking.

5. Embracing and Encouraging Diversity: Syntactic Diglossia and Interspeaker Variation

Yosuke Sato's talk discussed the issue of interspeaker variation. Many arguments in the generative syntactic literature over the grammaticality of certain expressions constructions in particular languages often result in futility, frustration and disappointment, to which the two most common reactions the *majority-vote* method or the *exclusionist* method. Sato argued that this largely uncharted territory is exactly where new generations of syntacticians may find gold nugget, for it offers an extremely rich source for constructing a theory of possible structured variation. More specifically, following Han et al. (2007), Sato proposed that, given a finite set of UG-guided hypotheses consistent with the input text from the primary linguistic data, a learner may pick up any one of the hypotheses, ending up acquiring a partially different grammar from his/her neighbor(s) in the presumed same I-language spoken in the allegedly homogenous linguistic community. Sato demonstrated how this proposal yields an illuminating account of interspeaker variation concerning the acceptability of so-called particle stranding ellipsis in Japanese based on his survey with 120 Japanese speakers, which indicates that there is a population split among Japanese speakers regarding the syntactic accessibility of this construction.

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Language Variation in Noun Phrases and Its Theoretical Considerations*

Jun Kawamitsu
Graduate School of Kyushu University
Yuya Sakumoto
Nagasaki University / Graduate School of Kyushu University
Nozomi Moritake
Graduate School of Kyushu University / JSPS Research Fellow

Keywords：Labeling, noun phrases, phase, Case

1. Introduction

Our attention to this workshop was dedicated to language variation in noun phrases. Our discussion consisted of (i) labeling within noun phrases, (ii) the (non-)phasehood of noun phrases, and (iii) genitive Case assignment in child English and Japanese.

2. Elements Affecting Labeling

Jun Kawamitsu focused on the articulated structure of noun phrases (e.g. Watanabe (2006)) and proposed that some of the functional heads affect the labeling mechanism proposed by Chomsky (2013). Following Saito's (2016) work that a case marker in Japanese functions as an anti-labeling device, he suggested that the extensive phrasal movement within a noun phrase can be deduced if the moved phrase is case-marked. He showed that the proposed analysis is supported by the distribution of numeral quantifiers and provided the possible derivation of numeral quantifier float in Japanese. In addition, he argued that the proposed analysis could be strengthened in that it correctly expects the asymmetry between subject- and object-oriented numeral quantifiers (e.g. Miyagawa (1989)).

Kawamitsu gave further consideration to the discussion regarding Case-less languages that are commonly assumed to lack phi-features as well as Case, such as Mandarin, Cantonese, Vietnamese, Hmong, and Bangla. What these languages have in common is that the subject nominal is to be definite/specific (e.g. Cheng and Sybesma (1999) and Simpson *et al*. (2011)). Based on this nature of the subject, he pursued the possibility that definite/specific items in these languages function as an anti-labeling device and suggested that labeling of the subject position, where the set is formed by {DP, TP}, does not fail since the label is detected as TP due to the anti-labeling property of D.

3. Consideration of Validity of DP Phases

Yuya Sakumoto investigated the validity of analyses on DP phases in the literature (e.g. Oba (1999),

Citko (2014)). Numerous researchers argue that DPs are phases (e.g. see Citko (2014) for an overview), but Sakumoto casted doubt on the validity and pointed out that the phasehood of DP phases depends on phenomena. For example, all DPs are phases if they are determined by proposition (Oba (1999), Chomsky (2000), among others). Radford (2004) argues that indefinite DPs are not phases from the perspective of DP islands because extraction out of indefinite DPs is possible, but impossible out of definite DPs (cf. Oba (1999), among others). Sakumoto further investigated DP phases in terms of binding, ellipsis and successive-cyclic movement (e.g. Citko (2014)). In this manner, Sakumoto examined the validity of DP phases and pointed out the problems (cf. Citko (2014), among others).

Sakumoto further considered phases (cf. Sakumoto (2023), among others), and briefly explored a relation between DP phases, successive-cyclic movement and inflection (cf. Richards (2012), Chomsky (2020), among others). Sakumoto focused on cross-linguistic data such as Hungarian (e.g., Szabolcsi (1983), Citko (2014)) and discussed the possibility that phasehood of DPs can be different among languages (cf. Citko (2014), Chomsky (2020), among others).

4. An Analysis of Genitive Subjects

Nozomi Moritake explored the so-called 'erroneous' genitive Case-marking on subjects observed in child English and Japanese. What is of interest to us is that English- and Japanese-speaking children at around two to three years of age sometimes produce genitive subjects in root contexts, although Egnlish- and standard Japanese-speaking adults would not allow genitive subjects to appear in those contexts (e.g. Schütze and Wexler (1996) and Suzuki (2001)).

Nishioka (2022) observes that genitive subjects can surface in root clauses in Kumamoto Japanese (KJ), a dialect spoken in southwestern part of Kyushu region, arguing that the source of genitive Case is a [+N] feature on C along the lines of analysis suggested by Hiraiwa (2005). Based on Sugisaki and Snyder's (2003) analysis of default parameter settings, Moritake postulated that a C head with the [+N] feature, i.e. the C head available in KJ, is analyzed as one of the default types of C in Universal Grammar. Following Moritake's (2022) proposal that Japanese employs upward Agree between an unvalued Case feature ([*u*Case]) on a DP and a valued Case feature like [NOM(inative)] or [ACC(usative)] on phase heads, Moritake argued that in matrix clauses, upward Agree between [*u*Case] on a DP and [+N] on C is responsible for genitive Case assignment and is available not only for Japanese-speaking children but also for English-speaking children, insofar as unvalued phi-features are absent on phase heads. To the extent that this analysis succeeds, Moritake can shed light on one of the default parameters of languages; in particular, the default feature specification on C.

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[II]

Sixteenth International Spring Forum

The Reconstruction Effects in the Restrictive Relative Clauses in NP/DP Languages*

Takato Yamamoto
Kyushu University

Keywords：restrictive relative clauses, reconstruction effects, Form Copy, NP languages

1. Introduction

This paper deals with two contrasts regarding the interaction between determiners that a relative head (= RH) has and reconstruction effects of an RH in restrictive relative clauses (= RCs). The first contrast is noted in Aoun and Li (2003), who argue that a type of determiners possessed by an RH affects whether the RH can show reconstruction effects. Building on the work of Carlson (1977), Aoun and Li (2003) distinguish the two types of determiners listed in (1) and observe the contrast as shown in (2).

(1) a. Type I determiners : the, that, this, my (possessive), every, any, what, all, most, etc.
b. Type II determiners: a, several, many, eleven (numeral), few, lots of, some, etc.
(Carlson (1977) and Aoun and Li (2003))

(2) a. I know the story about himself$_1$ that no student$_1$ would tell to the class.
(Aoun and Li (2003: 117))
b. * I know a story about himself$_1$ that no student$_1$ would tell to the class.
(Aoun and Li (2003: 116))

In (2a) and (2b), the reflexive *himself* is intended to be a variable bound by the subject *no student* in the RC. The bound variable construal of the reflexive is allowed when the RH contains the Type I determiner *the* in (2a). However, when the RH has a Type II determiner *a* in (2b), the reflexive cannot be bound by the subject in the RC. In a nutshell, the first contrast can be described as follows:

(3) Reconstruction effects of an RH emerge when the RH has a Type I determiner while they do not arise when the RH has a Type II determiner.

On the other hand, items in languages like Croatian that correspond to Type I determiners in English behave as if they are Type II determiners. According to Gračanin-Yuksek (2013), Croatian restrictive RCs in (4) below do not permit the reflexive *svog* 'self's' to refer to the subject *Iva* in the RC, even though the RH has svakog 'every,' whose English counterpart is a Type I determiner.

(4) * Jan$_1$ vali svakog svog$_{1/*2}$ psa što (ga) je Iva$_2$ dovela na
Jan$_1$ loves every self's$_{1/*2}$ dog that (him.Acc) Aux.3Sg Iva$_2$ brought on
izložbu [Croatian]
exhibition
'Jan$_1$ loves every one of his$_{1/*2}$ dogs that Iva$_2$ brought to the exhibition.'

(Gračanin-Yuksek (2013: 40))

Comparing (2a) and (4), we can describe the second contrast as follows:

(5) In contrast to languages like English, reconstruction effects of an RH are unavailable for restrictive RCs in languages such as Croatian even when the RH has a Type I determiner-like element.

This paper aims to provide an account of the two contrasts in (3) and (5) by proposing derivations of restrictive RCs based on the Form Copy by Chomsky (2021).

The rest of this paper is organized as follows: Section 2 introduces the theoretical assumptions adopted in this paper, and Section 3 reviews the analysis of the contrast in (2) developed by Aoun and Li (2003). In Section 4, we propose derivations of restrictive RCs and demonstrate that our analysis can account for the two contrasts in (3) and (5). Finally, Section 5 concludes this paper.

2. Theoretical Background

2.1. The Framework of Chomsky (2021)

Chomsky (2021) argues that in human language computation, the present state of derivation, called the "workspace," is only accessible to the next operations whereas the history of derivation cannot be accessed (Markovian property). In other words, Chomsky eliminates the computational memory device on the applied syntactic operations to reach the goal of the Strong Minimalist Thesis. Although this property can reduce the burdens on the computational system of human language, it is incompatible with the copy theory of movement, proposed by Chomsky (1993). According to this theory, a copy relation is created by movements/Internal Merge (IM) in syntax and it can be identified based on the stored information about movements/IM. However, the Markovian property disallows the applied operations to be memorized, which in turn makes it impossible to know whether the identical elements are in a copy relation or not.

Instead of keeping the copy theory of movement, Chomsky (2021) proposes Form Copy, a syntactic operation that assigns a copy relation to the identical inscriptions standing in a c-commanding relation. Form Copy applies at a derivational unit called a phase, which is generally assumed to be CP and v*P (e.g. Chomsky (2000 et seq)). Since a copy relation is no longer intrinsic to IM, it can also be assigned to identical inscriptions independently introduced by different applications of External Merge (EM). Consequently, Form Copy allows two types of copy relations: the one corresponding to the traditional movement/IM relation (IM-Copy) and the one between structurally identical elements that do not stand in an IM-relation (Markovian-gaps (= M-gaps)).[1] Moreover, Chomsky (2021) claims that the assignment of copy relations takes place in accordance with the Duality of Semantics in (4) and (5).

(6) EM is associated with θ-roles and IM with discourse/information-related functions.

(Chomsky (2021: 18))

(7) For A-positions, EM and EM alone fills a θ-position. (Chomsky (2021: 30))

According to (6), EM is necessary for the θ-role assignment while IM is required to create the operator-variable relation. (7) more specifically describes that only an element introduced by EM can occupy a θ-position. In other words, (7) means that the copy relation must be an M-gap when the higher copy is in a θ-position. The ways of assigning the copy relations are schematized in (8) below (Throughout this

paper, dotted lines are used to represent M-gaps while solid lines are employed to show IM-Copies).

(8) a. John tried [~~John~~ to win] (Chomsky (2021: 18)), slightly modified)

M-gaps

b. John seems ~~John~~ to win

IM-Copy

In (8a), the two inscriptions of *John* occupy θ-positions, where they receive θ-roles from the verbs *win* and *try*. Since the higher *John* fills a θ-position in the matrix clause, the copy relation between the two *John*s is an M-gap. As for IM-Copy, Chomsky (2021) argues that IM-Copy is assigned whenever a higher object within two identical elements to be assigned a copy relation does not occupy a θ-position.[2] Therefore, the copy relation between the two inscriptions of *John* in (8b) is IM-Copy because the higher *John* is not in a θ-position.

Chomsky (2021) claims that Form Copy can explain the contrast in (9) by distinguishing M-gaps and IM-Copies as stated in (10):

(9) a. one interpreter each seems [to have been assigned ~~one interpreter each~~ to the diplomats]

IM-Copy (Chomsky (2021: 22))

b. * one interpreter each [$_{v*P}$ ~~one interpreter each~~ tried [to be assigned ~~one interpreter each~~

to the diplomats]] IM-Copy M-gap (Chomsky (2021: 22))

(10) IM-Copy induces the reconstruction effects while an M-gap cannot.

In (9a), the subject *one interpreter each* must be interpreted at the base position for the distributive reading. The relevant interpretation is available in (9a) where the two inscriptions of *one interpreter each* are assigned IM-Copy. In contrast, the two lower counterparts in (9b) are merged at θ-positions to receive θ-roles from the verbs *try* and *assign*. Thus, the copy relation between them is an M-gap. It makes the lowest copy of the subject unavailable for the distributive reading, which causes (9b) to be ungrammatical.

Hayashi (2022) develops the descriptive rule in (10) into the simpler one in (11) below, by reconsidering the contrast in (9):

(11) The interpretive systems can only trace uniform operations. (Hayashi (2022: 109))

(11) can straightforwardly explain the contrast in (9). IM-Copy in (9a) enables the interpretive system to trace the lowest copy of *one interpreter each*. Unlike the representation in (9a), there are two different copy relations in (9b) as explained above, which disallow the lowest copy to be traced for licensing the distributive reading. Given the theoretical simplicity, this thesis adopts the interpretive system in (11).[3]

Finally, we explain the recent perspective on adjunction, or Pair-Merge, since Chomsky (2004). Pair-Merge is different from the traditional Merge, called Set-Merge. Set-Merge takes the two elements, α and β, then forms the set {α, β} while Pair-Merge creates the ordered pair <α, β> from α and β, where α is adjoined to β. In this thesis, we refer to Set-Merge as Merge or Set-Merge, whereas we keep using Pair-Merge to differentiate it from Set-Merge. In the ordered pair <α, β>, α is assumed to be put on a

separate plane. Moreover, Chomsky (2004) argues that the adjunct α in a separate plane does not receive any θ-roles from the primary plane while the ordered pair <α, β> has the same one as β. In other words, the ordered pair <α, β> and β are not distinct in terms of the θ-role assignment. In addition, we also assume with Chomsky (2021) that Form Copy can apply to syntactic objects in a separate plane.

2.2. Types of Determiners

This section reviews the distinction between Type I and Type II determiners in more detail. Since Milsark (1974), many previous studies have recognized two or more types of determiners (Milsark (1974), Carlson (1977), Hudson (1989), Takahashi (1999), Aoun and Li (2003) among others). One of the differences among determiners is the environment where they can appear. For example, the post-copular position of existential sentences cannot be occupied by the definite article *the*, *most*, and *every* and something like that, as illustrated in (12a, b). In contrast, that position is available for numerals such as *eleven* or the indefinite article *a*, among others shown in (12c):

(12) a. * There is {the, that, this, Mary's, every, each, any} man in the laundromat.
b. * There is {all, most} men in the laundromat.
c. There are {several, many, eleven, few, lots of, etc.} men in the laundromat.
(Carlson (1977: 522))

Following Carlson (1977) and Aoun and Li (2003), we refer to the items bracketed in (12a, b) as Type I determiners while we refer to the counterparts in (12c) as Type II determiners. As for further distinctions between Type I and Type II determiners, Higginbotham (1987) claims that the Type II determiner in (13a) can be interpreted as predicative while the Type I determiner in (13b) cannot:

(13) a. The apostles are twelve. (Higginbotham (1987: 48))
b. * The men are all. (Higginbotham (1987: 68))

Considering the characteristics of Type II determiners shown in (12)-(13), Takahashi (1999) claims that these determiners are adjectives (see also Bowers (1987)).[4] Given the adjectival property of Type II determiners, we suggest that they are introduced through Pair-Merge.[5]

The distinction between Type I and Type II determiners is also supported by "specificity conditions" suggested by Fiengo and Higginbotham (1981), which are represented by the following contrasts:

(14) a. Who did you buy pictures of __? (Bowers (1987: 48))
b. * Who did John buy John's/those/the pictures of __? (Bowers (1987: 48))
(15) a. Who did you buy a/three/many picture(s) of __? (Bowers (1987: 49))
b. * Who did you buy each/every/all picture(s) of __? (Bowers (1987: 49))

The extraction is possible from a nominal phrase with a Type II determiner while it is impossible from one with a Type I determiner. However, the contrasts in (13)-(15) do not hold for some languages such as Serbo-Croatian. For example, the possessive moja 'my,' whose English counterpart is a Type I determiner, can occur in the predicate position in a copular sentence as shown in (16).

(16) Ova knjiga je moja [Serbo-Croatian]
*this book is my (Bošković (2008: 106))

Furthermore, it is possible to extract a wh-phrase from nominal phrases that have what corresponds to a Type I determiner in English:

(17) O kojem piscu je pročitao [svaku knjigu [Serbo-Croatian]
about which writer is read every book
sve knjige/ (tu) tvoju knjigu __]?
all books/ that your book
'*About which write did he read every book/all books/this book of yours?'

(Bošković (2008: 107))

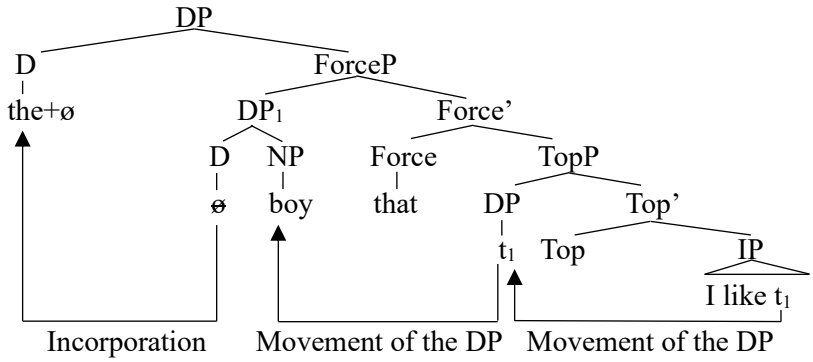
Considering such syntactic differences, Bošković (2008, 2012) distinguishes languages like Serbo-Croatian, named NP languages, from other languages such as English, called DP languages. Moreover, Bošković (2008, 2012) argues that Type I determiner-like elements in NP languages are adjectives and adjoined to NPs.[6] Following Bošković (2008, 2012), we assume the NP and DP language distinction and that adjectival determiners in NP languages undergo Pair-Merge in entering into derivations.

3. Hybrid Analysis of Restrictive Relative Clauses in Aoun and Li (2003)

Aoun and Li (2003) claim that there are two derivational ways for restrictive RCs and that one of these derivations brings about reconstruction effects of RHs while the other does not. Aoun and Li (2003) adopt a raising structure developed by Schachter (1973) and refined by Kayne (1994) and Bianchi (1999) as the first derivation. Following Bianchi (1999), Aoun and Li (2003) postulate a determiner peculiar to RCs, named the (null) relative determiner, and assume that the relative determiner must be licensed through incorporation into a Type I determiner outside an RC. With this assumption, Aoun and Li (2003) claim that a complex syntactic object comprising of an RH and the relative determiner moves from a base position via Spec-Top to Spec-Force within an RC. Then, a Type I determiner is merged with ForceP, and the null relative determiner is incorporated into the Type I determiner. With (18a) as an example, the relevant derivation is schematized as (18b) below:

(18) a. the boy that I like

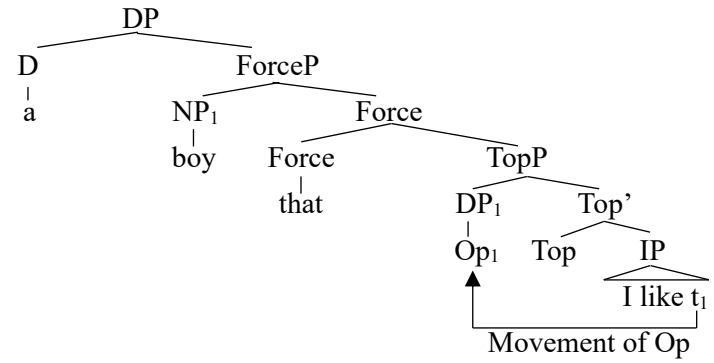
b.



Following the widely accepted consensus in the literature, Aoun and Li (2003) argue that the derivation in (18b) can bring about reconstruction effects of the RH because the RH moves within the RC. What is important is that since the null relative determiner must be licensed by incorporation into a Type I determiner, the derivation in (18b) is unavailable for a restrictive RC whose RH has a Type II determiner. Instead, this sort of restrictive RC is derived in another way. With (19a) as an example, the relevant derivation is schematically illustrated in (19b) below, where the RH is base-generated at Spec-ForceP whereas the null operator moves to Spec-TopP within the RC:

(19) a. a boy that I like

b.



Since (19b) does not involve the relative determiner, it is available even for a restrictive RC whose RH has a weak determiner. What is crucial in (19b) is that the RH is base-generated at Spec-ForceP, and the RC does not have lexical content of the RH. Consequently, (19b) does not induce reconstruction effects of the RH, whereby the effects are absent in a restrictive RC whose RH has a Type II determiner.

Although the proposals by Aoun and Li (2003) seem to explain the contrast in (2), there are some problems. First, the assumption of the relative determiner dedicated to an RC is unfavorable under the recent Minimalist framework, where the goal is to achieve descriptive and explanatory adequacy by excluding assumptions about the language faculty intrinsic to the human species from accounts on empirical facts as much as possible. In other words, an analysis without recourse to assumptions peculiar to a certain construction should be pursued. Second, it is unclear how the proposed derivations in (18) and (19) account for the cross-linguistic difference described in (5). Recall that a restrictive RC in languages like Croatian does not allow an RH to exhibit reconstruction effects even when the RH has a Type I determiner. The relevant example is repeated here:

(20) * Jan$_1$ vali svakog svog$_{1/*2}$ psa što (ga) je Iva$_2$ dovela na
Jan$_1$ loves every self's$_{1/*2}$ dog that (him.Acc) Aux.3Sg Iva$_2$ brought on
izložbu [Croatian]
exhibition
'Jan$_1$ loves every one of his$_{1/*2}$ dogs that Iva$_2$ brought to the exhibition.' (= (4))

4. Proposals

4.1. Derivations of Restrictive Relative Clauses in DP Languages

In this section, we propose derivations of restrictive RCs in DP languages. Recall that Type II determiners are adjectives, and they are introduced into derivations through Pair-Merge (see Section 2.2). In contrast, Type I determiners enter into derivations via Set-Merge. Under these assumptions, restrictive RCs that have RHs with a Type I determiner are derived in (21a) or (21b), whereas restrictive RCs that have RHs with a Type II determiner are derived in (22) below. Note that D_I in (21) means a Type I determiner while D_{II} in (22) represents a Type II determiner.

(21) Derivations of restrictive RCs that have an RH with D_I

a. $\{v^*, \{_{VP}\ V, <_{DP}\ \{D_I, RH\}, \{_{CP}\ \{D_I, RH\}\ \{C, \{\ldots\ \{D_I, RH\}\ \ldots\}\}\}>\}\}$

M-gap IM-Copy

b. $\{v^*, \{_{VP}\ V, \{_{DP}\ D_I, <_{NP}\ RH, \{_{CP}\ RH, \{C, \{\ldots RH\ldots\}\}\}>\}\}\}$

IM-Copy IM-Copy

(22) Derivations of restrictive RCs that have an RH with D_{II}

a. $\{v^*, \{_{VP}\ V, <_{NP} <D_{II}, RH>, \{_{CP} <D_{II}, RH> \{C, \{\ldots <D_{II}, RH>\ldots\}\}\}>\}\}$

M-gap IM-Copy

b. $\{v^*, \{_{VP}\ V, <_{NP}\ D_{II}, <_{NP}\ RH, \{_{CP}\ RH, \{C, \{\ldots RH\ldots\}\}\}>>\}\}$

M-gap IM-Copy

(21a) and (21b) are minimally different regarding the point when determiners are merged. D_I in (21a) is merged with the RH inside the RC while D_I in (21b) undergoes EM with the complex $<_{NP}$ RH, $\{_{CP} \ldots\}>$. The same difference is true for the derivations in (22): D_{II} undergoes Pair-Merge with the RH inside the RC in (22a) while D_{II} in (22b) is pair-merged with the complex $<_{NP}$ RH, $\{_{CP} \ldots\}>$ in (22b). $\{D_I, RH\}$ in (21a), $<D_{II}, RH>$ in (22a), or the RH in (21b) and in (22b) is base generated at the argument position within the RC and raised to Spec-CP via Spec-v*P.[6] Upon the completion of the CP phase, Form Copy applies to the middle and lowest inscriptions of $\{D_I, RH\}$ in (21a), $<D_{II}, RH>$ in (22a), or the RH in (21b) and (22b). The lower copy relation in (21a), (21b), (22a), or (22b) is IM-Copy because the higher inscription of $\{D_I, RH\}$, $<D_{II}, RH>$ or the RH within that relation occupies the non-θ-position, Spec-CP. Then, $\{D_I, RH\}$ in (21a), $<D_{II}, RH>$ in (22a), or the RH in (21b) and (22b) undergoes Pair-Merge with CP. The verbal head V and the phase head v* enter into the derivations in turn through EM to reach the completion of the v*P phase. Form Copy assigns the copy relation between the highest and middle inscriptions of $\{D_I, RH\}$ in (21a), $<D_{II}, RH>$ in (22a), or the RH in (21b) and (22b). Recall that we assume in Section 2.1 that β and <α, β> are not distinct in terms of the θ-role assignment. Under this assumption, the highest inscription of $\{D_I, RH\}$ in (21a) or $<D_{II}, RH>$ in (22a) is regarded as occupying the θ-position, where the syntactic object receives a θ-role from the matrix V. Moreover, the highest RH in (22b) is also taken as occupying the θ-position because $<_{NP}\ D_{II}, <_{NP}$ RH, $\{_{CP} \ldots\}>>$, which is merged with the matrix V in (22b), is non-distinct from the RH in terms of the θ- assignment. Therefore, the copy relation between the highest and middle inscriptions of $\{D_I, RH\}$ in (21a), $<D_{II}, RH>$ in (22a), or the RH in (22b) is an M-gap. Since the other copy relation in (21a) and (22a, b) is IM-Copy, reconstruction effects of the RH are not induced by the derivations in (21a) and (22a, b) under the interpretive system in (11). On the other hand, the copy relation between the highest and middle inscriptions of the RH in (21b) is IM-Copy due to the highest one filling a non-θ-position. Instead, the matrix V is merged with the syntactic object $\{_{DP}\ D_I, <_{NP}$ RH, $\{_{CP} \ldots\}>\}$, which is distinct from the RH in terms of the θ-role assignment because D_I is not pair-merged in (21b). Consequently, reconstruction effects of the RH result from the derivation in (21b) because the copy relations among the RHs are uniformly IM-Copy.

The proposed derivation can directly explain the contrast in (2) repeated in (23) below:

(23) a. I know the story about himself$_1$ that no student$_1$ would tell to the class. (= (2a))

b. * I know a story about himself$_1$ that no student$_1$ would tell to the class. (= (2b))

Under our analysis, the absence of the reconstruction effect in (23a) is attributed to an adjective property of Type II determiners. However, reconstruction effects are available for the restrictive RCs whose RH has a Type I determiner, as shown in (23b), because they have the derivation in (21b).

So far, we have accounted for the distinction between Type I and Type II determiners concerning reconstruction effects of RHs. However, as we have pointed out in Section 3, the Type I determiner-like element in NP languages is incompatible with reconstruction effects of RHs. Therefore, the next section turns to the lack of reconstruction effects of RHs in Croatian restrictive RC.

4.2. Derivations of Restrictive Relative Clauses in NP Languages

The remaining problem is the absence of reconstruction effects of RHs in Croatian restrictive RCs in (3), repeated in (24) below. The reflexive *svog* 'self's' cannot refer to the subject *Iva* in the RC despite the RH having *svakog* 'every,' whose English counterpart is a Type I determiner.

(24) * Jan$_1$ vali svakog svog$_{1/*2}$ psa što (ga) je Iva$_2$ dovela na
Jan$_1$ loves every self's$_{1/*2}$ dog that (him.Acc) Aux.3Sg Iva$_2$ brought on
izložbu [Croatian]
exhibition
'Jan$_1$ loves every one of his$_{1/*2}$ dogs that Iva$_2$ brought to the exhibition.' (= (3))

Given that Croatian is an NP language, our analysis can account for the absence of the reconstruction effect in (24) under the assumption that Type I determiner-like elements in NP languages are adjectives (see Section 2.2). The derivations of restrictive RCs in NP languages are schematized in (25) below:

(25) Derivations of restrictive RCs that have an RH in NP languages

a. {v*, {$_{VP}$ V, <$_{NP}$ <D, RH>, {$_{CP}$ <D, RH> {C, {… <D, RH>…}}}>}}

M-gap IM-Copy

b. {v*, {$_{VP}$ V, <$_{NP}$ D, <$_{NP}$ RH, {$_{CP}$ RH, {C, {…RH…}}}>>}}

M-gap IM-Copy

We omit the detailed explanation of (25) because (25a) and (25b) proceed in the same ways as (22a) and (22b), which are the derivations for restrictive RCs whose RHs have a Type II determiner in DP languages. The higher copy relation in (25a) or (25b) is an M-gap, while the lower one is IM-Copy for the same reasons as the cases in (22a, b). Consequently, the interpretive system cannot trace the lowest inscription of <D, RH> or the RH in (25), and hence reconstruction effects of RHs are not available for restrictive RCs in NP languages such as Croatian.

5. Conclusion

In this paper, we proposed derivations of restrictive RCs based on Form Copy by Chomsky (2021) and demonstrated that our proposals can account for the (un)availability of reconstruction effects of RHs in terms of copy relations. Under our analysis, the absence of reconstruction effects of RHs stems from an adjectival property of weak determiners in DP languages and Type I determiner-like elements in NP languages. Moreover, our analysis is compatible with the recent Minimalist framework because it does

not have to assume any relations other than copy relations.

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NOTES

[1] Chomsky (2021) uses "Markovian-gaps (= M-gaps)" for a copy relation between structurally identical elements that are not in an IM relation while he refers to a copy relation formed by IM as just an IM-configuration. This paper keeps the use of M-gaps and employs IM-Copy for an IM-configuration just for simplicity.

[2] Chomsky (2021) claims that IM is more economical than EM concerning the search domain: although IM searches only within a workspace, EM looks at the lexicon as well as a workspace. Due to this efficiency, IM-Copy is selected whenever M-gap is not required by (6) or (7).

[3] As for the empirical preference of the interpretive system in (11), please refer to the proposals of Hayashi (2022), where he demonstrates that (11) can account for the contrast between Japanese short- and long-distance restrictive RCs regarding reconstruction effects of RHs.

[4] In (1b), quantifiers like *many* or *few* and plural indefinite *Ø* are categorized into Type II determiners. However, Milsark (1994) distinguishes these quantifiers and the plural indefinite from Type I and Type II determiners and claims that they belong to a third type of determiner. What is characteristic of these quantifiers is that they have ambiguous interpretations between adjectival reading and proportional reading. For example, *many* in (i) can express the cardinality of dogs (e.g., 60 dogs) or the proportion of the dogs (e.g., 7 dogs out of 10 dogs).

(i) Many dogs are in the yard. (Takahashi (1999: 403))

On the other hand, the two readings in (i) can be disambiguated into the cardinal reading when *many* is distressed. Moreover, only the cardinal reading is available when the third type of determiners appears in the post-copular position of existential sentences as in (ii), which is unavailable for strong determiners.

(ii) There are many people at the party. (Takahashi (1999: 403))

Carlson (1977) and Aoun and Li (2003) focus on the cardinal reading of the quantifiers like *many* and the plural indefinite. Although we follow Carlson (1977) and Aoun and Li (2003) in this respect, it requires further studies to identify whether their proportional reading allows RHs to display reconstruction effects in restrictive RCs. Therefore, we will leave these issues for future research.

[5] Pair-Merge of an NP with a weak determiner creates the ordered pair <D, NP> labeled NP because adjuncts do not project. Thus, we assume that DP languages can accept an NP to occur as long as it has a determiner, regardless of its label.

[6] For reasons of space, we do not review other differences between NP and DP languages in Bošković (2008, 2012). As for these differences, please see the relevant studies.

[7] (21) and (22) omit the derivations within the v*P phase level. Briefly speaking, if {D_I, RH} in (21a), <D_{II}, RH> in (22a), or the RH in (21b) and in (22b) is base-generated within the VP, then the RH, {D_I, RH}, or <D_{II}, RH> moves to the edge of v*P, and then Form Copy assigns IM-Copy between the

inscriptions of the RH, {D_I, RH}, or <D_{II}, RH> in the original position and the v*P edge because the latter is not an θ-position. Consequently, the copy relations of RHs within restrictive RCs are uniformly IM-Copy, which leads to the representations in (21) and (22).

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Polarity Item Licensing in Vector Model: Negative, Positive and Bipolar Items

Sumiyo Nishiguchi
Otaru University of Commerce

Keywords : downward entailing, gradable, monotonicity assignment function, non-monotonic

1. Introduction

It has been known that downward entailing (DE) context licenses the negative polarity items (NPI) such as *any* (5). However, the NPI licensing is not straightforward in that non-monotonic context also licenses weak NPIs (6, 4, 7). This paper proposes a vector model of licensing NPI, positive (PPI) and so called bipolar polarity items (BPI) introduced in (14).

2. Polarity Items and Licensing Context

2.1. DE Licensers

The NPIs are licensed in DE environments (2, 3, 5). In (1a), the NPI *either* is licensed by strong negative *not*, and the omission of *not* makes it ungrammatical as in (1b). In contrast, the PPI *already* is anti-licensed by negation in (2a) (1).

(1) a. John did not travel either.

b. *John traveled either.

(2) a. *Mary has not already got vaccinated three times.

b. Mary has already got vaccinated three times.

2.2. Gradable Strength of PIs

NPI and PPI licensing is not a binary feature of lexical items, but scalar. The logical properties of the NPI licensing context vary among monotone decreasingness (MD), anti-additivity (AA) and anti-multiplicativity (15).

(3) a. MD: Let B be a Boolean algebra. A quantifier Q on B is said to be monotone decreasing iff for each two elements X and Y of the algebra B: if $X \in Q$ and $Y \in X$, then $Y \in Q$.

b. AA: Let B and B* be two Boolean algebras. A function f from B to B* is said to be anti-additive iff for each two elements X and Y of the algebra B: $f(X \cup Y)=f(X) \cap f(Y)$

c. Anti-multiplicativity: Let B and B* be two Boolean algebras. A function f from B to B* is said to be antimulti-plicative iff for each two elements X and Y of the algebra B: $f(X \cap Y)=f(X) \cup f(Y)$

(15)

For example, *alle* “all” and *geen* “no” in Dutch is AA. The examples in (4) shows that, if all children that drink OR smoke are punished, all children that drink will be punished AND all children that smoke will be punished too, and vise versa. So, *alle* “all”, as well as *geen* “no license NPIs of medium strength or the weak ones.

(4) a. Alle kinderen die drinken of roken worden gestraft
all children that drink or smoke become punished

"All children that drink or smoke will be punished ." ↔

Alle kinderen die drinken worden gestraft en alle kinderen die roken worden
all children that drink become punished and all children that smoke become
gestraft.
punished

"All children that drink will be punished and all children that smoke will be punished."

(14)

b. Geen kok die fluit of zingt is ongelukkig.
no cook that whistle or sings is unhappy

↔

Geen kok die fluit is ongelukkig en geen kok die zingt is ongelukkig.
no cook that whistle is unhappy and no cook that sings is unhappy

"No cook who whistles or sings is unhappy."

(14)

On the other hand, *inderdaad* "indeed/actually" is a strong PPI ungrammatical in the scope of negation (13). Even a weak negative licenser *hoogstens vier* "at most four" makes it ungrammatical as in (5).

(5) *Hoogstens vier sterren flonkeren inderdaad.
at most four stars twinkle indeed

"At most four stars twinkle indeed."

(ibid.)

Weak negative MD context licenses weak NPIs such as *any* and *ever*, while medium negative, AA or anti-multiplicative context only allows NPIs with medium or weak strength. The strong negative context, that are anti-morphic (AM), the combination of AA and anti-multiplicativity, licenses all kinds of NPIs. The strength of PPIs is measured by ungrammaticality in negative contexts. The strong PPI dislikes any negative context, the medium PPIs are ungrammatical in AA/anti-multiplicative or AM, and the weak PPI is anti-licensed only in AM.

3. Vector Model of PI Licensing

3.1. PIs and Monotonicity

For the scalar compatibility between PIs and licensing context, I propose the vector models to represent lexical information. The different strength of PIs and licensing context corresponds to assigned values on two vectors—one for the licenser and the other for the PIs.

(6) a. Lexicon: lexical item l $\in$ L

b. Lexical information: L = (R_m, R_p)

c. Monotonicity: R (upward—-nonmonotone—-downward)

R $\in \mathbb{R}$

R_m: a vector of monotonicity

R_m = {-3, -2, -1, 0, 1, 2, 3}

-3: AM

-2: AA/anti-multiplicative

-1: MD

1: monotone increasing

2: additive/multiplicative

3: morphic

d. Monotonicity assignment function F: F(l) $\rightarrow$ x $\in R_m$ = {-3, -2, -1, 0, 1, 2, 3}

e. NPI/BPI/PPI vector : R_p = {-3, -2, -1, 0, 1, 2, 3}

strong NP:I -3

medium NPI: -2

weak NPI: -1

weak PPI: 1

medium PPI: 2

strong PPI: 3

3.2. Licensers in Dutch

If we apply the above model, the NPI licensers in Dutch are assigned the following values on vector scale:

(7) *niet* "not"; R = (-3, 0) (AM)

geen "none"; R = (-2, 0) (AA)

weinig "few"; R = (-1, 0) (MD)

3.3. Inclusion Relationships

There is inclusion relationship between PI licensers. 3 on R_m includes 1 and -3 includes -1 since strong negation licenses weaker PIs. (8a) shows that, a strong negative context with -3 on the monotonicity vector licenses the NPIs with -1 to -3 on the polarity vector, namely, weak, medium or strong NPI . If strong PPI is acceptable, so are weaker PPIs in the scope of the same licenser. On the other hand, (8c) indicates that a weak negative context with the value -1 on monotonicity vector licenses only the weak NPI. The weak PPI whose monotonicity has the value 1 avoids the strong negative context as in (8d). The PPI of medium strength dislikes strong or mediumly negative context like (8e). The strong PPI in (8f) is incompatible with any level of negation.

(8) a. (-3, y) and (x, y $\in$ -1$\leq$y$\leq$-3)

b. (-2, y) and (x, y $\in$ -1$\leq$y$\leq$-2)

c. (-1, y) and (x, -1)

d. (x, 1) and ($x \neq -3$, y)

e. (x, 2) and ($x \notin -2 \leq x \leq -3$, y)

f. (x, 3) and ($x \notin -1 \leq y \leq -3$, y)

4. BPI

4.1. BPI in Dutch

In addition to the NPIs and PPIs, (14) pointed out that Dutch *ooit* could be the bipolar item (BPI) with combined feature of NPI and PPI. *Ooit* is licensed in AA as in (9a) and MD in (9b) but ungrammatical in AM as shown in (9c).

(9) a. **Geen** van de kinderen gaat **ooit** bij oma op bezoek.
none of the children goes ever with granny on visit
"None of the children ever visits granny."

(AA)

b. **Weinig** kinderen gaan **ooit** bij oma op bezoek.
Few children go ever with granny on visit
"Few children ever visit granny."

(MD)

c. *Een van de kinderen gaat **niet ooit** bij oma op bezoek.
one of the children goes not ever with granny on visit
"One of the children never visits granny."

(AM, van der Wouden 1997: 132-133)

Crucially, *ooit* is licensed by extra-clausal negation as in (10).

(10) Het is **niet** zo dat een van de kinderen **ooit** bij oma op bezoek gaat.
It is not so that one of the children ever with granny on visit goes
"It is not the case that one of the children ever visits granny."

(14, 133)

4.2. Serbo-Croatian and Hungarian

Furthermore, Serbo-Croatian *i*-series "also/even" and the Hungarian counterpart are licensed in medium and weak negation while anti-licensed by strong clausemate negation (10, 12).

(11) a. **Kevés** ember értett valamit **is**.
Few people understood something also/even
"Few people understood anything."

(Monotone decreasing)

b. **Nem** hiszem, hogy valamit **is** értettél.
Not think-I that something also/even understood-you
"I don't think that you understood anything."

(Extra-clausal antimorphic)

c.*__Nem__ értettél valamit **is**.
not understood-you something also/even
"You didn't understand anything."

(Antimorphic, Hungarian, Szabolcsi p.c.)

4.3. Japanese, Korean and Mandarin

The wide scope *mo* "also/even" in Japanese, *to* "also/even" in Korean and *ye* "also" in Mandarin show the behavior of the BPI (8, 9).

(12) a. Yo-**mo** hukete-ki-ta. Mo neru-to shi-yo.[1]
night-*also* late-become-PAST already sleep-COMP do-will
"It grew late (at night). It's time to go to bed."

Similar to Japanese *mo* "also/even," the AM negation interferes with Korean *to* "also/even."

(13) a. Pom-**to** wat-ta.
spring-also come-PAST
"Spring came" (That's why I'm so sad)

b. #Pom-**to** ochi **anat**-ta.
spring-also GEN-PAST
"Spring did not come" (That's why I'm so sad)

The AM negation also makes the sentence with the wide-scope *yě* "also" infelicitous in Mandarin Chinese.

(14) a. Qiūtiān **yě** lái-le.
fall also come-PERF
(In view of the foregoing events) "Fall came."

b. #Qiūtīan **yě** bù lái-le.
fall also NEG come-PERF
"Fall has not come."

4.4. Vector Model

The combined feature of the BPI needs double lexical entries. The BPI is either (0, 1), the weak PPI or (0, -2), the medium NPI.

(15) Dutch: $ooit_1$ "ever"; R =(0, 1)
$ooit_2$ "ever"; R= (0, -2)
Serbian-Croatian: i_1 "also/even"; R =(0, 1)
i_2 "also/even"; R= (0, -2)
Hungarian: is_1 "also/even"; R=(0, 1)

is$_2$ "also/even; R=(0, -2)

Japanese: *mo*$_1$ "even; R=(0, 1)

mo$_2$ "even; R=(0, -2)

Korean: *to*$_1$ "also/even; R=(0, 1)

to$_2$ "also/even; R=(0, -2)

Chinese: *ye*$_1$ "also"; R=(0, 1)

ye$_2$ "even; R=(0, -2)

4.5. Nonmonotonic Emotives as BPI Licensers

In fact the licensers of BPIs are not limited to extra-clause negation (AA), clausemate medium or weak negation. Negative emotives like *regret* license BPIs as in (16).

(16) a. Ik **betreur** (het) dat ik dat **ooit** gedaen heb.
I regret it that I that ever done have
"I regret of what I have ever done."

(Dutch, den Dikken p.c.)

b. **Sajnálom**, hogy valamit **is** adtam neki.
regret-I that something-ACC also/even gave-I to-him
"I regret that I gave him anything."

(Hungarian, Szabolcsi p.c.)

It means that *ooit*$_3$ does not require either monotone increasing or decreasing context.

(17) *ooit*$_3$; R=(0, 0)

Furthermore, *any* and *ever* in English are weak NPIs that are also licensed in non-monotonic contexts. The antecedent of the conditional is arguably nonmonotonic. As (18) indicates, in a situation where any questions are solicited, clarification questions may not be considered to be a real question. So the former may not entail the latter and vice versa. Still, the NPI *any* is licensed in the antecedent.

(18) If you have any questions, raise your hands.

$\not\leftrightarrow$

If you have any clarification questions, raise your hands.

5. Multipurpose: Both NPI and Licenser

The claimed vector model makes us wonder if there could be anything like a *multi-purpose* NPIs. Could any lexical item possess a combined feature of the NPI and the NPI licenser as in (19)?

(19) R = (-1, -1)

A further research is called for in order to answer this question.

6. Conclusion

This paper presented vector models for the PIs, that are NPI, PPI and BPI. There is underspecification with values for the BPI that require multiple lexical entries.

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The Overt Focus Movement to vP Periphery in English*

Satoru Kanno
Tokyo University of Science
Tomonori Otsuka
Kyushu University
Ryoichi Kondo
Fujita Health University
Yuta Tanaka
Chubu University

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1. Introduction

The purpose of this paper is to offer a syntactic analysis for sentences such as (1b).

(1) a. One swallow does not make a summer.
b. One swallow does not a summer make. (cf. Takizawa (2003: 44))

(1a) is a proverb commonly used in conversation and found in literature and websites. (1b) is almost synonymous with (1a). A prominent contrast between (1a) and (1b) is the word order patterns: the basic English word order is found in (1a) while the object precedes the verb in (1b). One of our informants has reported that sentences like (1b) have sentence focal stress placed on a verbal phrase. This paper discusses sentences with object-verb word order patterns and calls them swallow constructions. (1b) is a representative example of swallow constructions, and its meaning can be found on the website Wiktionary, which defines it as follows:

(2) One instance of an event (such as the arrival of a single bird) does not necessarily indicate a trend. (https://en.wiktionary.org/wiki/one_swallow_does_not_a_summer_make)

To analyze swallow constructions, we adopt Chomsky's (2013, 2015) framework, which assumes the following as the main theoretical apparatuses: (i) Simplest Merge, (ii) the Labeling Algorithm by minimal search, and (iii) Feature Inheritance. We show that these apparatuses, along with supplementary minimalist assumptions, successfully produce swallow constructions. At the end of this paper, we discuss some similarities between swallow and *there*-unaccusative constructions.

2. Previous Work

Takizawa (2003, 2004, 2017, 2018) has extensively studied swallow constructions in his series of works. He has explored several interesting properties. For example, he offers (3), summarizing the properties of swallow constructions.[1]

(3) Properties of *NP1 do not NP2 V* (SOV construction)

a. The subject NP1 and the object NP2 are typically both indefinite.

b. Its verb is typically *make*. However, *break* and other verbs are sometimes used.

c. Mostly used in negative sentences

d. In many cases, adverbs such as *necessarily, alone, always* co-occur. Even without such an adverb, its meaning is implied. (The translations are ours) (cf. Takizawa (2017: 153))

A further contribution of Takizawa's studies lies in offering various examples of swallow constructions from corpus data and websites. For example, he offers the sentences in (4).

(4) a. Formal training does not necessarily a good teacher make.

(Letters to the Editor, By Matthew Roemer, The Daily Yomiuri, 1997/1/14, p. 6)

b. Twin peaks don't a mountain range make. (Bank of English)

(Takizawa (2003: 44); Takizawa (2018: 37))

He also provides (5), a list of verbs that can be used as main verbs in swallow constructions.

(5) get, create, define, destroy, follow, ruin, match, reverse, say, spread, support, suppress, undergo, undo, win, weave, make/ruin (cf. Takizawa (2018: 38))

Turning to the study that we have conducted concerning swallow constructions, Kanno et al. (2022) offer (6), wherein one of our informants has reported grammatical examples of swallow constructions.

(6) a. One victory does not a tradition break.

b. One agreement between two countries does not a conflict settle.

c. One celebrity does not excitement produce/create.

d. One victory does not a trophy get/win. (Kanno et al. (2022) with slight modifications)

Kanno et al. (2022) conclude that swallow constructions are productive because they use various types of nouns and verbs. Simultaneously, as Takizawa correctly has noted, there is a large variation in acceptability judgments among native speakers.[2]

3. Analysis

In this section, we present our analysis of swallow constructions. We adopt Chomsky's (2013,

2015) labeling theory as our framework, within which we focus on three theoretical apparatuses. First, we adopt the concept of Simplest Merge. When Merge applies to XP and YP, what is created is a set comprising X and Y, {XP, YP}, without a label.[3] Second, we assume with Chomsky (2013, 2015), that labels are assigned under the Labeling Algorithm based on minimal search. Specifically, the Labeling Algorithm utilizes two ways to assign labels to {XP, YP} structures, which comprise two phrases and are ambiguous to minimal search. One way to assign a label to {XP, YP} structures is related to internal Merge: when XP undergoes internal Merge, the set {XP, YP} is labeled YP because the copy left behind by internal Merge becomes invisible to minimal search. The other way is based on feature sharing: when XP and YP share the same prominent feature α, the label of {XP, YP} is determined as [α]. Third, we adopt the operation of Feature Inheritance. When this operation applies, the features of the phase are sent to the lower head.

Adopting this framework, let us review how a simple transitive vP structure is constructed (see Chomsky (2015) for more details). The verbal structures of simple transitive sentences are shown in (7).

(7) $\{ <R, v^*> \{_{<\varphi, \varphi>} IA \{R_{[\varphi]}\ t_{IA}\ \}\}\}$

The derivation in (7) precedes as follows. First, the root (R) is Merged with the internal argument (IA). Subsequently, the IA moves upward, merging with the set {R, t_{IA}}. Next, v* is introduced into the structure. At this point, Feature Inheritance is applied, transmitting the φ-features (or [φ]) down onto R. This Feature Inheritance operation makes it possible for the set {IA {R[φ], t_{IA}}} to be assigned <φ, φ> because of the feature sharing of [φ] between the IA and R. Then, v* is internally pair-Merged with R to form the ordered pair <R, v*>. An important assumption at this point is the invisibility of v*: when v* is pair-Merged with R, v* becomes invisible (see Chomsky (2004) for the claim that pair-Merge creates adjunction relations, and adjuncts are on a separate plane). However, we assume that this is not the only possibility for the vP structure and that another vP structure is involved in swallow constructions.

With this in mind, we now consider the derivation of the swallow construction. We assume that the vP structure in swallow constructions differs minimally from simple transitive constructions. Specifically, we follow Otsuka (2017), who claims that it is possible to assume a derivation for making R invisible rather than v*, departing from Chomsky's assumption.

Assuming that this line of derivational possibility is correct, we propose that R becomes invisible in swallow constructions, as illustrated in (8).

(8) $\{_{<Foc, Foc>} IA_{[Foc]} \{t_{EA} \{<v^*_{[Foc]}, R> \{_{<\varphi, \varphi>} t_{IA} \{R_{[\varphi]}\ t_{IA}\ \}\}\}\}\}$

Consider the derivational structure of the verbal domain in swallow constructions, step-by-step. In the first stage of derivation, R is introduced and Merged with the IA. Subsequently, the IA moves upward. Next, v* is Merged into the structure and, at this stage of derivation, the Feature Inheritance operation applies, passing [φ] down onto R. The set of {IA {$R_{[\varphi]}\ t_{IA}$}} is assigned <φ, φ>. An important derivational point is where R undergoes head-movement. When this head movement applies, R becomes invisible. By contrast, v* remains visible. Owing to the visibility of v*, we claim that its focus feature ([Focus],

or [Foc]) also remains syntactically visible and active (see Section 5 for the presence of focus features in the vP domain of swallow constructions). Thus, when the IA moves further to the edge of v*P, the Labeling Algorithm finds two instances of the focus feature. One is on the IA and the other is on v*. These instances of [Focus] serve as targets of the Labeling Algorithm, and the label <Focus, Focus> (or <Foc, Foc>) is assigned to the verbal structure.[4,5]

In sum, the important point in the derivation of swallow constructions lies in the assumption of the visibility of v* within the vP structure. Its visibility keeps the [Focus] of v* active and visible during syntactic derivation. Focus interpretation is assigned to the IA at the edge of the verbal domain.[6,7]

4. More Data

In this section, we discuss the data from Kanno et al. (2022) concerning the swallow construction and argue that the data shown here support the proposed structure.

The first set of data involves the CP structure. We will conclude below that the object-verb order shift in swallow constructions is not concerned with the use of a clausal CP left peripheral position. Before discussing swallow constructions, consider the sentence in (9), where topicalization is applied in embedded clauses.

(9) *John raised the possibility that Mary, your antics would upset. (Alrenga (2005: 179))

The sentence in (9) indicates that topicalization cannot apply within *that*-clauses preceded by noun phrases (the so-called complex NP structures). By contrast, swallow constructions can occur in such environments. Specifically, the sentences in (10) are acceptable.

(10) a. The fact that one victory does not a revolution make is one that can be applied in any field.
b. … leads to the fact that one victory does not a revolution make (Kanno et al. (2022: 7))

(10) shows that swallow constructions appear within the relevant kind of *that*-clauses, which do not allow fronting, as in (9). The grammaticality of these sentences indicates that swallow constructions do not use the left periphery of the CP.

Next, we consider the TP structure of the swallow constructions. The overall conclusion concerning the TP structure of the swallow constructions is that they have a full-fledged TP structure. The first piece of evidence comes from the absence of a definiteness effect for the subject phrases. Consider (11) and (12):

(11) Today's victory does not a revolution make. (Kanno et al. (2022: 3))
(12) This victory does not a revolution make. (Kanno et al. (2022: 3))

(11) and (12) are both grammatical, even though definite subjects (*today's victory* in (11) and *this victory* in (12)) appear, showing that there is no restriction on the definiteness of the subject DPs (see Milsark (1979); Diesing (1992) for related discussions).

Regarding the temporal properties of constructions, let us examine (13).

(13) a. (Even in the ancient age,) Stone walls did not necessarily a good castle make.
b. Formal training has not a good teacher made.
c. Space exploration will not always conflicts produce. (Kanno et al. (2022: 2))

The sentences in (13) indicate that swallow constructions can accommodate various tenses (the past tense form in (13a), the present perfect tense form in (13b), and the future modal *will* in (13c)). The temporal properties shown in (13) are quite different from those of imperative constructions, which are considered defective in their tense. The following sentences show the temporal restrictions of imperative constructions:

(14) a. (You) be/*are quiet.
b. *Will sign the paper, please. (Sawada (1983: 21-22))

As illustrated in (14), T-agreement is not observed and a future modal cannot be used in imperative constructions.

Furthermore, swallow constructions are observed with non-negative forms. This indicates that the negative part of swallow constructions is not fixed, which implies that the constructions possess a normal TP with an independent negative projection. Consider (15) (see Takizawa (2003) for similar examples).

(15) a. They can not take away his liberty, for <u>stone walls do a prison make</u>. They can not deprive him of his property. In prison most men are equally propertyless.
(underline is ours COHA, 1920, MAG, Atlantic)
b. Not all stone walls a prison make; some are there to protect, to hold up.
(https://www.firstthings.com/article/2022/04/a-theology-of-fiction)

Thus, we can conclude, from (11)–(15), that swallow constructions have a full-fledged TP structure.

Let us now consider sentences in relation to vP structure. The coordination data support the current analysis, which argues for object movement toward the vP-edge. Consider (16), where two vPs are coordinated.

(16) a. One victory does not a tradition break nor a revolution make.
b. One victory does not a revolution make nor a tradition break. (Kanno et al. (2022: 4))

(16) demonstrates that the object-verb patterns are coordinated, resulting in grammatical sentences. Moreover, the following coordination pattern is important in the current analysis:

(17) One victory does not a revolution make nor break a tradition. (Kanno et al. (2022: 4))

The sequence *break a tradition* clearly has a vP structure. This vP structure can be coordinated with *a revolution make*. This means that *a revolution make* is also vP and that the objects move at most as high as the vP-edge.

Finally, let us discuss cases where verb-particles are used as the main verb in swallow constructions ((18a/b), cited from Kanno et al. (2022: 6) with slight modifications).

(18) a. One agreement between two countries does not a conflict cool down.
b. *One agreement between two countries does not a conflict down cool.
c. *One agreement between two countries does not down a conflict cool.

The sentence in (18a) is grammatical, even when the particle *down* appears. However, the word order of the *conflict down cool* in (18b) and *down a conflict cool* does not result in a grammatical swallow construction. Some people may contend that swallow constructions are derived from the rightward movement of the verbal head. However, this analysis is incorrect. If the rightward head movement were on the right track, the word order in which a verb stands in sentence-final position, as in (18b) and (18c), would be observed. This is because, in such an analysis, we would expect the verb *cool* to move rightward across the particle *down*; the resulting sentences in (18b) and (18c) should be grammatical, contrary to fact. Thus, it is plausible to assume that the object moves leftward, as discussed in Section 3.[8]

5. Similarities between Swallow Constructions and *There*-Unaccusative Constructions

5. 1. Focus Interpretation of Internal Arguments

In this section, we explore some similarities between swallow constructions and *there*-unaccusative constructions. An example of *there*-unaccusative constructions is presented in (19).

(19) There arrived some packages in the mail. (Maeda (2010: 290))

In analyzing this type of *there*-unaccusative construction, Maeda (2010: 291) reports "… associate DPs are interpreted as a kind of focus…" In other words, *there*-unaccusative constructions contain a vP-internal focus, which is related to the interpretation of associate DPs as new information according to Maeda (2010).

Here, let us note that another important property of *there*-unaccusative constructions is the definiteness effects of the IAs. These effects are seen in (20) in which definite noun phrases cannot appear.

(20) a. There appeared an/*the angel before him.
b. There arose a/*the question during the meeting. (Rochemont and Culicover (1990: 1))

However, superlative nominals can appear in *there*-unaccusative constructions, despite the presence of the definite article *the*. The sentences in (21) are from one of our informants.

(21) a. There arrived the smallest mammal in the zoo.
b. There arose the most serious problem during the meeting.
c. There appeared the brightest idea in my mind.

We have observed the following: (i) vP-internal focus is assigned to IAs and (ii) the IAs show the definiteness effects. Hence, it is reasonable to assume that the two are correlated.

Given this correlation, the definiteness effects should be observed in the swallow constructions because, in the current analysis, IAs have focus features that serve as the target of the Labeling Algorithm (see the structure in (8)). This expectation concerning definiteness effects is borne out in (22).

(22) a. * Stone walls did not necessarily this good castle make.
b. * Bravery does not necessarily him make. (Kanno et al. (2022: 2))

As these sentences show, definite noun phrases, such as *this good castle* in (22a) and *him* in (22b), cannot appear in the construction under discussion. Simultaneously, like *there*-unaccusative constructions, superlative noun phrases can appear in swallow constructions.

(23) Stone walls do not the best castle make. (Kanno et al. (2022: 2))

5. 2. An Extension: Derivation of *There*-Unaccusative Constructions

In this section, we describe the syntactic structure of *there*-unaccusative constructions. We have already reviewed Maeda's analysis of the focal interpretations of IAs. Specifically, Maeda (2010) offers (24) for their structure.

(24) $[_{CP}\ C^0\ [_{TP}$ there $T^0\ [_{vP}\ V\ [_{FocP}\ DP\ Foc^0\ \ [_{VP}\ \ t_V\ \ t_{DP}]]]]]$

focus movement (Maeda (2010: 291))

The structure in (24) indicates that the IA DP moves to the specifier of FocusP (or FocP), and the verb needs to move twice: first to the focus head and then to the higher V-head position. The structural analysis is plausible and captures many properties of *there*-unaccusative constructions.

However, we pursue an alternative possibility in analyzing *there*-unaccusative constructions within the framework of Chomsky (2015). Specifically, we propose (25).

(25) Feature Inheritance can apply to [Focus] instead of [u-φ].

(25) shows that Feature Inheritance is more flexible than has been assumed thus far (a similar line of proposal on the flexibility of Feature Inheritance can be found in Ouali (2008, 2011), Miyagawa (2017), and Hayashi (2020)). The alternative vP-structures of the *there*-unaccusative constructions are illustrated in (26).

(26) $\{ <R, v^*_{[\varphi]}> \{_{<Foc, Foc>} IA_{[Foc]} \{R_{[Foc]}\ t_{IA}\}\}\}$

The first application of Merge produces a set of R and IA. Subsequently, the IA moves upward. Next, v* is introduced into the structure. Notably, the focus feature is passed down to R using the option of (25). Therefore, the Labeling Algorithm can find two instances of [Focus] simultaneously: one on the IA and the other on R. Consequently, the label becomes <Foc, Foc> for the set $\{IA, \{R_{[Foc]}, t_{IA}\}\}$. Next, R is internally pair-Merged with v*, and v* is rendered invisible along with its [φ], shown as $<R, v^*_{[\varphi]}>$, where the shade on $v^*_{[\varphi]}$ denotes its invisibility. This Merge renders the φ-features of v* invisible. The invisibility of v* with [φ] leads to the intransitive properties of unaccusative verbs (see Epstein, Kitahara and Seely (2016) for a proposal that their intransitive properties are derived via the external pair-Merge of R and v*).

To summarize the discussion, this section has shown the derivations of *there*-unaccusative constructions. We have argued for the flexible nature of Feature Inheritance. Specifically, in *there*-unaccusative constructions, [focus] undergoes Feature Inheritance. The analysis can account for the focused interpretation of IAs and definiteness effects in *there*-unaccusative constructions.

6. Conclusion

This study has focused on the syntactic derivation of swallow constructions. Following Otsuka (2017), we have proposed that in their vP structure, R is rendered invisible. Consequently, the focus feature on v* is visible and active and serves as the target of the Labeling Algorithm. A noticeable theoretical possibility of the current analysis is that Feature Inheritance is more flexible, as claimed by Ouali (2008, 2011), Miyagawa (2017), and Hayashi (2020). Pursuing this possibility, we have argued that in *there*-unaccusative constructions, focus features undergo Feature Inheritance instead of φ-features.

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NOTES

1. Takizawa calls what we call swallow constructions SOV constructions.

2. Shuto Yamamura (personal communication) has raised a question of why swallow constructions are much rarer than their "usual" simple transitive counterparts. We believe that the answer lies in the fact that swallow constructions must satisfy various conditions to be grammatical, such as syntactic, semantic, and discourse conditions. As various examples can be identified in the literature and on the Internet, we believe that swallow constructions are produced by UG principles.

3. Here and in what follows, we utilize the expressions of "XP" and "YP." However, strictly speaking, under Chomsky's (2015) labeling assumption, these are phrases containing X and Y, namely, {X,... } and {Y,... }, respectively. The expressions for XP and YP are simply used for expository purposes.

[4.] Here, following Tanaka (2022), we assume that what is Transferred to the interfaces is the complement of a head that possesses [φ] that has been valued derivationally, not the complement of an inherent phase head. Thus, the complement of the lower R is Transferred even if v* remains visible, as [φ] on the lower R has been valued for assignment of the accusative case.

[5.] We assume that the <φ, φ> label is assigned at the vP phase level before the movement of IA to the edge, and then, the <Foc, Foc> label is determined at the next CP phase level after the movement.

[6.] Yusuke Imanishi (personal communication) has pointed out some similarities between the swallow and pseudo-incorporation constructions found in Niuean and other languages. Swallow constructions share a prominent feature with pseudo-incorporation constructions in that a noun phrase occurs in front of a verb because of the movement operation.

In addition, Yosuke Sato (personal communication) has argued for a pseudo-incorporation analysis of swallow constructions based on the following data:

(i) *Formal training does not necessarily a good teacher make that students need.

(Kanno et al. (2022: 7))

In swallow constructions, a relative clause cannot be attached to an object. Yosuke Sato has informed us that the attachment of relative clauses is not possible in pseudo-incorporation constructions either. We leave the investigation of similarities between swallow constructions and pseudo-incorporation constructions for further research.

[7.] Takashi Munakata (personal communication) states that the current analysis predicts that the preceding objects cannot be *wh*-phrases because of the incompatibility between the focus interpretation of objects and existential interpretation of *wh*-phrases. This prediction is actually borne out by the following sentence:

(i) *(Tell me) what does not what make. (Kanno et al. (2022: 8))

[8.] Kanno et al. (2022) explores the possibility of swallow constructions being analyzed under the leftward movement of objects. The current analysis is consistent with the possibility raised in Kanno et al. (2022).

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Labeling and Selection: A Case Study of *Wh*-Associated *Exactly*[*]

Maya Suzuki
Tohoku University

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1. Introduction

Since Chomsky (2013, 2015), a great deal of attention has been given to labeling theory by many generative linguists. We have gained significant theoretical and empirical insights through Chomsky's (2013, 2015) Labeling Algorithm (LA). Moreover, several studies have refined Chomsky's (2013, 2015) LA and attempted to capture a wide range of phenomena. Mizuguchi (2019) stands as an example of such research. After offering an overview of Chomsky's (2013, 2015) and Mizuguchi's (2019) labeling systems, section 1.3 will present the goal of this paper.

1.1. Chomsky's (2013, 2015) Labeling Algorithm

Chomsky (2013, 2015) argues that for a syntactic object (SO) to be interpreted at the interfaces, the SO must be given a label by LA, which involves minimal search. Chomsky (2013, 2015) then proposes that LA operates as follows:

(1) a. $\{_{\alpha}$ H, XP$\}$ α=H
b. $\{_{\alpha}$ XP, YP$\}$ α=??

(1a) shows that when a set of {H, XP} is formed, H, a lexical item, is designated as the label of α by LA. On the other hand, in the case of (1b), where a set of {XP, YP} is formed, the label of α cannot be determined because minimal search locates two heads X and Y. It thus causes labeling failure, the unlabeled set being uninterpretable at the interfaces. Encountering this problem, Chomsky (2013, 2015) proposes that there are two strategies through which LA can determine the label of {XP, YP}, as shown in (2).

(2) a. XP … $\{_{\alpha}$ XP, YP$\}$ α=YP
b. $\{_{\alpha}$ $XP_{[F]}$, $YP_{[F]}\}$ α=<F, F>

One strategy in (2a) is that if one of the two phrases, here XP, undergoes Internal Merge (IM) and leaves its copy, the copy (the shaded one) is invisible to LA because 'it is part of discontinuous

element' (Chomsky (2013: 44)). Then, the YP label can uniquely be assigned to the SO. The other strategy is feature-sharing, as illustrated in (2b). The prominent feature F shared by XP and YP is selected as the label of the SO, which is notated as <F, F>.

However, Mizuguchi (2019) argues that XP-YP configurations exist where neither movement nor feature-sharing allows LA to uniquely determine its label. For example, in German, the so-called partial *wh*-movement is possible (van Riemsdijk (1982), McDaniel (1989)). Let us consider (3). It should be noted that the following examples receive the same semantic interpretation.

(3) a. **Wen**$_i$ meinst du [t'_i daß [Peter Hans t_i vorgestellt hat]]?
who.ACC think you.NOM that Peter.NOM Hans.DAT introduced has
'Who do you think Peter has introduced to Hans?' (Sabel (2000: 411))

b. *Was* meinst du [**wen**$_i$ [Peter Hans t_i vorgestellt hat]]?
WH think you.NOM who.ACC Peter.NOM Hans.DAT introduced has
(Sabel (2000: 410))

In (3a), the *wh*-phrase *wen* moves from the complement of the verb *vorstellen* 'introduce' in the embedded clause to the sentence-initial position. Conversely, in (3b), it stays at the intermediate landing site, the specifier position of the embedded clause. Instead of the *wh*-phrase *wen*, the *wh*-expletive *was* is located at the sentence-initial position. The *wh*-phrase *wen* and the declarative CP in (3b) form a set of {*wh*P, CP}, where the two phrases are both visible to LA and do not have any shared feature. Therefore, Chomsky's (2013, 2015) LA predicts that (3b) is ungrammatical due to labeling failure, which is, in fact, incorrect.

1.2. Mizuguchi's (2019) Labeling System

Contrary to Chomsky (2013, 2015), Mizuguchi (2019) proposes that minimal search can detect both the two heads X and Y in the SO of {XP, YP} and label the SO as either <X> or <Y>, as follows:[1]

(4) $\{_{\alpha}$ XP, YP$\}$ α=<X>/<Y>

According to Mizuguchi (2019), this ambiguous labeling should be freely available as long as none of it violates any third-factor principles. Therefore, the SO of {XP, YP} in (4) does not result in labeling failure even if XP or YP does not raise, or XP and YP do not share any appropriate feature.

In this connection, Mizuguchi (2019) argues that the role by movement in determining the label of {XP, YP} can be dispensed with. This is a natural consequence of Mizuguchi's (2019) labeling system, under which an XP-YP configuration can ambiguously labeled. According to Mizuguchi (2019), copy invisibility is just a stipulation, and copies created by IM are not distinguished from repetitions of the same SO in syntactic computation and are taken to be visible to LA.

Furthermore, Mizuguchi (2019) proposes that the well-formedness of the labeled set depends on whether it satisfies interface requirements, one of which is selection. Then, the labeled outcomes must

satisfy selectional requirements at the Conceptual-Intentional (CI) interface.

Mizuguchi's (2019) labeling system can account for the grammaticality of (3b) because {*wh*P, CP} can be labeled as either <*n*> or <C>, so that labeling failure does not occur. If <*n*> is the label of the set, it is interpreted as a nominal element like a free relative clause at the CI interface, violating the selectional requirement of the verb *meinen* 'think', which should select a clausal complement. Conversely, the <C> label satisfies the verb's selectional requirement and is ruled in at the CI interface. As a result, the derivation can converge when {*wh*P, CP} is labeled as <C> within Mizuguchi's (2019) labeling framework.

1.3. The Goal of This Paper

I have provided an overview of Chomsky's (2013, 2015) and Mizuguchi's (2019) labeling system, which present conflicting views on copy invisibility and ambiguous labeling. The goal of this paper is to demonstrate that the distribution of the *wh*-associated *exactly* can be explained by integrating their labeling systems. In section 2, I will propose a new labeling system, based on Chomsky (2013, 2015) and Mizuguchi (2019). Section 3 will first introduce the distribution of the adverb *exactly* associated with a *wh*-phrase (the *wh*-associated *exactly*) and subsequently offer an analysis of it in terms of labeling and selection. Section 4 will demonstrate that my approach to the *wh*-associated *exactly* is more adequate than a previous study, Zyman (2022). Section 5 will conclude this paper.

2. Proposal

Integrating Chomsky's (2013, 2015) and Mizuguchi's (2019) labeling system, I propose a new labeling system, under which labels are assigned as follows:

(5) a. $\{_{\alpha}$ H, XP$\}$ α=<H>
b. $\{_{\alpha}$ XP, YP$\}$ α=<X>/<Y>
c. XP … $\{_{\alpha}$ XP, YP$\}$ α=<Y>

The set in (5a) is formed by H and XP. In this case, α is uniquely labeled as <H>. In (5b), two phrases form a set of {XP, YP}. I follow Mizuguchi (2019) in assuming that the set in (5b) can be labeled as either <X> or <Y>. Conversely, following Chomsky (2013, 2015) and contra Mizuguchi (2019), I assume that the label of α in (5c) is uniquely determined as <Y>. Moreover, I assume with Mizuguchi (2019) that the labeled and transferred outcome is interpreted and evaluated at the CI interface in terms of selection.

Given my proposal, it is predicted that if a head Z takes the set of {XP, YP} as its complement and should select the set labeled as <X>, XP must not undergo IM out of the set of {XP, YP}; if it underwent IM, Z would form a selectional relation with the set labeled as <Y>, leading to a violation of Z's selectional requirement. Both cases are schematically illustrated in (6).

(6) a. {Z, $\{_{\alpha}$ XP, YP$\}$} α=<X>/<Y>
b. * XP … {Z, $\{_{\alpha}$ XP, YP$\}$} α=<Y>

The configuration in (6a) is ruled in at the CI interface because the label of α can be determined as <X>. On the other hand, in (6b), XP in α cannot participate in the label determination of α because it is a lower copy, so that α is uniquely labeled as <Y>. As a result, Z fails to select the set labeled as <X> at the CI interface, resulting in the ungrammaticality of (6b). The next section will demonstrate that the prediction is correct through the analysis of the *wh*-associated *exactly*.

3. The *Wh*-Associated *Exactly*

The first half of this section will introduce the distribution of the *wh*-associated *exactly*. First, let us look at the following examples of echo questions, where the *wh*-phrases stay in their original position.

(7) a. Muriel put <u>what</u> *exactly* on the table with great care?!
b. Harvey gave <u>what</u> *exactly* to the president to annoy you?! (Zyman (2022: 90))

In (7), the italicized *exactly* is associated with the underlined *wh*-phrases (the *wh*-associate). The *wh*-associated *exactly* can also be fronted with its *wh*-associate, as illustrated in (8).

(8) <u>Who(m)/what</u> *exactly* did she blame? (Zyman (2022: 86))

Moreover, *exactly* can also be separated from its *wh*-associate, as shown in (9).

(9) a. <u>What/which pretzel</u> did he sell for a million dollars *exactly*?
b. <u>What</u> did Harvey give to the president to annoy you *exactly*? (Zyman (2022: 90))

In (9), the *wh*-associates are fronted to the sentence-initial position and *exactly* is stranded in the sentence-final position. Let us call this phenomenon *exactly*-stranding. Concerning *exactly*-stranding, while it has been briefly mentioned in several studies, including McCloskey (2000), Zyman (2022) provides its detailed observations. As Zyman (2022) observes, the stranded position of *exactly* is restricted, as illustrated in (10), where it is stranded within the original position of its moved *wh*-associate.

(10) a. * <u>What</u> did Muriel put *exactly* on the table with great care?
b. * <u>What</u> did Harvey give *exactly* to the president to annoy you? (Zyman (2022: 90))

Given the data in (9) and (10), Zyman (2022: 91) provides the generalization that "[*e*]*xactly* cannot be stranded within (big) VP."[2]

In the second half of this section, we will account for the distribution of the *wh*-associated *exactly* within my labeling framework. In light of the fact that *exactly* can immediately follow its *wh*-associate both in its original position and the sentence-initial position, I assume that *exactly* and its *wh*-associate

are externally merged and form a set, as in (11). Therefore, the resulting set can remain in the original position of the *wh*-associate or undergo IM to the sentence-initial position as a single unit.

(11) $\{_{\alpha}\ \{_{<n>}$ what$\}$, $\{_{<\mathrm{Adv}>}$ exactly$\}\}$ α=<*n*>/<Adv>

In (11), the set consisting of *exactly* and its *wh*-associate forms an XP-YP configuration. Since ambiguous labeling is applicable to such a configuration, α can be labeled as either <*n*> or <Adv>.

First, this paper analyzes the examples of echo questions in (7a), repeated in (12a), as having the *v*P structure in (12b).

(12) a. Muriel put <u>what</u> *exactly* on the table with great care?! (=(7a))

b. {Subj, {*v**, {R, $\{_{\alpha}$ *wh*P, AdvP}}}}

In (12b), after forming the set of α, neither *wh*P nor AdvP undergoes IM. Therefore, the label of α can be determined by ambiguous labeling. If α receives the AdvP label, the labeled outcome violates the verb's selectional requirement. R is required to select <*n*>, namely a nominal expression, rather than <Adv> at the CI interface. Thus, only the derivation where the <*n*> label is assigned to α converges.

Next, let us turn to (10a), repeated in (13a), where *exactly* is stranded within VP. The ungrammatical sentence in (13a) is derived as in (13b):

(13) a. * <u>What</u> did Muriel put *exactly* on the table with great care? (=(10a))

b. * *wh*P … {Subj, {*v**, {R, $\{_{\alpha}$ *wh*P, AdvP}}}}

(13b) illustrates that *wh*P undergoes IM out of α and strands AdvP at its original position, namely within VP. In this case, α can only be labeled as <Adv> because *wh*P in α is a lower copy, so that <*n*> cannot be a candidate for the label of α. The <Adv> label results in a violation of the verb's selectional requirement and is, therefore, ruled out at the CI interface. As demonstrated above, the prediction in (6) is borne out.

My proposed analysis further predicts that *exactly* can be stranded even at the middle of the sentence if no selectional requirement is imposed on the position. Let us consider (14).

(14) *wh*P … {$\{_{\alpha 2}$ *wh*P, AdvP}, {Subj, {*v**, {R, $\{_{\alpha 1}$ *wh*P, AdvP}}}}}

In (14), the set of α undergoes IM to the *v**P edge and then only *wh*P undergoes further IM and strands *exactly* there. The higher copy of α, namely α_2, is uniquely labeled as <Adv>, but this does not cause any gibberish at the CI interface because the position in which *exactly* is stranded is not subject to any selectional requirement. Thus, this type of *exactly*-stranding should be possible. This is borne out by (15), where *exactly* precedes the verb *put*.

(15) <u>What</u> did Muriel *exactly* put on the table with great care? (Zyman (2022: 96))

Although I have demonstrated so far that my labeling mechanism is supported by the distribution of the *wh*-associated *exactly*, Chomsky (2001 and his subsequent works) argues that the object raises for φ-agreement with VP. This means that my analysis also has to account for the ungrammaticality of (10) by excluding the derivation in (16), where AdvP is stranded at Spec, RP but not the complement.

(16) * *wh*P … {Subj, {*v**, {{$_{\alpha 2}$ *wh*P, AdvP}, {R, {$_{\alpha 1}$ *wh*P, AdvP}}}}}

To account for (16), I make the following three assumptions:

(17) a. Labeling applies to the transferred constituent (normally the phase head complement), rather than the full phase. (McInnerney (2022: 1))

b. The complements of *v** and C are constituents that undergo transfer. (Chomsky (2000, 2001))

c. Copies within a single transferred constituent receive the same label.

Given (17a) and (17b), labeling applies to the complements of *v** and C, namely VP and TP. (17c) can be derived from economy considerations: this eliminates the need to apply search to each copy and minimizes the number of applications of labeling. Then, let us consider (18), where the transferred VP domain is boxed.

(18) * *wh*P … {Subj, {*v**, $\boxed{\{\{_{\alpha 2}\ wh\text{P, AdvP}\}, \{\text{R}, \{_{\alpha 1}\ wh\text{P, AdvP}\}\}\}}$}} (=(16))

In (18), since *wh*P in α_2 is a lower copy, the label of α_2 is uniquely determined as <Adv>. In accordance with (17c), α_1 is also labeled as <Adv>. However, the <Adv> label of α_1 will violate the verb's selectional requirement. Thus, the ill-formedness of the derivation in (18) is derived from labeling and selection. Here, let us turn to (19).

(19) {$_{\alpha 3}$ *wh*P, AdvP} … {Subj, {*v**, $\boxed{\{\{_{\alpha 2}\ wh\text{P, AdvP}\}, \{\text{R}, \{_{\alpha 1}\ wh\text{P, AdvP}\}\}\}}$}}

In (19), unlike in (18), both α_1 and α_2 are lower copies, which means that their constituents (i.e. *wh*P and AdvP) are all lower copies. One may wonder whether (19) is also ruled out due to a violation of the verb's selectional requirement because all the copies of *wh*P in RP are lower ones. However, the examples of (8), (9) and (15), repeated in (20), are allowed even if both the *wh*-associate and *exactly* are extracted from the complement position of the verb, which suggests that (19) is the derivation that is ruled in.

(20) a. <u>Who(m)/what</u> *exactly* did she blame ___ ? (=(8))

b. <u>What/which pretzel</u> did he sell ___ for a million dollars *exactly*? (=(9a))

c. <u>What</u> did Harvey give to the president to annoy you *exactly*? (=(9b))

d. <u>What did Muriel *exactly*</u> put ___ on the table with great care? (=(15))

Our labeling mechanism can correctly rule in (19). α_1 and α_2 in (19) cannot be uniquely labeled because their constituents are all lower copies. I argue that in this case, for α_1 and α_2 to be interpreted at the interface, ambiguous labeling applies to them. As a result, α_1 and α_2 can be assigned the <*n*> label, so that the verb's selectional requirement can be satisfied. Therefore, even if all the copies of *wh*P in RP are lower ones, no problem arises regarding selection because *exactly* also undergoes IM out of RP, which makes ambiguous labeling possible.[3, 4]

In this section, I have demonstrated that my labeling algorithm correctly accounts for the facts regarding the *wh*-associated *exactly*: under my analysis, the ungrammatical cases are excluded because the labeled outcomes violate the verb's selectional requirement whereas the grammatical cases are ruled in because the relevant requirement is successfully satisfied. In the next section, I will review Zyman's (2022) approach to the *wh*-associated *exactly* and point out its empirical problem, which my approach does not encounter.

4. Comparison with Zyman (2022)

To explain the distribution of the *wh*-associated *exactly*, Zyman (2022) proposes an analysis that employs the obligatory late adjunction, which is stated as follows:

(21) *Phase-Constrained Obligatory Late Adjunction*
For H a phase head and XP its associated spellout domain (= complement), adjunction within the HP phase must occur immediately before spellout of XP. (Zyman (2022: 86))

According to (21), no operation such as Merge and agreement can take place between adjunction and spellout because spellout of XP immediately follows adjunction. This gives an account of the ungrammaticality of (10a), repeated in (22).

(22) * <u>What</u> did Muriel put *exactly* on the table with great care? (=(10a))

(22) shows that *exactly* cannot be stranded within VP. Under Zyman's (2022) analysis, the ungrammatical sentence in (22) is derived as follows:

(23) a. [$_{vP}$ Subj *v*-V [$_{VP}$ what [t_V on the table]]] *completion of the vP phase*
b. [$_{vP}$ Subj *v*-V [$_{VP}$ what exactly [t_V on the table]]] *adjunction of exactly*
c. [$_{vP}$ Subj *v*-V $\boxed{[_{VP}\text{ what exactly [}t_V\text{ on the table]]}}$] *spellout of VP*
d. * [$_{vP}$ what [$_{vP}$ Subj *v*-V $\boxed{[_{VP}\ t_{what}\text{ exactly [}t_V\text{ on the table]]}}$]] *internal merge of what*
(cf. Zyman (2022: 95, 96))

In (23a), the *v*P phase is completed. Then, in (23b), *exactly* is adjoined to its *wh*-associate to be stranded within VP. At this point, the phasal complement VP must be spelled out because adjunction

occurs. Consequently, as shown in (23d), the *wh*-associate is trapped within VP and cannot undergo IM to the *v*P edge because it is already spelled out. Thus, the ungrammaticality of (22) obtains.

However, Zyman's (2022) analysis encounters an empirical problem. Let us examine (24), which involves anaphor binding.

(24) a. ? I bought [him$_i$ [<u>paintings</u> *near himself*$_i$]].
b. ? [<u>Which paintings</u> *near himself*$_i$] did you buy him$_i$ *t* ?

(24a) shows that the indirect object *him* binds *himself* within the direct object. In (24b), the direct object *which paintings near himself* undergoes IM to the sentence-initial position and *himself* can still establish a coreferential relation with *him*. This suggests that *himself* is reconstructed within VP and bound by *him* in (24b). However, under Zyman's (2022) analysis, the adjunct *near himself* is expected not to be reconstructed within VP when *which paintings* undergoes IM because it is obligatorily late-merged and thus does not have its copy within the domain. Thus, Zyman (2022) incorrectly predicts that no coreferential relation between *himself* and *him* is available in (24b).[5]

Unlike Zyman (2022), my proposed analysis can account for the distribution of the *wh*-associated *exactly* in terms of labeling without encountering such a problem. Moreover, in my labeling mechanism, there is no need to make use of late merge, which is indispensable for Zyman's (2022) analysis but in conflict with the Strong Minimalist Thesis because it increases computational burden (see Chomsky (2020, 2021)).

5. Conclusion

This paper has proposed a new labeling system, under which a set of {XP, YP} is labeled ambiguously while when one of the two constituents undergoes IM, the other is unambiguously selected as the label of the SO. Moreover, the labeled outcomes are subsequently evaluated and interpreted at the interfaces. Then, I have demonstrated that the distribution of the *wh*-associated *exactly* can be accounted for under this labeling system.

In this paper, I have argued that the *wh*-associated *exactly* forms an XP-YP configuration with its *wh*-associate. The existence of such a configuration poses a problem for Chomsky's (2013, 2015) LA, under which it cannot be labeled and interpreted at the interfaces. Moreover, Mizuguchi (2019) would fail to capture the fact that *exactly* cannot be stranded within VP, because under Mizuguchi's (2019) labeling system, lower copies are expected to serve like non-copies. Thus, I can conclude not only that my proposed analysis of the *wh*-associated *exactly* is more adequate than Zyman's (2022) analysis, but also that my labeling system is superior to Chomsky's (2013, 2015) and Mizuguchi's (2019).

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NOTES

[1] Following Mizuguchi (2019: 565), this paper employs the notation <X>, which represents the label of a set, to show that the set has the properties of X.

[2] In fact, *exactly* can also immediately precede its *wh*-associate, as shown in (i).

(i) Exactly what did they say to you? (Zyman (2022: 88))

According to Zyman (2022), such a sentence may sound callous, but that is not the case when *exactly* immediately follows its *wh*-associate or is stranded. Although the difference between the *exactly*-preceding cases and the *exactly*-following cases requires some explanation, this issue currently lies beyond the scope of this paper. Therefore, we will leave it for future research.

[3] In the derivation of (20a), the set of {*wh*P, AdvP} eventually lands at Spec, CP. This paper argues that in the final landing site, the set must be labeled as <*n*> as a result of the application of ambiguous labeling. If I adopt the feature-sharing strategy for labeling, like Chomsky (2013, 2015), the <*n*> label enables the set consisting of {*wh*P, AdvP} and CP to be labeled as <Q, Q> because *wh*P rather than AdvP carries the relevant feature. Conversely, if not, the set consisting of {*wh*P, AdvP} and CP can also be labeled by ambiguous labeling, and the <*n*> label of {*wh*P, AdvP} allows CP to be properly typed as a *wh*-interrogative clause (see Cheng (1991) for the clausal typing hypothesis). Then, the question of which possibility is more plausible arises, but it will be left for future research.

[4] Regarding sentences like (20b, c), where *exactly* is stranded at the sentence final position, I adopt Zyman's (2022) assumption that it is stranded at the rightward specifier of FocP and its *wh*-associate undergoes further IM to a higher position. Thus, I assume that the rightward specifier of FocP, the position in which *exactly* is stranded, is also not subject to any selectional requirement. See also Zyman (2022: 107) for alternative analyses regarding the derivation of such cases.

[5] Regarding the derivation of (22), one might wonder whether *exactly* can be adjoined to the lower copy of its *wh*-associate after the *wh*-associate undergoes IM to the *v*P edge. In fact, Zyman (2022) also excludes such a derivation in terms of multidominance (Citko (2011)) but not in terms of the copy theory of movement (Chomsky (1995)).

(i) a. [$_{vP}$ ____ [$_{vP}$ Subj *v*-V [$_{VP}$ ____ [t_V on the table]]]] *internal merge of what*
what

b. [$_{vP}$ ____ [$_{vP}$ Subj *v*-V [$_{VP}$ ____ [t_V on the table]]]] *adjunction of exactly*
what exactly

c. [$_{vP}$ ____ [$_{vP}$ Subj *v*-V $\boxed{[_{VP}\ ____\ [t_V \text{ on the table}]]}$]] *spellout of VP*
what exactly (cf. Zyman (2022: 95, 96))

In (ia), the *wh*-associate *what* moves to the *v*P edge. Subsequently, in (ib), *exactly* is adjoined to the multiply dominated *wh*-associate, but it cannot be adjoined only to the lower occurrence of the *wh*-associate. Then, in (ic), VP is spelled out. According to Zyman (2022), although there is a single SO *exactly* with two occurrences, it cannot be pronounced in the lower position. In this respect, Zyman (2022) argues that an SO is generally pronounced in the highest position it occupies. In this way, *exactly* fails to be stranded within VP even when adjoined to its *wh*-associate after *wh*-movement. Thus, Zyman (2022) also explains the ungrammaticality of (22) by ruling out the derivations in (i).

Furthermore, if (24b) has the derivation like (i), the coreferential relation between *himself* and

him becomes possible. This is because the multiply dominated *himself* must be pronounced in the highest position it occupies but can be interpreted in the original position at the same time. Therefore, (24b) does not poses a problem for Zyman's (2022) multidominance approach. Nevertheless, my proposal is more adequate theoretically than Zyman (2022) in that the former does not adopt the concept of multidominance, as well as late merge, which is against the Strong Minimalist Thesis.

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The Unique Scope Property of Japanese Negative Imperatives

Kaito Ozawa
Aichi Prefectural University

Keywords: syntax, Japanese negative imperatives, the exhaustive focus particle *dake* 'only'

1. Introduction

It is observed that the Japanese exhaustive focus particle *dake* 'only' takes fixed wide scope with respect to *nai* 'not' as in (1) (Shibata (2015a, b) among others).[1]

(1) a. Taroo-dake hasir-anakat-ta.
Taro-only run-Neg-Past
b. dake > nai: It is **only Taro** that **did not** run.
c.*nai > dake: It is **not the case** that **only Taro** ran.

However, in negative imperatives, the scope ambiguity arises between *dake* and the negative imperative marker *na*. For instance, the sentence in (2a) has two scope interpretations as in (2b) and (2c).

(2) a. Taroo-dake hasir-u-na!
Taroo-only run-Pres-Neg
b. dake > na: It is **only Taro** that **is prohibited** from running.
c. na > dake: It **is prohibited** that **only Taro** run.

When *dake* scopes over *na* as in (2b), the sentence in (2a) means that Taro is the only person that is prohibited from running. Given this meaning, the sentence in (2a) is felicitous only in a context where Taro is prohibited from running but all the other alternatives are allowed to run. In contrast, in the reading where *dake* scopes below *na* as in (2c), the interpretation is that Taro is prohibited from running alone. Under this interpretation, the sentence in (2a) is acceptable only in a context in which Taro is allowed to run only if he runs with other alternatives.

Let us now demonstrate the existence of the scope ambiguity between *dake* and *na*.

(3) a. Context: Taro, Ichiro and Jiro are Japanese Olympic representatives of marathon. They are all expected to run the race tomorrow, but Taro got his leg broken today, so he will not be able to run the race, but the other two members will. The coach said, …

b. ✓ Taroo-dake hasir-u-na! Taroo-no-kega-wa sinkoku-dakara.
Taroo-only run-Press-Neg Taro-Gen-injury-Top serious-because
'Only Taro don't run! It is because his injury is serious.'

c. dake > na: It is **only Taro** that **is prohibited** from running.

In this context, Taro is not allowed to run while all the alternatives other than Taro are allowed, and thus this context forces the *dake* > *na* interpretation. The fact that the sentence in (3b) is felicitous in this context indicates that *dake* can take wide scope with respect to *na*. Moreover, the same sentence is felicitously used in a context in which only the *na* > *dake* reading is possible as in (4).

(4) a. Context: Taro and Jiro are marathon runners. Their coach set a rule for them which forces them to practice together. They cannot practice running separately. One day, Taro broke the rule and ran alone. Unfortunately, the coach witnessed it, and said, …

b. ✓ Taroo-dake hasir-u-na! Jiroo-mo hasi-re!
'Only Taro don't run! Jiro run together!'

c. na > dake: It **is prohibited** that **only Taro** run.

This context forces the *na* > *dake* reading because Taro is allowed to run only if he runs with Jiro. If *dake* is always interpreted above *na*, the fact that the sentence in (4b) is felicitous is puzzling.

Based on the scope ambiguity between *dake* and *na*, I will demonstrate that the structure of Japanese negative imperatives differs from that of Japanese negative declaratives. In particular, based on Shibata's (2015a, b) analysis, according to which NegP is located between TP and *v*P in Japanese negative declaratives and *dake* cannot occur twice at the lower and higher copies of a moved element, I claim that, unlike *nai*, *na* is base-generated above TP, and the scope ambiguity between *dake* and *na* arises due to the optional movement of an element to which *dake* is attached.

This paper is organized as follows. In section 2, I introduce Shibata's (2015a, b) proposal for the structure of Japanese negative declaratives. In section 3, adopting Shibata's (2015a, b) analysis, I will put forth three possible analyses of the derivation of Japanese negative imperatives: the reconstruction analysis, the optional head movement (HM) analysis and the base-generation analysis. I will point out that the analyses other than the base-generation analysis have serious problems, and claim that the base-generation of *na* above T is the only possible derivation. In section 4, I conclude this paper and present some remaining issues.

2. Shibata (2015a, b): The Structure of Japanese Negative Declaratives

As mentioned above, *dake* always scopes above *nai*. Shibata (2015a, b) claims that NegP is located between TP and *v*P in Japanese, and that the fixed wide scope of *dake* stems from the two factors: the late adjunction of *dake*, which is necessary given Fox's (2002) Trace Conversion, and the obligatory movement of all the elements in *v*P, whose landing site is located above NegP.

Before the advent of the Minimalist Program, it was assumed that moved elements left traces, which were interpreted by Traces and Pronouns Rule (Heim and Kratzer (1998)). However, in the Minimalist

Program, the copy theory of movement is adopted where copies are left behind when elements move, and thus trace are abandoned. Because Traces and Pronouns Rule cannot apply to lower copies, a new mechanism to interpret movement chains is required. For this reason, Fox (2002) proposes Trace Conversion, which converts lower copies of moved elements into definite descriptions.[2] This operation consists of two steps in (5), which are illustrated in (6).

(5) a. Variable Insertion: (Det) Pred → (Det) [Pred $\lambda y(y = x)$]
b. Determiner Replacement: (Det) [Pred $\lambda y(y = x)$] → the [Pred $\lambda y(y = x)$] (Fox (2002: 67))

(6) Illustration
a. input: $[_{DP}$ every $[_{NP}$ book]
b. variable insertion: $[_{DP}$ every $[_{NP}\ \lambda y.\ y$ is a book $\wedge\ y = x_1]]$
c. determiner replacement: $[_{DP}$ the $[_{NP}\ \lambda y.\ y$ is a book $\wedge\ y = x_1]]$

After the application of Trace Conversion, the lower copy of *every book* becomes a definite expression which plays the same role as traces. The important point is that determiner replacement only targets a determiner and does not affect adjuncts.

As for the syntactic status of *dake*, Aoyagi (2006) claims that it is not a determiner but an adjunct. Given this, Shibata (2015a, b) points out that *dake* is not the target of determiner replacement. Therefore, if *dake* is base-generated at the lower copy of a moved element, it is unaffected and interpreted twice at the higher and lower copies. Shibata (2015a, b) argues that when *dake* is interpreted twice, it results in an anomalous meaning. In order to avoid this problem, *dake* is required to occur only at the final landing site of a moved element. Considering this, Shibata (2015a, b) argues that *dake* is adjoined to the highest copy by some form of late adjunction proposed by Lebeaux (1988).

Moreover, according to Shibata (2015a, b), all the elements in *v*P must move above NegP as in (7).

(7) $[_{TP}\ XP_i\ [_{TP}\ YP_j\ [_{TP}\ ZP_k\ [_{NegP}\ [_{vP}\ XP_i\ [_{VP}\ YP_j\ [ZP_k\ V]]\ v]\ Neg]\ T]]]$

Shibata (2015b) claims that only the derivations in which all the elements within *v*P move out can meet the condition imposed by the morphological component, where V, *v*, Neg and T form a single word via morphological merger (Marantz 1988). Shibata (2015b) argues that morphological merger is conditioned by the structural adjacency in (8).

(8) Structural Adjacency
X and Y are structurally adjacent if and only if there is no overt Z which is asymmetrically c-commanded by X and asymmetrically c-commands Y. (Shibata (2015b: 146))

Given (8), if an element intervenes between the relevant heads, the derivation is filtered out.

Due to the obligatory movement of elements in *v*P above NegP and the late-adjunction of *dake* to the

highest copy, *dake* only occurs above NegP. As illustrated in (9), there is no copy of *dake* below *nai*. Therefore, *dake* cannot scope below *nai*, always leading to the wide scope of *dake* over *nai*.[3]

(9) a. Taroo-dake hasir-anakat-ta.

b. $[_{NegP}\ [_{vP}\ [_{DP}\ \varnothing_{the}\ [_{NP}\ \text{Taro}]]\ [_{VP}\ \text{hasir}]\ v]\ \text{nai}]$

c. Movement of the subject

$[_{TP}\ [_{DP}\ \varnothing_{the}\ [_{NP}\ \text{Taro}]]\ [_{NegP}\ [_{vP}\ [_{DP}\ \varnothing_{the}\ [_{NP}\ \text{Taro}]]\ [[_{VP}\ \text{hasir}]\ v]]\ \text{nai}\ ]\ \text{ta}]$

d. Lase adjunction of *dake*

$[_{TP}\ [_{DP}\ [_{DP}\ \varnothing_{the}\ [_{NP}\ \text{Taro}]]\text{-}\boxed{\textbf{dake}}\ ]\ [_{NegP}\ [_{vP}\ [_{DP}\ \varnothing_{the}\ [_{NP}\ \text{Taro}]]\ [[_{VP}\ \text{hasir}]\ v]]\ \boxed{\textbf{nai}}\ ]\ \text{ta}]$

e. Variable insertion

$[_{TP}\ [_{DP}\ [_{DP}\ \varnothing_{the}\ [_{NP}\ \text{Taro}]]\text{-}\boxed{\textbf{dake}}\ ]\ \lambda 1\ [_{NegP}\ [_{vP}\ [_{DP}\ \varnothing_{the}\ [_{NP}\ \text{Taro}\ x \wedge x = y_1]]\ [[_{VP}\ \text{hasir}]\ v]]\ \boxed{\textbf{nai}}\ ]\ \text{ta}]$

f. Determiner replacement

$[_{TP}\ [_{DP}\ [_{DP}\ \varnothing_{the}\ [_{NP}\ \text{Taro}]]\text{-}\boxed{\textbf{dake}}\ ]\ \lambda 1\ [_{NegP}\ [_{vP}\ [_{DP}\ \text{the}\ [_{NP}\ \text{Taro}\ x \wedge x = y_1]]\ [[_{VP}\ \text{hasir}]\ v]]\ \boxed{\textbf{nai}}\ ]\ \text{ta}]$

Shibata's (2015a, b) claims are summarized as follows. *Dake* cannot occur twice because it results in an uninterpretable structure. In order to avoid this problem, *dake* needs to be acyclically adjoined to the highest copy of a moved element. Since all the elements in *v*P are forced to move above NegP in Japanese, there is no copy of *dake* below *nai*, preventing *nai* from outscoping *dake*.

3. The Derivation of Japanese Negative Imperatives

In this section, based on Shibata's (2015a, b) analysis, I propose the structure of Japanese negative imperatives. Recall that contrary to the negative declaratives, *dake* can take both wide and narrow scope with respect to *na* in Japanese negative imperatives as in (10a). The same result obtains when *dake* is adjoined to an object as in (10b).

(10) a. Taroo-dake hasir-u-na!
Taroo-only run-Press-Neg

i. dake > na: It is **only Taro** that **is prohibited** from running.

ii. na > dake: It **is prohibited** that **only Taro** run.

b. Niku-dake tabe-ru-na!
meat-only eat-Pres-Neg

i. dake > na: It is **only meat** that **is prohibited** to eat.

ii. na > dake: It **is prohibited** to eat **only meat**.

There are three possible analyses to capture the scope ambiguity between *dake* and *na*: the reconstruction analysis, the optional HM analysis and the base-generation analysis.

The first possibility is the reconstruction analysis, according to which *na* is base-generated at the same position as *nai* and *dake* is adjoined at the lower copy of moved elements. The wide scope of *dake* over *na* is derived when *dake* at the higher copy is interpreted. On the other hand, when *dake* at the higher copy is ignored and *dake* at the lower copy is used for interpretation, *dake* takes narrow scope

below *na*. These options are illustrated in (11).

(11) The reconstruction analysis

a. dake > na:

[$_{TP}$ [Subj+**dake**]$_i$ [$_{NegP}$ [$_{vP}$ [Subj+dake]$_i$ [$_{VP}$ hasir] *v*] **na**] ru]

b. na > dake:

[$_{TP}$ [~~Subj+dake~~]$_i$ [$_{NegP}$ [$_{vP}$ [Subj+**dake**]$_i$ [$_{VP}$ hasir] *v*] **na**] ru]

However, this analysis is rejected since when *dake* scopes over *na*, *dake* is interpreted twice, causing improper meaning. Given that *dake* cannot be interpreted multiple times, a viable derivation is limited to the optional HM of *na* to a head which is located higher than T or its base-generation above T.

In the optional HM analysis, all the elements in *v*P move above NegP, followed by the late-adjunction of *dake* to moved elements at the final landing site. Regarding the derivation of *na*, it is base-generated below T and optionally moves above T, leading to the scope ambiguity as in (12).

(12) a. dake > na:

[$_{TP}$ [Subj]$_i$+**dake** [$_{NegP}$ [$_{vP}$ [Subj]$_i$ [$_{VP}$ hasir] *v*] **na**] T]

b. na > dake:

[$_{XP}$ [$_{TP}$ [Subj]$_i$+**dake** [$_{NegP}$ [$_{vP}$ [Subj]$_i$ [$_{VP}$ hasir] *v*] **na**] T] **na**]

When *na* remains below T, the *dake* > *na* interpretation obtains as in (12a). On the other hand, if *na* moves above T and c-commands *dake*, *na* scopes over *dake* as in (12b).

On the other hand, in the base-generation analysis, *na* is base-generated above T and does not move. *Dake* takes scope below *na* when *dake* is adjoined to elements which remain in TP, whereas the wide scope reading of *dake* results when focused elements optionally move above *na* and *dake* is acyclically attached to them. These derivations are shown in (13).

(13) a. na > dake:

[$_{XP}$ [$_{TP}$ [Subj]$_i$+**dake** [$_{vP}$ [Subj]$_i$ [$_{VP}$ hasir] *v*] T] **na**]

b. dake > na:

[$_{XP}$ [Subj]$_i$+**dake** [$_{TP}$ [Subj]$_i$ [$_{vP}$ [Subj]$_i$ [$_{VP}$ hasir] *v*] T] **na**]

In (13a), *dake* falls under the scope of *na*, leading to the *na* > *dake* interpretation. In contrast, *dake* takes wide scope with respect to *na* in (13b) since *dake* is adjoined to the element which is located above *na*. In the next subsections, based on Baker's (1985) Mirror Principle, I will argue against the optional HM analysis and contend that the base-generation analysis outweighs the optional HM analysis.

3.1. Argument against the Optional Head Movement Analysis

In the optional HM analysis, the head movement of *na* triggers the scope ambiguity. In other words, the head movement has the semantic effect, and thus it is inevitable to make the assumption in (14).

(14) Assumption of the optional HM analysis

The head movement of *na* happens not at PF but in the narrow syntax.

In this connection, what is crucial in the following discussions is the relationship between the morphology and the narrow syntax. As for the relationship between them, Baker (1985) proposes the Mirror Principle in (15), according to which morphological derivation mirrors operations in the narrow syntax.

(15) The Mirror Principle

Morphological derivations must directly reflect syntactic derivations (and vice versa).

(Baker (1985: 375))

The Mirror Principle states that "the morphological ordering known via the morpheme order must match the syntax" (Baker (1985: 378)). This means that if affix A precedes affix B within a word, a syntactic process which adds affix A to a root is required to precede the merger of affix B to the root.

Given the Mirror Principle and the assumption that head movement of *na* takes place in the narrow syntax, it is impossible to derive the correct morpheme order of a negative imperative verb in the optional HM analysis. The important point is that, while the tense morpheme follows *nai* within a negative declarative verb as in (16a), it precedes *na* within a negative imperative verb as in (16b).

(16) a. hasir-anakat-ta
verb-nai-tense

b. hasir-u-na
verb-tense-na

Under the optional HM analysis, *na* is base-generated between T and *v*, and then it moves above T to scope over *na*. This movement must proceed in a roll-up fashion and form a complex head with T on the way to the final landing site, the head of XP, as in (17).[4]

(17) $[_{XP}\ [_{TP}\ [\text{Subj}]_i\text{+dake}\ [_{NegP}\ [_{vP}\ [\text{Subj}]_i\ [_{VP}\ \text{V}]\ v]\ \mathbf{na_j}]\ \mathbf{[T+na_j]_k}]\ \mathbf{[X+[T+na_j]_k]}\ ]$

Roll-up movement

Since the complex head is formed via head movement, which takes place in the narrow syntax, the Mirror Principle requires its morphological structure to reflex the order in which each head is merged. In the derivation shown in (17), the merger of *na* precedes that of T, and thus it is predicted that *na* precedes the tense morpheme within a negative imperative verb as in (18), which is contrary to the fact.

(18) a. Complex head formed via Neg-to-T-to-X movement

$[_X\ [_T\ [\text{na}]\text{-T}]\text{-X}]$

b. The morpheme order

na-T-X

c. Result

* hasir-na-ru-∅

run-na-T-X

Therefore, if *na* is introduced into the derivation at the same position as *nai*, the correct morpheme order cannot be derived.

In this analysis, in order for *na* to follow the tense morpheme, *na* is forced to move directly above T. In that case, the desired result obtains by pronouncing each head. However, this direct movement of *na* above T violates the Head Movement Constraint (Travis (1984)), which states that a head can move only to the closest higher head which contains it.

(19) The Head Movement Constraint (HMC)

An X^0 may only move into the Y^0 which properly governs it. (Travis (1984: 131))

Therefore, the movement in (20) is prohibited.

(20) *na* cannot move directly above T due to the HMC

$[_{XP}\ [_{TP}\ [Subj]_i\text{+dake}\ [_{NegP}\ [_{vP}\ [Subj]_i\ [_{VP}\ V]\ v]\ \mathbf{na_j}]\ T]\ \mathbf{X+na_j}\ ]$

The HMC violation

Consequently, in the optional HM analysis, the scope ambiguity between *dake* and *na* and the desired verb form are not captured at the same time.

Given the discussion thus far, the problem of the HM analysis is summarized as follows. Taking the Mirror Principle into consideration, it is predicted that the morphemes in a negative imperative verb are aligned in the wrong order. In order to avoid this problem, *na* is forced to move directly above T, but this violates the HMC. Therefore, in the optional HM analysis, the scope ambiguity between *dake* and *na* and the correct morpheme order cannot be derived at the same time. Since this problem is difficult to overcome, the base-generation analysis of *na* above T is the only feasible derivation as shown below.

3.2. Argument for the Base-Generation Analysis

In the base-generation analysis, the problem of the morpheme order does not arise. Since the merger of *na* applies after that of T, the Mirror Principle allows only the verb form, in which the tense morpheme is followed by *na*. This is the desired form of a negative imperative verb as in (21).

(21) a. The narrow syntax

$[_{TP}\ [Subj]_i\ [_{vP}\ [Subj]_i\ [_{VP}\ \text{hasir}]\ v]\ T]\ \text{na}]$

b. The morpheme order

V-v-T-na

c. Result

✓hasir-u-na

With regard to the scope ambiguity between *dake* and *na*, it is captured by the optional movement of elements to which *dake* is late-adjoined. When *dake* is interpreted below *na*, elements to which *dake* attaches remain within TP and are c-commanded by *na* as in (22a). In contrast, the wide scope of *dake* over *na* is derived when *dake* is adjoined to elements which move above *na* as in (22b).

(22) a. na > dake:

$[_{XP}$ $[_{TP}$ [Subj]$_i$+**dake** $[_{vP}$ [Subj]$_i$ [VP hasir] *v*] u] **na**]

dake > na:

b. $[_{XP}$ [Subj]$_i$+**dake** $[_{TP}$ [Subj]$_i$ $[_{vP}$ [Subj]$_i$ [VP hasir] *v*] u] **na**]

In (22a) and (22b), *dake* occurs once, avoiding the problem caused by multiple occurrences of *dake*.

This analysis is preferable to the other two analyses. With regard to the reconstruction analysis, since *dake* is merged at the base-generated position of moved elements, the copy of *dake* occurs at multiple positions, causing a structure to be uninterpretable. The desired result does not obtain in the optional HM analysis, either. While this analysis can obtain the scope ambiguity between *dake* and *na*, it always outputs wrong morpheme order for a negative imperative verb, because the merger of *na* applies earlier than that of the tense morpheme. Given the Mirror Principle, which requires a morphological structure to match a syntactic structure, a negative imperative verb in which *na* precedes the tense morpheme is always formed. These problems do not arise in the base-generation analysis. The intended meaning obtains without *dake* being interpreted twice since *dake* is acyclically adjoined to the highest copy of a moved element. In addition, because *na* is introduced into the derivation after the tense morpheme is merged, the morphemes are correctly aligned. Therefore, the scope ambiguity between *dake* and *na* indicates that *na* is base-generated at a higher position than T.

4. Conclusion

In this paper, I first provided a new observation regarding the scope ambiguity between *dake* and *na*. I adopted Shibata's (2015a, b) claims that all the elements in *v*P must move above NegP and that *dake* cannot be interpreted twice because it causes improper meaning. I compared three possible strategies to capture the scope ambiguity observed in Japanese negative imperatives, and pointed out that the reconstruction analysis and the optional head movement analysis face serious challenges. In the reconstruction analysis, the copy of *dake* appears twice, which leads to an improper result. The optional head movement analysis also has a problem in that it always creates a negative imperative verb in which *na* precedes the tense morpheme. In contrast to these analyses, the base-generation analysis is free from these problems. *Dake* is acyclically attached to the highest copy of moved elements, thereby avoiding the semantic anomaly. Furthermore, since the merger of *na* applies after that of the tense morpheme, a negative imperative verb is well-formed. Therefore, it is concluded that *na* is base-generated above T.

Although I have argued for the base-generation analysis, there are several remaining issues. The first is the formation of a negative imperative verb. Shibata (2015a, b) argues that V, *v*, Neg and T undergo morphological merger to form a single word. The question is whether a negative imperative verb is also

formed via morphological merger of V, *v*, Neg, T and *na*. Given the discussion in this paper, it is suggested that elements above T are not subject to morphological merger. This is because if *na* goes through morphological merger with lower heads, it is predicted that nothing can intervene between *na* and T, and thus elements to which *dake* is adjoined are required move out of TP, blocking the *na* > *dake* reading. Therefore, if the analysis of Shibata (2015a, b) and the base-generation analysis are on the right track, it implies that *na* does not undergo morphological merger. However, I leave this issue for the future work.

The second issue is the motivation of optional movement of elements to which *dake* is late adjoined. I have proposed the optional movement of focused elements to capture the scope ambiguity. However, the motivation of this movement is unclear. That being said, there are two possibilities: optional focus movement and scrambling. If the movement of focused elements is focus movement, it is driven by some kind of focus feature. However, given that the movement of focused elements is not obligatory, the presence of the focus feature should be optional, and thus it has to be revealed what is the difference between when the feature is present and when it is not. The other possibility is scrambling, according to which a focused element is scrambled over *na*, and *dake* is adjoined to the scrambled element. However, whether the scrambling is motivated by some feature or occurs completely freely remains unclear.

The third is the fixed narrow scope effect of *dake* due to the presence of case particles. In this paper, I have dealt with the case in which a case particle is absent. In the case where there is an overt case particle, the scope ambiguity disappears as in (23).

(23) a. Taroo-dake-ga hasir-u-na!
Taro-only-NOM run-PRES-NEG
b. ??dake > na: it is **only Taro** that **is prohibited** from running.
c. na > dake: it **is prohibited** that **only Taro** runs.

The present analysis has nothing to say about this phenomenon, and this is left for the future research.

NOTES

[1] The same scope pattern as (1) also obtains when *dake* is adjoined to the object as in (i).

(i) Taroo-wa niku-dake tabe-nakat-ta.
Taro-Top meat-only eat-Neg-Past
a. dake > nai: It is only meat that Taro did not eat.
b.*nai > dake: It is not the case that Taro eat only meat.

[2] Fox (2002) assumes that Trace Conversion applies in the narrow syntax. However, Shibata (2015a, b) points out that it violates Chomsky's (1995) Inclusiveness Condition. For this reason, I follow Shibata (2015a, b) in that this operation applies during the syntax-semantics mapping.

[3] I assume that proper nouns are covert definite descriptions, whose head is a covert definite determiner, and that the pronounced part is a predicate as in (ii) (see Elbourne (2005) and Matushansky (2008)).

(ii) $[_{DP}\ \varnothing_{the}\ [_{NP}\ \text{Taro}]]$

[4] According to Dékány (2018), the restriction that HM must proceed in a roll-up fashion is a subcase of Lapointe's (1980) Generalized Lexical Hypothesis.

(iii) Generalized Lexical Hypothesis
No syntactic rule can refer to elements of morphological structure. (Lapointe (1980: 8))

A complex head derived via HM ultimately forms a single word, and each head in the complex head corresponds to each morpheme in a word. According to (iii), a syntactic rule cannot apply to a head which is responsible for a morpheme, so it must be applied to the entire complex head. Therefore, HM proceeds in a roll up fashion, banning extraction of a head within a complex head.

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Japanese Noun Classes and Numerals*

Akira Watanabe
University of Tokyo

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1. Introduction

Chomsky (2010: 62) lists six basic tasks for the study of evolution of language. Among them is the need to account for the lexical items, which are atoms of computation. At the same time, Chomsky (2012: 35) remarks that while philosophers are interested in the meaning of nouns, linguists work mostly on verbal concepts. Though one might ask how accurate his assessment is, one cannot deny the fact that for nouns, there is nothing comparable to Levin's (1993) monumental work on verb classes in English, with 49 major classes and some further subdivisions. Levin's classification combines semantic factors with patterns of argument structure alternation, a strictly syntactic criterion. I would like to suggest that it is now time to put an analogous project concerning noun classes on the serious research agenda.

In the past, there were proposals about noun classes in English, especially on the basis of syntactic criteria related to the mass/count distinction. Allan (1980) thus lists eight classes, whereas Grimm and Wahlang (2021) posit 13. Given Levin's classification of verbs, however, these numbers are very small. The difficulty facing the study of noun classes is the number of criteria that need to be identified. With regard to the mass/count distinction, number marking and the choice of determiners matter, but these are not the only items that can be combined with nouns. In distinguishing seven types of relational nouns, Anttila and Fong (2004) refer to the syntactic realization of arguments taken by the head noun. In this short note, I will demonstrate that the pseudopartitive construction provides another set of criteria.

2. Case Studies: Container Nouns vs. Group Nouns

The recognition that a proper analysis of the pseudopartitive construction requires identifying types of nouns that can appear in front of the head of the construction is expressed by Lehrer (1986). Consider group nouns, which require a plurality (Barker 1992, de Vries 2021).

(1) a. one committee of women/*a woman
b. a stack of plates/*a plate

Barker regards the plural nominal in question as a complement, but the tradition stemming from Jackendoff (1977) includes the structure with group nouns among the class of pseudopartitives.

Jackendoff (1977: 121) notes that certain cases involving group nouns can be structurally ambiguous. Without pursuing the matter concerning the treatment of the English constructions, however, I will take up in this short note the Japanese counterparts, which provide a clear piece of evidence that pseudopartitives with a group noun are possible. Let me start with the discussion of pseudopartitives that feature a container noun as the background against which we can address the issue of noun classes. Interestingly, group nouns and container nouns contrast sharply in pseudopartitive structure.

2.1. Container Nouns

An important characteristic of Japanese pseudopartitives noted by Watanabe (2006) is that there are multiple structural possibilities, as illustrated below.

(2) a. [Danbooru-bako(-ni) futa-hako]-no gengogaku-no hon-o ofisu-ni hakobikonda.
cardboard-box -Dat two-Cl-Link linguistics-Link book-Acc office-to brought.in
'I brought two cardboard boxes of linguistics books into my office.'
b. Gengogaku-no hon [danbooru-bako(??-ni) futa-hako]-o ofisu-ni hakobikonda.
c. Gengogaku-no hon-o [danbooru-bako(-ni) futa-hako] ofisu-ni hakobikonda.

The bracket phrase can appear in front of the projection of the head noun, between the head noun and the case particle, or after the case particle. Watanabe (2006) proposes that these three types of structure are related by movement.

Now, what separates pseudopartitives featuring containers from the rest is the fact that the specialized classifier -*hai* must be used for a subset of container nouns in the pseudopartitive structure, as the contrast between (3a) and (3b) indicates, an observation also due to Watanabe (2006).

(3) a. Gurasu(-ni) ni-hai-no biiru-de yopparatta.
glass-Dat two-Cl-Link beer-with got.drunk
'I got drunk with a glass of beer.'
b. * Gurasu(-ni) ni-ko-no biiru-de yopparatta.
c. Gurasu ni-ko-o watta.
glass-two-Cl-Link-Acc broke
'I broke two glasses.'

The classifier -*ko*, used with the container noun *gurasu* in contexts other than pseudopartitives as in (3c), is impossible in the pseudopartitive structure. The classifier -*hai* is a Japanese-specific criterion that defines a subclass of container nouns.

2.2. Group Nouns

Let us now turn to group noun pseudopartitives, which also display multiple placement possibilities, just like container noun pseudopartitives, as in (4).

(4) a. Futa-setto-no tsumiki-o katta
two-set-Link block-Acc bought
'I bought two sets of blocks.'
b. Tsumiki futa-setto-o katta.
c. Tsumiki-o futa-setto katta.

Notice, however, that the numeral is directly linked to the group noun *setto* without a classifier in (4). In fact, if the classifier appropriate for this group noun is used, the pseudopartitive structure is ungrammatical, as indicated by the ill-formedness of (5a), which contrasts with (4c).

(5) a. *Tsumiki-o setto(-ni) futa-tsu katta.
block-Acc set-Dat two-Cl bought
'I bought two sets of blocks.'
b. Tsumiki-no setto-o futa-tsu katta.
block-Gen set-Acc two-Cl bought

The head-complement structure, illustrated in (5b), with the interpretation hard to distinguished from the one intended for (5a), is perfectly acceptable with the ordinary numeral-classifier sequence appearing after the case particle, on the other hand. Though space limitations prevent demonstration with a full array of examples, the pattern is systematic. Since container noun pseudopartitives do not have to omit the classifier, the obligatory absence of the classifier in pseudopartitives is a criterion that distinguishes group nouns from container nouns. It should also be stressed that the pseudopartitive structure and the head-complement structure are clearly distinguished for group nouns in Japanese.

I would also like to add that Japanese group nouns seem to require plural nouns, too. What is likely to be a mass noun cannot be used either in the pseudopartitive structure or in the head-complement structure, as shown below.

(6) a. * Shio-o futa-setto katta.
salt-Acc two-set bought
'I bought two sets of salt.'
b. * Shio-no setto-o futa-tsu katta.
salt-Gen set-Acc two-Cl bought
'I bought two sets of salt.'

These examples become acceptable once it is understood that there are multiple small bottles containing salt and that sets of these bottles are meant, but this empirical wrinkle confirms the plurality requirement. We are led to conclude that group nouns can diagnose the mass/count distinction in Japanese.

2.3. Combining a Numeral and a Noun without the Mediation of a Classifier

Let me close the discussion of group nouns and container nouns by commenting on the significance

of the classifier-less combination of numerals and nouns.

In the first place, there are a sizable number of nouns that allow the classifier-less combination with a numeral. Tōjō's (2014) study of a newspaper corpus lists more than 200 hundred nouns that can be directly combined with a numeral, including the wh-numeral *nan*. Tōjō attempts a semantic classification of these nouns and remarks that container nouns occupy a prominent place, an observation that dates back to Backus (1972). At the same time, there are container nouns that do not allow omission of the classifier, *danbooru-bako* in (2) and *gurasu* in (3) being among them. The criterion discussed above is based on this latter subclass of container nouns. Let me also add that unaware of Tōjō's work, Watanabe (2023) observes on the basis of a smaller corpus that a subset of container nouns and group nouns contrast in the morphology of numerals that they combine with directly.

Obviously, whether a classifier intervenes in the combination of a numeral and a noun is an important syntactic criterion. If there is a tendency for certain noun classes of nouns to omit a classifier, that should be taken into account in identifying noun classes. Lower-level morphological details may also be sensitive to nouns classes. One might object that the language-specific nature of classifiers casts doubt on the validity of this criterion at the UG level. It should be pointed out, however, that Chomsky (1991), drawing attention to the rapidity and regularity of lexical-conceptual development, suggests that children are simply acquiring labels for concepts that they already have. It is quite likely that noun classes are based on universal conceptual resources that can be recruited for the lexicon. If there is a UG basis for noun classes, language-specific characteristics can be added on top of that. One should also recall Lehrer's (1986: 121) observation concerning English that containers can be distinguished from standard measures by their ability to be accompanied by *-ful* in pseudopartitives. The criterion is specific to English, but the class of container nouns may be universal. The same thing can be said about the class of group nouns.

3. Conclusion

To conclude, group nouns and (a subset of) container nouns are shown to behave differently in pseudopartitives, leading us to posit two distinct classes of nouns. This is just a beginning, because we need to ask why they behave the way they do. Watanabe (2018) suggests that the classifier-less combination of numerals and nouns reflects defective number marking. Once we have this understanding, cross-linguistic comparison becomes easier.

Turning to a bigger picture, we can entertain the possibility that the ability to participate in the pseudopartitive construction provides a criterion for one broad class of nouns. The distinction between the head-complement structure and the pseudopartitive construction is clearly visible in Japanese due to its word order characteristics. This means that we can delineate the class of nouns that can be used in pseudopartitives without much difficulty. I also hope to have shown that pseudopartitive constructions provide a fertile ground for exploring noun classes. Rothstein (2017: 195) gives a more detailed list of noun types that can appear in pseudopartitives than Lehrer (1986). There is a lot more to be done in this area. And don't forget that it is also necessary to identify noun classes that are not used in the pseudopartitive construction.

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(i) I long for ……

(ii) I manage to ……

4. Takami (1996:51)には、以下のような……

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