

Papers from the Forty-Second Conference
November 23-24, 2024
and from
the Seventeenth International Spring Forum
May 25-26, 2024
of
The English Linguistic Society of Japan

JELS 42

日本英語学会第42回大会（名古屋大学）
第17回国際春季フォーラム（京都大学）
研究発表論文集

The English Linguistic Society of Japan
2025

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本論集は、2024年5月25日、26日に京都大学にて開催された日本英語学会第17回国際春季フォーラム、および同年11月23日、24日に名古屋大学にて開催された日本英語学会第42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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[I]

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Without-Absolute Constructions in English *

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Keywords : *without*-absolute constructions, grammatical extensions, the dynamic view of language

1. Introduction

With-absolute constructions (hereafter *with*-ACs) such as those in (1), where *with* takes a clausal complement, have attracted a great deal of interest in the study of English grammar (Sakakibara (1982); McCawley (1983); among others). (The symbols in parentheses denote the acceptability judgments of Speakers A, B, C, and D, respectively.)

- (1) a. John sat with tears streaming down his face. (OK/OK/OK/OK)
b. John came in with a parakeet on his head. (OK/OK/OK/OK)

By contrast, to the best of my knowledge, little attention has been paid to *without*-absolute constructions (henceforth *without*-ACs) such as those in (2) (Hantson (1983) being a notable exception).¹

- (2) a. John sneaked into the room without anyone noticing. (OK/OK/OK/OK)
b. John was sleeping without any clothing on his upper body. (OK/OK/OK/OK)

In this paper, we first investigate a number of interesting properties of *without*-ACs and discuss some problems that arise under a feature-based approach within the Minimalist framework. We then argue that *without*-ACs develop by analogy to *with*-ACs during certain intermediate stages of the acquisition of English, along the general lines of Kajita (1977, 1997, 2004, *inter alia*). This analysis provides a principled account of the existence and properties of *without*-ACs.

2. Basic Facts

2.1. Meanings

Sakakibara (1982) observes that *with*-ACs express a variety of meanings: “attendant circumstance,” “time,” “reason,” “condition,” and “concession.” All but concessive interpretations are available for *without*-ACs, as illustrated in (3).²

- (3) a. John was sleeping without any clothing on his upper body. (OK/OK/OK/OK)

- b. Without anyone noticing, John sneaked into the room. [“When/While no one noticed, ...”]
(OK/OK/OK/OK)
- c. Without John at home, Mary enjoyed her day off. [“Because John was not at home, ...”]
(OK/OK/OK/OK)
- d. Without John at home, Mary would feel terrible. [“If John was not at home, ...”]
(OK/OK/OK/OK)
- e. Without John at home, Mary enjoyed her day off. [“Although John was not at home, ...”]
(*/?/?/*/?/?)

2.2. Predicates

It is well known that *with* can select both verbal and verbless clauses, as illustrated in (4) and (5), respectively.³

- (4) a. John sat with tears streaming down his face. (OK/OK/OK/OK) (VP)
- b. John fell asleep with his radio turned on. (OK/OK/OK/OK) (VP)
- c. With Mary to look after his children, John was optimistic about his future. (OK/OK/?/OK) (TP)
- (5) a. John came in with a parakeet on his head. (OK/OK/OK/OK) (PP)
- b. The dwarf faded into darkness with us barely able to say good-bye. (OK/OK/OK/OK) (AP)
- c. You cannot get lost with Mary your guide. (*/?/?*/?/?) (Predicative DP)

Without also selects both types of clauses. There is, however, idiolectal variation in the availability of adjectival small clauses in *without*-ACs like the one in (7b).⁴

- (6) a. John sneaked into the room without anyone noticing. (OK/OK/OK/OK) (VP)
- b. The troops retreated from the village without a shot fired. (OK/OK/OK/OK) (VP)
- c. Without Mary to look after his children, John would need to work from home. (OK/OK/?/OK)
(TP)
- (7) a. John was sleeping without any clothing on his upper body. (OK/OK/OK/OK) (PP)
- b. The dwarf suddenly disappeared without anyone able to say good-bye. (*/?/OK/?*) (AP)
- c. You would be better off without Mary your guide. (*/?/?*/?/?) (Predicative DP)

2.3. Markedness

As pointed out by Hantson (1983), passives as in (8)–(11) and expletives as in (12)–(15) tend to be more degraded in *without*-ACs than in *with*-ACs, especially when *with(out)* takes an infinitival complement, as in (10)–(11) and (14)–(15).⁵

- (8) a. With his children being looked after by Jane, his future was looking brighter.
- b. Without his children being looked after by Jane, his life would be pretty gloomy.
(Hantson (1983: 57))
- (9) a. With his children being looked after by Mary, John was optimistic about his future.

- (??/OK/?/?)
- b. Without his children being looked after by Mary, John would need to work from home.
(??/OK/*/?)
- (10) a. With his children to be looked after by Jane, his future was looking brighter.
b.*? Without his children to be looked after by Jane, his life would be pretty gloomy.
(Hantson (1983: 57))
- (11) a. With his children to be looked after by Mary, John was optimistic about his future.
(??/?/?*/OK)
b. Without his children to be looked after by Mary, John would need to work from home.
(*/?/*/*)
- (12) a. With there being someone to look after his children, his future was looking brighter.
b. Without there being someone to look after his children, his life would be pretty gloomy.
(Hantson (1983: 60))
- (13) a. With there being someone to look after his children, John was optimistic about his future.
(OK/OK/OK/OK)
b. Without there being someone to look after his children, John would need to work from home.
(OK/?/?/OK)
- (14) a.?? With there soon to be someone to look after his children, his future was looking brighter
b. * Without there soon to be someone to look after his children, his life would be pretty gloomy.
(Hantson (1983: 60))
- (15) a. With there soon to be someone to look after his children, John was optimistic about his future.
(?*/?/?/OK)
b. Without there soon to be someone to look after his children, John would need to work from home. (*/?/?/?/OK)

3. Problems

Within the Minimalist framework, one could assume that in *with(out)*-ACs of the form [_{PP} *with(out)* [_{DP_{Subj}} XP_{Pred}]], *with(out)* is specified as [P, uD, uX] (where X is T, V, P, A, or D), i.e. *with(out)* c-selects a DP and an XP (cf. Adger (2003: 83ff.)).^{6,7} Alternatively, it could be assumed that a functional head mediating predication (e.g. [*with(out)* [_{FP} DP_{Subj} [_{F'} F XP_{Pred}]]) determines the syntactic types of predicates that *with(out)*-ACs can take.

There are, however, two problems with these analyses. First, they have nothing to say about interspeaker variation in the availability of predicates in *without*-ACs. All we could say under those analyses would be that *with(out)* or the F head is featurally specified in such-and-such a way. The other problem is that the analysis does not account for why passives as in (8)–(11) and expletives as in (12)–(15) tend to be more degraded in *without*-ACs than in *with*-ACs. Given that *with*- and *without*-ACs are structurally analogous (i.e. [_{PP} *with(out)* [_{DP} XP]]) and that both passives and expletives are allowed in canonical TP complements, as in (16) (taken from Hantson (1983: 56)), it seems rather difficult to provide a natural account of the facts solely in terms of feature specification.

- (16) a. I expect the problem to be solved by John.
 b. I expect there to be many people at the party.

To sum up, the peculiarities of *without*-ACs are regarded as merely an accident under a feature-based analysis.

4. A Dynamic Approach

4.1. Grammatical Dynamism

We argue that the properties of *without*-ACs receive a straightforward account within the framework of Kajita (e.g. 1977, 1997, 2004). Kajita's non-instantaneous model of language acquisition, where Language Acquisition Device (LAD) makes reference not only to Primary Linguistic Data (PLD) but also to the properties of the current grammar, assumes step-by-step grammatical extensions. The ways in which the current grammar can be developed into the next grammar are determined by inter-stage constraints of type (17).⁸

- (17) If $G(L,i)$ has property P , then $G(L,i+1)$ may, though need not, have property P' , and if $G(L,i)$ does not have P , then $G(L,i+1)$ cannot have P' unless some other constraint in the system makes P' possible in $G(L,i+1)$. [$G(L,i)$: the grammar of a language L at stage i ; $G(L,i+1)$: the grammar of the language at the next stage] (Kajita 1997: 384)

4.2. An Extension Analysis

We propose that *without*-ACs are derived from ACC-*ing* complements on the model of *with*-ACs in the course of the acquisition of English. Suppose that there is a certain stage of the acquisition of English, call it S_i , at which *with*-ACs (e.g. (18)) are already available and ACC-*ing* complements (e.g. (19)) become available.

- (18) a. John sat with tears streaming down his face. (OK/OK/OK/OK)
 b. John came in with a parakeet on his head. (OK/OK/OK/OK)
 (19) a. I don't mind {John/him} smoking cigars. (Hantson (1983: 62))
 b. After retirement it was also revealed the *yokozuna's* legendary accomplishments came despite him being blind in one eye. (*The Japan Times*, May 20, 2020)

It would seem natural to assume that at this stage, the structure of [*without* [DP_{ACC} V-*ing*]] like the one in (20) receives an interpretation such that *without* takes an ACC-*ing* complement, just as *mind* in (19a) and *despite* in (19b) do, because such interpretations are typically associated with the structure of [V/P [DP_{ACC} V-*ing*]].

- (20) John sneaked into the room without anyone noticing. (OK/OK/OK/OK)

However, the speaker may subconsciously notice that ACC-*ing* complements of *without* (e.g. (20))

are structurally and semantically quite analogous to *with*-ACs of the form [*with* [DP_{ACC} V-*ing*]] (e.g. (18a)). (Notice that the ACC-*ing* interpretation and the AC interpretation are identical in (20) (cf. van de Pol and Petré (2015: 214)).) At the next stage, S_{i+1} , ACC-*ing* complements of *without* are reanalyzed as small clause complements of the form [*without* [DP_{ACC} vP]], based on *with*-ACs of the form [*with* [DP_{ACC} vP]] (e.g. (4a, b)). Notice that gerundive and passive participles share the features [-N, +V]. It thus becomes possible at this stage for *without* to take a passive participial complement (e.g. *without a shot fired*). This motivates the acquisition of infinitival complements of *without* (e.g. *without Mary to look after his children*) at the next stage, S_{i+2} , given the common features [-N, +V] between participles and infinitives, and the availability of *with*-ACs taking infinitival predicates (e.g. *with Mary to look after his children*) at S_{i+1} . Along similar lines, during subsequent stages, the other [-N] predicate, i.e. the prepositional predicate (e.g. *without any clothing on his upper body*), becomes available in *without*-ACs, followed by the adjectival predicate (e.g. *without anyone able to say good-bye*), on the model of the already acquired predicates of *with*-ACs.⁹ We therefore generalize the path of the series of extensions as in (21).

- (21) *Without*-ACs begin to take [-N] categories and then [+N] categories as their predicates, based on the syntactic types of predicates *with*-ACs take.

This line of analysis would be reasonable, given that grammatical extensions proceed in “minimal” steps (Kajita (1997: 388, 2004: 20)). As a result, the gaps in paradigm (22) are (partially) filled in the adult grammar.^{10,11} (For expository purposes, we assume that *with*-ACs in G_{i+1} can take predicates of all categories in (22) (cf. (5c); see also fn. 3).)

(22) Paradigm of Predicates in G_{i+1}

	<i>to</i> VP	V- <i>ing</i>	V- <i>en</i>	PP	AP	DP
<i>with</i> -ACs	✓	✓	✓	✓	✓	✓
<i>without</i> -ACs		✓				

The present proposal gains support from observational data from five English children: Adam, Eve, Sarah (Brown (1973)), Abe (Kuczaj (1976)), and Naomi (Sachs (1983)), ranging in age from 1;1 to 5;1. (All data come from the CHILDES database (MacWhinney (2000)).) Table 1 shows age emergence data for *with(out)*-ACs (including *without* taking an ACC-*ing* complement), *without* DP (e.g. *without you*), and *without* PRO-*ing* (e.g. *without getting hurt*). “Verbless” represents *with*-ACs involving verbless clauses (e.g. *with a parakeet on his head*) and “verbal” those involving verbal clauses (e.g. *with tears streaming down his face*).¹² Crucially, there are no instances of *without*-ACs (including *without* taking an ACC-*ing* complement) in the corpora, suggesting that *without*-ACs are a later acquisition than *with*-ACs. (Notice that all children except for Eve produce nominal/PRO-*ing* complements of *without*.) Also, Adam and Abe produce *with*-ACs taking participial predicates at 3;5.29 and 4;4.1, respectively, before they produce *without* taking a PRO-*ing* complement, which we assume becomes available prior to an ACC-*ing* complement.¹³ These findings are consistent with the current analysis, where *without*-ACs

become available on the model of *with*-ACs during certain intermediate stages of the acquisition of English.

Table 1. Age of Emergence for *With(out)*-ACs, *Without* DP, and *Without* PRO-ing

		Adam (2;3-4;10)	Eve (1;6-2;3)	Sarah (2;3-5;1)	Abe (2;4-4;1)	Naomi (1;1-5;1)
<i>with</i> -ACs	Verbless	2;8.1	2;3.0	2;10.5	2;7.7	2;3.17
	Verbal	3;5.29	-	-	4;4.1	-
<i>without</i> -ACs		-	-	-	-	-
<i>without</i> DP		-	-	-	3;4.19	-
<i>without</i> PRO-ing		4;10.23	-	4;6.10	4;10.29	2;5.5

4.3. Consequences

Under the present proposal, the facts about *without*-ACs presented in Section 2 receive a straightforward account. First, *without*-ACs do not allow a concessive interpretation (3e) (cf. fn. 2). This can be accounted for if a variety of interpretations for *without*-ACs, illustrated in (3), gradually become available.¹⁴ Given that concessive clauses are acquired later than other adverbial clauses (Diessel (2004: Ch. 7)), the degraded status of (3e) might reflect the derivative status of concessive adverbials in general, which would make it impossible for *without*-ACs to express “concession” meaning.

Second, *without*-ACs allow a narrower range of predicates than *with*-ACs for some speakers, not the other way around, as shown in Tables 2 and 3.

Table 2. Predicates of *Without*-ACs (cf. (6)–(7))

	<i>to</i> VP	<i>V-ing</i>	<i>V-en</i>	PP	AP	DP
Speaker A	OK	OK	OK	OK	*	*
Speaker B	OK	OK	OK	OK	?	?
Speaker C	?	OK	OK	OK	OK	?*
Speaker D	OK	OK	OK	OK	?*	?

Table 3. Predicates of *With*-ACs (cf. (4)–(5))

	<i>to</i> VP	<i>V-ing</i>	<i>V-en</i>	PP	AP	DP
Speaker A	OK	OK	OK	OK	OK	*
Speaker B	OK	OK	OK	OK	OK	?
Speaker C	?	OK	OK	OK	OK	?*
Speaker D	OK	OK	OK	OK	OK	?

This fact can be naturally accounted for under the current analysis, where the syntactic types of predicates *without*-ACs take gradually extend based on that of *with*-ACs, as generalized in (21). Also, given the order of acquisition proposed above, we can expect that predicates such as TP and AP are more

derivative than VP. The idiolectal variation in the availability of those derivative predicates is thus a natural consequence of the present proposal (cf. Yagi (1984: 240)).

Let us now turn to the fact that *without*-ACs are less compatible with passives and expletives than *with*-ACs, especially when *with(out)* selects an infinitival complement (i.e. [*with(out)* [DP_{ACC} to VP]]). The judgments of our informants and Hantson (1983) on the examples in (10)–(11) and (14)–(15) are summarized in Tables 4 and 5, respectively. The proposed analysis accounts for the data in terms of the “derivativeness” (Kajita (1983: 6)) of the relevant structures/constructions.¹⁵

Table 4. Passivization within the Infinitival Complement of *With(out)*-ACs

	Speaker A	Speaker B	Speaker C	Speaker D	Hantson
<i>with</i> -ACs	??	?	?*	OK	OK
<i>without</i> -ACs	*	?	*	*	*?

Table 5. Expletive *There* in the Infinitival Complement of *With(out)*-ACs

	Speaker A	Speaker B	Speaker C	Speaker D	Hantson
<i>with</i> -ACs	?*	?	?	OK	??
<i>without</i> -ACs	*	??	?	OK	*

Recall that we proposed above that *without*-ACs are acquired later than *with*-ACs, and that basic-derivative distinctions can be made among the syntactic types of predicates *without*-ACs take. Also, it has been reported that expletives and passives are not available in early child English (e.g. Radford (1990: 255–258); Tomasello (2003: 156–157); Kajita (2004: 15ff.); and references therein). Within the present framework, *without*-ACs, expletive constructions, and passive constructions are all derivative to varying degrees, in the sense of being introduced into the pre-adult grammars through grammatical extensions. Crucially, it is generally assumed that the derivativeness of structures is retained even in the adult grammar (Kajita (1983: 6)). The data in Tables 4 and 5 can thus be interpreted as reflecting the cumulative effect of the derivativeness of the infinitival complement of *without* and that of expletive/passive constructions.¹⁶

It is also worth noting that the idiolectal variation shown in Tables 4 and 5 suggests that the derivativeness of the same structure/construction (e.g. *there*-constructions) can differ among speakers. This is naturally accommodated by the current framework, where the paths of language development (partially) determine adult-grammar properties.

5. Conclusion

We have shown that *without*-ACs display a number of interesting properties that distinguish them from *with*-ACs and resist a satisfactory account in terms of feature specification/distribution in the spirit of the Minimalist framework. We have argued that *without*-ACs develop on the model of *with*-ACs in the course of the acquisition of English. The analysis put forth here gives us a principled account of the peculiarities of *without*-ACs.

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NOTES

¹ We are concerned in this paper with those *with(out)*-ACs that function as adverbial modifiers as in (1)–(2). However, *with(out)*-ACs can also be employed as adnominal modifiers, as illustrated below:

- (i) So in its way, giving towels is not much different from getting a free key chain or pen with the name of the company on them when you buy something. [...] But what about presents without the name of the company on them and no obvious connection to what you're buying?

(Kate Elwood (2004) *Takes and Mistakes*, NHK Publishing, pp. 78-79.)

² Sakakibara (1982) cites the following example as showing that *with*-ACs can receive a concessive interpretation.

- (i) With parliamentary elections only eleven days away, Japanese Prime Minister Masayoshi Ohira died of a heart attack last week at the age of 70.

(*Newsweek*, Jun. 23, 1980; Sakakibara (1982: 79))

It should also be noted that *without* taking a PRO-ing complement like the one in (ii) can also receive a concessive interpretation.

- (ii) Without being invited, he sat down at our table.

(*Shogakukan Random House English-Japanese Dictionary*, 2nd ed., s.v. *without*)

³ Nominal small clauses selected by *with(out)*, such as those in (5c) and (7c), are subject to a great deal of interspeaker variation. Consider the following:

- (i) a. Why don't you become a student again? With you (as) a student, we could subscribe to lots of magazines at reduced rates. (McCawley (1983: 281))
b. We will say that (79) [=AP S'] is a predication environment, with AP the predicate and S the subject. (Edwin Williams (1980) "Predication," *Linguistic Inquiry*, p. 220.)

All informants say that (5c) and (7c) are both acceptable if *as* is put before *your guide*, as in *with(out) Mary as your guide*.

⁴ Speakers A, B, and D all concur that (7b) is acceptable if *being* is added before *anyone*, as in *without anyone being able to say good-bye*. Speaker A says that *being* "seems implied" in (5b) (i.e. *with us barely being able to say good-bye*), but it is not necessary, unlike in (7b). Adjectival small clauses

selected by *without* are acceptable to all informants when the adjective does not take a complement.

- (i) a. Mary hates it when people speak with their mouths full. (OK/OK/OK/OK)
- b. Say that again without your mouth full. (OK/OK/OK/OK)

⁵ Hantson (1983: 61) notes that “*without* has [...] ceased to be a pure preposition, although, [...], it is still far less of a clause introducer than *with*.”

⁶ Given the standard assumption that *v* and T require a subject DP in their Spec, *with(out)* would bear just one c-selectional feature, i.e. [*uV*] or [*uT*], when *with(out)* selects a verbal clause (e.g. (4), (6)).

⁷ Notice that assuming that *without* c-selects a small clause complement of the form [*DP*_{Subj} *XP*_{Pred}] is not sufficient to account for the data in (6)–(7); rather it seems reasonable to assume that *without* c-selects the DP and the XP and that those speakers who find (7b) and (7c) marginal or unacceptable have not acquired the relevant c-selectional features of *without*, i.e. [*uA*] and [*uD*].

⁸ Chomsky’s (e.g. 1975: 14–15, 119–122, 1986: 52–55, 2004: 104) instantaneous model of language acquisition, which considers LAD as a function that maps PLD to the adult grammar of a language, can make no reference to the properties of pre-adult grammars.

⁹ I owe the original insight to Hiromune Oda (p.c.).

¹⁰ The view that complementation patterns of a lexical head gradually extend is not entirely novel; see, for example, Omuro (2018: Ch. 6).

¹¹ Given that grammatical extensions are by definition optional (cf. (17)), it is possible that some of the gaps remain in some speakers’ grammar due to linguistic and/or extralinguistic factors. Masaaki Fuji (p.c.) suggests that “maturation” can be an extralinguistic factor that makes it difficult for grammatical extensions to proceed after reaching a certain age.

¹² *With* selecting an infinitival complement (e.g. (4c)) does not occur in the data examined here.

¹³ This assumption gains some plausibility from the observation that in infinitival complements, covert (viz. PRO) subjects emerge prior to overt subjects (Bowerman (1979); Tomasello (2003: 245ff.); and references therein). Gerundive complements are later to emerge than infinitival ones (Bowerman (1979)).

¹⁴ I am grateful to Toshiyuki Kumashiro (p.c.) for suggesting this idea to me.

¹⁵ Kajita (1983: 6) notes that “[t]he strength of basic motivation, the degree of base-model similarity, and the modes of extension jointly determine the degree of derivativeness of the new rule/structure.”

¹⁶ One might wonder why (6b), which involves passivization, is not ruled out on a par with (10b) and (11b). We assume, following a suggestion by Fuminori Matsubara (p.c.), that *without* selects a *vP* complement in (6b) but a *TP* complement in (10b) and (11), and that the degraded status of (10b) and (11b) is due to the cumulative effect of the derivativeness of passives and that of the infinitival complement of *without*. The somewhat greater acceptability of (9b) than (11b) for Speakers A, B, and D suggests that the participial complement of *without* is less derivative than the infinitival complement. For reasons that are not clear to me, Speaker C, who rejects (9b), also rejects its active counterpart (i.e. *Without Mary looking after his children, John would need to work from home*), which sounds acceptable to Speakers A, B, and D.

REFERENCES

- Adger, David (2003) *Core Syntax: A Minimalist Approach*, Oxford University Press, Oxford.
- Bowerman, Melissa (1979) "The Acquisition of Complex Sentences," *Language Acquisition: Studies in First Language Development*, ed. by Paul Fletcher and Michael Garman, 285-305, Cambridge University Press, Cambridge.
- Brown, Roger (1973) *A First Language: The Early Stages*, Harvard University Press, Cambridge, MA.
- Chomsky, Noam (1975) *Reflections on Language*, Pantheon Books, New York.
- Chomsky, Noam (1986) *Knowledge of Language: Its Nature, Origin, and Use*, Praeger Publishers, New York.
- Chomsky, Noam (2004) "Beyond Explanatory Adequacy," *Structures and Beyond: The Cartography of Syntactic Structures*, Vol. 3, ed. by Adriana Belletti, 104-131, Oxford University Press, Oxford.
- Diessel, Holger (2004) *The Acquisition of Complex Sentences*, Cambridge University Press, Cambridge.
- Hantson, André (1983) "For, With and Without as Non-Finite Clause Introducers," *English Studies* 64, 54-66.
- Kajita, Masaru (1977) "Towards a Dynamic Model of Syntax," *Studies in English Linguistics* 5, 44-76.
- Kajita, Masaru (1983) "Grammatical Theory and Language Acquisition," paper presented at the 1st Conference of the English Linguistic Society of Japan, Sophia University, Tokyo.
- Kajita, Masaru (1997) "Some Foundational Postulates for the Dynamic Theories of Language," *Studies in English Linguistics: A Festschrift for Akira Ota on the Occasion of His Eightieth Birthday*, ed. by Masatomo Ukaji, Toshio Nakao, Masaru Kajita and Shuji Chiba, 378-393, Taishukan, Tokyo.
- Kajita, Masaru (2004) "<Shuhen> <Reigai> wa Shuhen Reigai ka (Are 'Peripheries/Exceptions' Really Peripheral/Exceptional?)," *Nihongo Bunpo* 4, 3-23.
- Kuczaj, Stan (1977) "The Acquisition of Regular and Irregular Past Tense Forms," *Journal of Verbal Learning and Verbal Behavior* 16, 589-600.
- MacWhinney, Brian (2000) *The CHILDES Project: Tools for Analyzing Talk*, 3rd ed., Lawrence Erlbaum Associates, Mahwah, NJ.
- McCawley, James D. (1983) "What's with *With*?" *Language* 59, 271-287.
- Omuro, Takeshi (2018) *Doshi to Kobun (Verbs and Constructions)*, Kenkyusha, Tokyo.
- Radford, Andrew (1990) *Syntactic Theory and the Acquisition of English Syntax*, Blackwell, Oxford.
- Sachs, Jacqueline (1983) "Talking about the There and Then: The Emergence of Displaced Reference in Parent-Child Discourse," *Children's Language*, Vol. 4, ed. by Keith. E. Nelson, Lawrence Erlbaum Associates, Hillsdale, NJ.
- Sakakibara, Hiroaki (1982) "With-Constructions in English," *Studies in English Literature, English Number* 1982, 79-95.
- Tomasello, Michael (2003) *Constructing a Language: A Usage-Based Theory of Language Acquisition*, Harvard University Press, Cambridge, MA.
- Van de Pol Nikki and Peter Petré (2015) "Why is There a Present-Day English Absolute?" *Studies in Language* 39, 198-228.
- Yagi, Takao (1984) "Togoron no Yuhyoseiron (A Markedness Theory in Syntax)," *Gengo* 13, 238-248.

Interface-Based Constraints on Subject Movement*

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1. Introduction

In terms of Chomsky's (2013, 2015) labeling theory, subject elements in English cannot occupy Spec-CP since T is too weak to serve as a label, which is also a crucial notion to explain the *that*-trace effect; namely, T cannot be labeled if a *wh*-subject moves to Spec-CP (headed by *that*), causing the derivation to crash at the interfaces. However, a lot of studies have presented evidence that *wh*-subjects moves to Spec-CP in the derivation of subject questions (e.g. Messick (2020)). This creates a significant paradox: (i) if we argue that *wh*-subjects cannot occupy Spec-CP, we fail to explain the derivation of subject questions; but (ii) if we claim that they can move to Spec-CP, we cannot account for the *that*-trace effect. In this paper, we will claim that *wh*-subjects can occupy Spec-CP under the spirit of Free Merger and that various subject movement constraints, including the *that*-trace effect, can be reduced to interface conditions, overcoming the dilemma of subject movement in a conceptually desirable way. In fact, we will argue that ϕ -problems (the infeasibility of Affix Hopping and Case-valuation) generate subject movement constraints at the interface level.

2. Labeling Theory and Problems

2.1. Weak Heads

Chomsky (2013, 2015) holds that Merge is applied freely and any set formed by Merge must have a label for interpretations at the interfaces. To determine the label, Chomsky (2013) introduces the Labeling Algorithm by Minimal Search (MS). When a head and a phrase undergo Merge, the head provides the label. When two phrases undergo Merge, there are two strategies for labeling: either (i) agreeing features provide the label (e.g. $\langle \phi, \phi \rangle$, $\langle Q, Q \rangle$); or (ii) by raising one of the two phrases, the leftover one becomes the label since copies are ignored for MS (see Chomsky (2013: 44)).

In addition to this algorithm, Chomsky (2015) proposes the following notion of weak heads.

(1) English T and root R in all languages are too weak to serve as a label.

This suggests that $\langle \varphi, \varphi \rangle$ agreeing labeling is required to strengthen the weak heads, thereby T in English must agree with a subject, and R must agree with an object, leading to a deduction of the structural parallelism between the CP and v^*P phases. Crucially, based on the notion of weak heads, subject elements in English cannot move to Spec-CP but must stay within Spec-TP for labeling by MS, which leads to the *that*-trace effect.

- (2) a. * Who do you think that loves Mary?
 b. $\{\beta \text{ that } \{\alpha \text{ who T } \{R-v^* \text{ who love Mary}\}\}\}$
 c. $\{\beta \text{ that } \{\alpha \text{ who T } \{R-v^* \text{ who love Mary}\}\}\}$ ($\alpha = \langle \varphi, \varphi \rangle$)

As (2) indicates, the *wh*-subject *who* must stay within Spec-TP to strengthen the weak head T; if it leaves there, T cannot be strengthened since MS cannot see copies. In this case, however, *who* is trapped within the Transfer domain α (the complement of *that*), so that it cannot move to the matrix Spec-CP. Hence, the derivation is doomed to crash, deriving the relevant effect from labeling.

2.2. Elimination of Weak Heads (Hayashi (2020))

Although Chomsky's labeling analysis successfully offers a theoretical explanation to the *that*-trace effect, we have to say that it is problematic. Indeed, the weakness of T constitutes a theoretical contradiction with labeling in English infinitival clauses. If English T is weak, as pointed out by Mizuguchi (2017) and Hayashi (2020), the label of infinitival T cannot be determined since it is hard to assume that φ -agreement between a subject and infinitival *to* can be obtained. For this reason, such a theoretically problematic notion cannot be an effective tool to account for the *that*-trace effect.

To resolve this kind of issue with labeling, Hayashi (2020) proposes that all heads are strong and Feature Inheritance is applied freely, eliminating the notion of weak heads proposed by Chomsky. Leaving the details aside, if his proposal is on the right track, infinitival T can be labeled without φ -agreement since all heads are strong (see Hayashi (2020) in detail). Let us then reconsider the *that*-trace effect in terms of Hayashi's proposal:

- (3) a. * Who do you think that loves Mary?
 b. $\{\beta \text{ who}_{[\varphi]} \text{ that } \{\alpha \text{ who T}_{[u\varphi]} \{R-v^* \text{ who loves Mary}\}\}\}$ ($\alpha = T$)

While Chomsky (2015) contends that *who* cannot move to Spec-CP due to the labeling failure of weak T, Hayashi (2020) eliminates the notion of weak heads entirely, rendering this argument moot; even if the *wh*-subject moves to Spec-CP in the derivation, T can be labeled since it is no longer a weak head under his analysis. Hayashi argues that the culprit is not the label weakness of T but $[u\varphi]$ on T. In cases like above, significantly, $[u\varphi]$ on T cannot be valued since MS cannot see the copy of *who* within Spec-TP, causing the derivation to crash due to the undervaluation. Notice, however, that the relevant feature-valuation can be achieved if C keeps $[u\varphi]$, which should be admitted under the assumption that Feature Inheritance is optional. Let us then consider what happens if a subject element moves to Spec-CP and the phase head C keeps $[u\varphi]$ as follows:

(4) $\{\beta \text{ Subject}_{[\varphi]} C_{[\nu\varphi]} \{\alpha T \{\text{R-}v^* \text{ subject love Mary}\}\}\}$ ($\alpha = T, \beta = \langle \varphi, \varphi \rangle$)

Since the subject occupies Spec-CP, $[\mu\varphi]$ on C can be valued as in (4). However, Affix Hopping fails to work. As for cases like (4), Hayashi assumes that $[\nu\varphi]$ on C must be attached to a verb V (R- v^*) via Affix Hopping at the Sensorimotor (SM) interface. However, Affix Hopping from C to V is interrupted by T lying halfway between the two heads. This is because affixes can only hop from one head to the head immediately below it (e.g., Affix Hopping of T-to-Neg-to-V is disallowed: **John not loves Mary.*). Hence, even if feature-valuation works, $[\nu\varphi]$ cannot hop to V at the SM interface. Moreover, as argued by Suenaga (2022), there is likely to be another problem with subjects moving to Spec-CP. It is generally assumed that nominative Case is assigned as a reflection of φ -agreement between a subject and finite T at least in English (Chomsky (2000, 2001) and Epstein et al. (2012)). If so, *wh*-subjects also have to agree with finite T. Remember, however, that φ -agreement between a subject and T cannot be achieved if it moves to Spec-CP (see (3)), whereby $[\mu\varphi]$ on T cannot be valued. In this regard, whether the relevant feature-valuation may or may not work, it remains unclear how the *wh*-subject gets nominative Case.¹

In short, it can be concluded that subject elements must remain within Spec-TP even though the notion of weak heads is abandoned; if subjects move to Spec-CP in the derivation, there will arise problems associated with φ -agreement (Affix Hopping and Case-valuation).

2.3. Dilemma of Subject Movement

Although we have seen so far that subject elements cannot occupy Spec-CP due to φ -problems, we must encounter a formidable dilemma, which stems from the derivation of subject questions like (5).

- (5) Who loves Mary?
- a. $[_{CP} C [_{TP} \text{Who loves Mary}]]?$ (Spec-TP)
 - b. $[_{CP} \text{Who} C [_{TP} \text{loves Mary}]]?$ (Spec-CP)

The derivation of subject questions has been mired in controversy particularly with respect to the question of whether *wh*-subjects occupy Spec-TP or Spec-CP. Based on our discussions so far, the former derivation (5a) should be chosen. Nevertheless, there is various evidence that *wh*-subjects move to Spec-CP, which will be briefly described below:

- (6) A: Someone loves Mary. B: Who?
- a. $[_{CP} C [_{TP} \text{Who loves Mary}]]?$ (Spec-TP)
 - b. $[_{CP} \text{Who} C [_{TP} \text{loves Mary}]]?$ (Spec-CP)

If we take sluicing to involve *wh*-movement to Spec-CP followed by TP-deletion, the *wh*-subject in (6) cannot stay within Spec-TP. This is because, if it remains there, *who* should be included within the sluiced site, TP (see also Messick (2020)). Next, consider the following data, which violates the Coordinate Structure Constraint (CSC):

- (7) a. *Who left and John went to the store?
 b. [CP who [_{&P} [_{TP} ~~who~~ left] & [_{TP} John went to the store]]] (Messick (2020: 4))

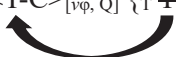
As Messick (2020) argues, (7) shows that *wh*-subjects move to Spec-CP; if *who* and the DP subject *John* stayed within Spec-TP respectively, it would not violate the CSC, contrary to fact (as for other data, see Bošković (2019), Messick (2020), and references therein).

It is important to recall here that the *that*-trace effect would not occur if *wh*-subjects were allowed to occupy Spec-CP. That said, it is empirically observed that *wh*-subjects move to Spec-CP in the derivation of subject questions. Thus, we must address these two seemingly contradictory aspects of subject movement within the current Free Merger framework, an agonizing dilemma that warrants our undivided attention.

3. R-to-C Raising Analysis (Suenaga (2022, 2024))

3.1. Derivation of Subject Questions

In this section we assume with Suenaga (2022, 2024) that the derivation of *wh*-subject questions involves T-to-C raising by Internal pair-Merge, which allows *wh*-subjects to move to Spec-CP, overcoming the dilemma of subject movement discussed above. Consider (8):



- (8) a. *T-to-C Raising in Syntax*
 b. {CP who_[Nom] { <T-C>_[vφ, Q] { T $\bar{\text{T}}$ {R-v* ~~who~~ V(R-v*) Mary}}}}}
- 

The *wh*-subject *who* occupies Spec-CP in this simplified structure, where T undergoes the raising operation with Internal pair-Merge after inheriting [*uφ*, Q] from C. The crucial point here is that φ-agreement between *who* and finite T(-C) is established, whereby φ/Case-valuation can be achieved. Furthermore, since T has already been raised to C in syntax, the local relationship between C (T-C) and V (R-v*) is established at the SM interface, so that [*vφ*] can be attached to V as shown in (9).

- (9) a. *Affix Hopping at the SM Interface*
 b. {CP who { <T-C>_[vφ, Q] { T ... {R-v* ... V Mary}}}}}
- 
- (CP = <Q, Q>, <φ, φ>)

3.2. Subject Movement Constraints

If the present analysis is on the right track, it can be extended to cover various subject movement constraints, including the *that*-trace effect:

- (10) Who do you think (*that) loves Mary?
 a. ... R(*think*) {CP who { <T-C>_[vφ, Q] { T $\bar{\text{T}}$ {R-v* ~~who~~ V(R-v*) Mary}}}}}
- 
- b. ... R(*think*) {CP who { that { T T {R-v* who V(R-v*) Mary}}}}}
- 

(10) shows the stage where the *wh*-subject moves to the embedded Spec-CP. In cases like (10a), ϕ /Case-valuation works since ϕ -agreement between *who* and T(-C) is made possible by T-to-C raising, which also establishes the local requirement for Affix Hopping at the SM interface, so that the derivation converges. In cases like (10b), however, T-to-C raising cannot be applied since the C head position is occupied by overt *that*, which is based on Chomsky's (2015) assumption that when Internal pair-Merge takes place, the host (phase head) should be affixed to the raised element (non-phase head). It is naturally thought that an affix is a bound morpheme that cannot stand alone as a word. Crucially, *that* is not a bound morpheme but a free morpheme that can occur alone; namely, the free morpheme *that* can never be affixed, being unable to undergo pair-Merge. For this morphological reason, the relevant derivation is doomed to fail (due to the ϕ -problems), leading to the *that*-trace effect.

The same can apply to the following contrast found in Belfast English, which circumvents the doubly-filled Comp filter unlike in Standard English as in (11a):

- (11) a. I wonder which dish that they picked. (Henry (1995: 107))
 b. *I wonder which author that wrote this book. (Henry (1995: 141, fn.2))

Especially noteworthy here is that the object *wh*-phrase can occur with *that*, but the subject *wh*-phrase *which author* cannot, as shown in (11b). This intriguing contrast can also be reduced to ϕ -problems:

- (12) ... R(*wonder*) { which author that { T { ~~which author~~ write this book } } } (= (11b))

(12) roughly depicts the stage where the subject *which author* occupies the embedded Spec-CP, whose head position is occupied by overt *that*. Recall that T cannot be raised to the filled position; hence, Affix Hopping and Case-valuation will not be achieved, which leads to the subject-object asymmetry in (11).

Our analysis can also deal with the following asymmetry involving the *wh*-island effect, where the *wh*-object *what* can move across the *wh*-island, but the *wh*-subject *who* cannot undergo such movement:

- (13) a. ? What do you wonder who saw? (Chomsky (1986: 48))
 b. * Who do you wonder what read? (George (1980: 72))

With Free Merger in place, it can be assumed that (13a) has the following structure in the derivation:

- (14) ? What do you wonder who saw? (= (13a))
 a. $\{\epsilon \text{ what}_{[uQ, \phi]} \{\delta \text{ who}_{[uQ, \phi]} \{\gamma \text{ C}_{[Q, u\phi]} \{\beta \text{ T} \{\alpha \text{ } t_{\text{who}} \text{ R-}v^* \text{ } t_{\text{what}} \dots\} \}\}\}\}$
 b. $\{\epsilon \text{ what}_{[uQ, \phi]} \{\delta \text{ who}_{[uQ, \phi]} \{\gamma \text{ C} \{\beta \text{ T}_{[Q, u\phi]} \{\alpha \text{ } t_{\text{who}} \text{ R-}v^* \text{ } t_{\text{what}} \dots\} \}\}\}\}$ ($\alpha = \text{R-}v^*$, $\beta = \text{T}$)
 c. $\{\epsilon \text{ what}_{[uQ, \phi]} \{\delta \text{ who}_{[uQ, \phi]} \{\gamma \text{ T}_{[Q, u\phi]} \text{-C} \{\beta \text{ } \bar{\text{T}} \{\alpha \text{ } t_{\text{who}} \text{ R-}v^* \text{ } t_{\text{what}} \dots\} \}\}\}\}$

(14a) exhibits the stage where both *who* and *what* internally merge with Spec-CP; since Merge applies freely, nothing bans this kind of Internal Merge. Next, T inherits [Q, $u\phi$] and MS provides the labels as in (14b). Then, as shown in (14c), T-to-C raising occurs with Internal pair-Merge. Following Kitahara's

(2020) analysis of unique valuation, however, φ -valuation cannot work in this case. Kitahara argues that when two or more distinct [νF] simultaneously participate in the valuation of one [uF], an externalization problem will arise. This is because there is no way to realize such multiple values on a single head: valuation must be done uniquely. Then, in cases like (14), two *wh*-elements both have [φ], so that φ -valuation cannot succeed since two distinct [φ] simultaneously participate in the valuation of one [$u\varphi$] on T(-C), which leads to causing an externalization problem. However, this problem can be avoided if *what* moves away from Spec-CP at the next phase level, escaping from the MS domain of ν^* :

(15) $\{ \text{what}_{[uQ, \varphi]} \{ \zeta \nu^* \dots \{ \epsilon t_{\text{what}} \{ \delta \text{who}_{[\nu Q, \varphi]} \{ \gamma T_{[Q, \nu\varphi]}-C, \dots \} \} \} \} \} \} \quad (\gamma = T-C, \delta = \epsilon = \langle Q, Q \rangle, \langle \varphi, \varphi \rangle)$

Here, since the lower copy of *what* is invisible to MS, φ -valuation works uniquely; hence, φ -problems do not occur in cases like (13a). Things get worse if the *wh*-subject *who* escapes from Spec-CP:

(16) a. *Who do you wonder what read? (= (13b))
 b. $\{ \text{who}_{[uQ, \varphi]} \{ \nu^* \dots \{ \gamma \text{what}_{[uQ, \varphi]} \{ \beta t_{\text{who}} \{ \alpha T_{[Q, u\varphi]}-C, \dots \} \} \} \} \} \}$

In this case, *what* remains within Spec-CP, so that the unique φ -valuation environment may be created. However, the agreement relationship between *who* and T-C is not established since MS cannot see the lower copy of *who*, whereby Affix Hopping and Case-valuation can never be accomplished properly, which derives the asymmetry involving the *wh*-island effect. In passing, if the discussion so far is tenable, we can predict that subject movement is incompatible with argumental topicalization, since it is expected that unique φ -valuation will not work. This prediction is borne out by the following data:

(17) a. *I wonder who *this book* would buy around Christmas.
 b. I wonder who *around Christmas* would buy this book. (Rizzi (1997: 309), slightly modified)

Assuming that argumental topicalization is derived by movement of a topic element to Spec-CP (Agbayani (2000)), it is expected that *who* and the topicalized object *this book* occupy Spec-CP at the same time in cases like (17a). If so, unique φ -valuation will not succeed and an externalization problem occurs; *who* and *this book* both have distinct [φ] (see Lasnik and Saito (1992) for a government-based approach). Interestingly, however, subject movement is compatible with adverb preposing as shown in (17b). Unlike cases like (17a), significantly, it is expected that no valuation problem will arise in this case if we assume that adjuncts like *around Christmas* lack [φ]. In other words, even if *who* and *around Christmas* occupy the CP domain at the same time, φ -problems will not occur. Hence, the *wh*-subject is allowed to move to Spec-CP, which also derives the object-adjunct asymmetry in question.

In short, even without relying on the notion of weak T, the present analysis can elucidate the (un)availability of subject movement to Spec-CP in terms of φ -problems. Therefore, we formulate the following interface conditions on subject movement, which allows us to make sure what constraints subject movement and what enables it, leading to resolving the dilemma of subject movement:

- (18) Interface Conditions on Subject Movement
- a. Subject movement can be applied freely in the absence of ϕ -problems.
 - b. ϕ -problems arise when Affix Hopping and Case-valuation fail to work.

This states that when ϕ -problems arise, subject movement must be constrained even if Merge can be applied freely. Conversely, in the absence of them, subjects can move freely, occupying Spec-CP. In the next section, we will discuss two amelioration effects involving subject movement, reinforcing the validity of our proposed interface conditions.

4. Repair-by-Ellipsis: TP-Deletion + Default Case

It has been known that the *that*-trace effect can be repaired by ellipsis or TP-deletion (see Perlmutter (1971), Merchant (2001, 2008), and others).

- (19) It appears that someone will resign, but it's not yet clear who. (Merchant (2008: 136))
 (cf. ... not yet clear who [TP it appears [that ~~who~~ will resign]]) (deletion is marked with shading)

A curious point in cases like (19) is that, given the recoverability condition imposed on ellipsis, the *wh*-subject moves past *that* to the landing site, which should be impossible under our analysis; T-to-C raising cannot be applied, causing ϕ -problems. Nevertheless, the *that*-trace effect does not occur.

Even more curious is that ellipsis is likely to be associated with another constraint involving subject movement. Consider the following ungrammatical date in (20):

- (20) a. *Who what said? (Haegeman (1994: 504))
 b. *I wonder who what will bring. (Lasnik and Saito (1984: 236))

Recall that a subject and object cannot occupy Spec-CP at the same time due to unique valuation failure; hence, it is expected that the subject and object *wh*-phrases cannot co-occur within Spec-CP in cases like (20). However, such ungrammatical constructions can somehow be revamped if ellipsis takes place as shown in (21), which is an instance of multiple sluicing:

- (21) Everyone brought something (different) to the potluck, but I couldn't tell you who what.
 (Merchant (2001:112))

If we take (multiple) sluicing to involve (multiple) *wh*-movement followed by TP-deletion, it is certain that the intriguing cases listed above are rescued by TP-deletion: but how and why? We argue that the answer to this question lies in the combination of ellipsis and default case. This is based on an empirical fact that English can employ subjects carrying default case when TP-deletion takes place as follows:

- (22) a. A: Who wants to try this game? B: Me. (Merchant (2004: 703), slightly modified)
 b. [CP Me C [TP wants to try this game]]

As for the formulation of fragment answers like (22), Merchant (2004) argues that it involves the movement of a fragment subject to Spec-CP followed by TP-deletion. Then, significantly, such a subject appears with an accusative form (Schütze (2001)). Furthermore, it is known that logical subjects in *there*-constructions also appears with default case (e.g. Robin (2014)). Importantly, when the subject elements undergo *wh*-movement, the *wh*-subject must be pronounced with *who* rather than *whom*:

- (23) a. Who was there at the party? (Williams (1974: 177))
 b. *Whom was there in the house? (Lumsden (1988: 44))

This suggests that, as pointed out by Moritake (2024), *who* should be used for the default morphological realization of *wh*-subjects in English. As for the implementation of default case, we follow Moritake's (2024) proposal that [*uCase*] serves as an instruction for realizing default case at the SM interface: a *wh*-subject is pronounced with default case when its [*uCase*] remains unvalued at the interface. Keeping these arguments in mind, reconsider the relevant amelioration effects:

- (24) a. ... but it's not yet clear who [_{TP} it appears [**that who** will resign]] (= (19))
 b. ... but I couldn't tell you [_{CP} who **what** C [_{TP} ~~who~~ bring ...]] (= (21))

In cases like (19) and (21), subject movement is normally disallowed due to the infeasibility of T-to-C raising or unique valuation failure, which should cause ϕ -problems.

- (25) a. ... {_{CP} who_[default case] C {_{TP} it appears that **T_[u ϕ] ... V (R-v*) ...}}**

- b. ... {_{CP} who_[default case] what C {_{TP} **T_[u ϕ] ... V (R-v*) ...}}**

However, of importance in these cases is that deletion targets the TP domain which includes all the heads involving Affix Hopping. That is, since the domain does not have to be externalized, the application of affixal merger itself can be dispensed with, avoiding the issue with Affix Hopping. Moreover, even though [*uCase*] of the *wh*-subject may not be valued as it arrives at the SM-interface, it can be realized with its default case form *who* there, whereby the problem with Case does not occur, either. Hence, we can conclude that the derivations meet the interface conditions thanks to the application of ellipsis and the realization of default case at the SM interface.

To the extent that our analysis is on the right track, it is worth discussing a special type of exclamative sentences called Mad Magazine Sentences (MMs), which have some unique properties:

- (26) a. HIM/*'im get a job?! (Akmajian (1984: 8), slightly modified)
 b. Him worry/*worries?? (Schütze (1997: 189))

As (26a) indicates, subjects in MMs are pronounced with default case and such subjects must be stressed. In addition, verbs used in MMs have no tense-agreement morphology as shown in (26b). Many studies have argued that MMs have infinitival T rather than finite T, so that the nominative Case assignment

never occurs based on the assumption that infinitival T does not have an ability to assign nominative Case (e.g. Schütze (1997)). Moreover, Moritake (2024) assume with Tamada and Kondo (2021) that a subject in MMs undergoes movement to Spec-CP to gain focus stress by agreeing with the phase head C bearing a focus feature [Foc]. Recall that subject movement to Spec-CP is allowed only if the derivation does not generate ϕ -problems at the interface level. Fortunately, in MMs, Case of subject elements does not need to be valued; they can be pronounced with default case. Additionally, there is no problem with Affix Hopping in such sentences; verbs in MMs do not have to be inflected just like verbs used in infinitival clauses. In this regard, we can say that subjects in MMs move to Spec-CP in the derivation without any problem.

5. Conclusion

In this paper we proposed interface conditions which allow us to make sure what constraints subject movement and what enables it. Specifically, when ϕ -problems arise, subject movement must be constrained even if Merge applies freely. When the problems do not occur, subjects can move to Spec-CP freely. Consequently, we could obtain the derivations in which *wh*-subjects can occupy Spec-CP (e.g. subject questions), while simultaneously deducing various subject movement constraints (e.g. the *that*-trace effect), then solving the dilemma of subject movement under the spirit of Free Merger.

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NOTES

¹ Note that the subject undergoes ϕ -agreement with C rather than T in (4).

REFERENCES

- Agbayani, Brian (2000) “*Wh*-Subjects in English and the Vacuous Movement Hypothesis,” *Linguistic Inquiry* 31, 703–713.
- Bošković, Željko (2019) “Generalized Asymmetry,” ms., University of Connecticut.
- Chomsky, Noam (1986) *Barriers*, MIT Press, Cambridge, MA.
- Chomsky, Noam (2000) “Minimalist Inquiries: The Framework,” *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89–155, MIT Press, Cambridge, MA.
- Chomsky, Noam (2001) “Derivation by Phase,” *Ken Hale: A Life in Language*, ed. by Michael Kenstowicz, 1–52, MIT Press, Cambridge, MA.
- Chomsky, Noam (2013) “Problems of Projection,” *Lingua* 130, 33–49.
- Chomsky, Noam (2015) “Problems of Projection: Extensions,” *Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti*, ed. by Elisa Di Domenico, Cornelia Hamann and Simon Matteini, 3–16, John Benjamins, Amsterdam.
- Epstein, Samuel David, Hisatsugu Kitahara and T. Daniel Seely (2012) “Structure Building That Can’t Be,” *Ways of Structure Building*, ed. by Myriam Uribe-Etxebarria and Vidal Valmala, 253–270,

- Oxford University Press, Oxford.
- George, Leland (1980) *Analogical Generalizations of Natural Language Syntax*, Doctoral dissertation, MIT.
- Haegeman, Liliane (1994) *Introduction to Government and Binding Theory, 2nd Edition*, Wiley-Blackwell.
- Hayashi, Norimasa (2020) “Labeling without Weak Heads,” *Syntax* 23, 275–294.
- Henry, Alison (1995) *Belfast English and Standard English*, Oxford University Press, Oxford.
- Kitahara, Hisatsugu (2020) ““Multiple-Specifier” Constructions Revisited,” *Reports of the Keio Institute for Cultural and Linguistic Studies* 51, 207–216.
- Lasnik, Howard and Mamoru Saito (1984) “On the Nature of Proper Government,” *Linguistic Inquiry* 15, 235–289.
- Lasnik, Howard and Mamoru Saito (1992) *Move α : Conditions on Its Application and Output*, MIT Press, Cambridge, MA.
- Lumsden, Michael (1988) *Existential Sentences: Their Structure and Meaning*, Croom Helm, London.
- Merchant, Jason (2001) *The Syntax of Silence: Sluicing, Islands, and the Theory of Ellipsis*, Oxford University Press, Oxford.
- Merchant, Jason (2004) “Fragment and Ellipsis,” *Linguistics and Philosophy* 27, 661–738.
- Merchant, Jason (2008) “Variable Island Repair under Ellipsis,” *Topics in Ellipsis*, ed. by Kyle Johnson, 132–153, Cambridge University Press, Cambridge.
- Messick, Troy (2020) “The Derivation of Highest Subject Questions and the Nature of the EPP,” *Glossa* 5, 1–12.
- Mizuguchi, Manabu (2017) “Labelability and Interpretability,” *Studies in Generative Grammar* 27, 327–365.
- Moritake, Nozomi (2024) *Nominal Licensing and Agree in Syntactic Theory: The Default Feature Specification on the Phase Heads and Its Theoretical Implications*, Doctoral dissertation, Kyushu University.
- Perlmutter, David (1971) *Deep and Surface Structure Constraints in Syntax*, Rinehart and Winston, New York, Holt.
- Rizzi, Luigi (1997) “The Fine Structure of the Left Periphery,” *Elements of Grammar: Handbook of Generative Syntax*, ed. by Liliane Haegeman, 281–337, Kluwer, Dordrecht.
- Sobin, Nicholas (2014) “Th/Ex, Agreement, and Case in Expletive Sentences,” *Syntax* 17, 385–416.
- Schütze, Carson (1997) *Infl in Child and Adult Language: Agreement, Case, and Licensing*, Doctoral dissertation, MIT.
- Schütze, Carson (2001) “On the Nature of Default Case,” *Syntax* 4, 205–238.
- Suenaga, Kodai (2022) “On the Derivation of *Wh*-Subject Questions in English,” *Kyushu University English Review* 64, 85–110.
- Suenaga, Kodai (2024) “*Wh*-Subjects and T-to-C Raising in English,” *English Linguistics* 40, 153–183.
- Tamada, Takahiro and Ryoichi Kondo (2021) “A Unified Account of Mad Magazine Sentences and Non-canonical Types of *How Come* Construction in English,” *JELS* 38, 236–240.
- Williams, Edwin (1974) *Rule Ordering in Syntax*, Doctoral dissertation, MIT.

Shift from Relational Adjectives to Qualitative Adjectives: Analysis Based on a Competitive Approach

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1. Introduction: Relational Adjectives and their Type Shift

Denominal adjectives commonly fall into two types: qualitative and relational, as illustrated in (1a) and (1b), respectively.

- (1) a. beautiful, childlike, famous, friendly, handy, speechless, stylish, picturesque
b. alcoholic, alphabetical, dietary, industrial, republican, woollen

A distinctive semantic difference between these two types is that qualitative adjectives (henceforth, QAs) are characterized as attributing properties to the denotation of their head nouns, whereas relational adjectives (henceforth, RAs) classify that denotation by relating their base nouns to their head nouns (Gunkel and Zifonun (2008: 283)). In this sense, RAs have a classificatory function. In other words, they narrow down the classes denoted by their head nouns to specify a certain subclass. Furthermore, relational adjectivizers (e.g. *alcoholic*) merely indicate that base nouns are related to head nouns in some respects. This implies that relational adjectivization is semantically empty, adding no semantic predicates to base nouns with the consequence that “their [= RAs’] denotation appears to be of the same semantic type as that of their respective base nouns (Gunkel and Zifonun (2008: 284)).” These considerations show that RAs retain the nominal properties of their bases to a significant degree. Therefore, these adjectives differ syntactically from QAs. For example, they can be modified by degree adverbs like *very*. This is not the case with RAs (e.g. * *a very industrial output* (Bisetto (2010: 66))). However, this RA-QA distinction is often ambiguous because RAs by and large shift to QAs, as observed by many morphologists. In particular, Bauer et al. (2013: 318) state that “it is possible to coerce just about any relational adjective into a qualitative reading.” To illustrate this shift, consider the different occurrences of *grammatical* in (2).

- (2) a. * very grammatical mistakes
b. not very grammatical English
(Farsi (1968: 55))
- (3) a. concerning grammar
b. correct according to the rules of grammar

In (2a), *grammatical* cannot occur with *very* because it is an RA, as defined in (3a). In contrast, the same adjective allows the occurrence in (2b) because it shifts to a QA to acquire a meaning as given in (3b).

Although this RA-to-QA shift is well-known, why such a phenomenon occurs has hardly been discussed in the literature and remains unexplained. This paper aims to investigate the reason in terms of competition. Nagano (2018), one of only a few works on the shift, explains that this comes from an internal structure specific to nominal phrases formed by RAs. This explanation implies that a possible factor for the shift is internal to an RA itself. In this respect, it can be seen as an internal factor. As another possibility, this paper examines the competition between RAs and other expressions, which can be regarded as an external factor. Like RAs, nouns have a classificatory function, serving as attributive modifiers of other nouns by forming N-N compounds (e.g. *coffee table*) (Payne and Huddleston (2002: 448-451, 556-557) and Nikolaeva and Spencer (2020: 57), among others). The nonhead nouns (e.g. *coffee (table)*) attributively modify the head nouns (e.g. *(coffee) table*). In the following, we refer to such nonhead nouns as modifying nouns. It has been pointed out in the literature, such as by Nikolaeva and Spencer (2020), that RAs compete with N-N compounds. This entails a competing relationship between RAs and modifying nouns. Regarding the competition, Nikolaeva and Spencer (2020: 94) state that in English, occurrences of RAs are somewhat restricted partly because N-N compounds are standard. Interestingly, Spencer (1999: 97, n. 7) points to the possibility that this standard status of N-N compounds may be responsible for the RA-to-QA shift.¹ This paper explores this possibility by adopting Aronoff's (2016, 2019, 2023) competitive approach to morphology. More specifically, we prove that like RAs, modifying nouns result from a process called transposition. Furthermore, based on Aronoff's competitive approach, we show that in English, the type involving modifying nouns is the default option for transposition rather than the type involving RAs, which results in their shift to QAs. Aronoff observes that the competition between two expressions can induce a semantic shift in either expression. We demonstrate that the RA-to-QA shift is an instance of such a semantic shift.

This paper is organized as follows. Section 2 shows that RAs are products of transposition and examines their morphological status. Section 3 reveals that modifying nouns undergo transposition to obtain adjectival morphosyntax. Section 4 introduces Aronoff's competitive approach to our discussion and indicates that modifying nouns rather than RAs are default transpositions, which can trigger the RA-to-QA shift. Section 5 makes concluding remarks.

2. Relational Adjectives: Their Morphological Status

It is widely assumed that RAs, which are attested cross-linguistically, result from the transposition from nouns to adjectives. Its key feature is that "it changes the morphosyntactic category of the word (verb to noun, noun to adjective, and so forth) without alternating the semantic representation of the word (Spencer (2013: 63))." In this sense, transposition is an asemanic process purely for category shifting. Note here that "morphology is traditionally divided into two branches inflection and derivation (Bauer (2003: 91))." This division poses a natural question as to whether transposition is an inflectional or derivational process. According to Spencer (2016: 28), these two processes differ fundamentally in

that “inflection defines word-forms of a lexeme while derivation defines new lexemes.” Lexemes are abstract lexical units defined as “an abstract characterization of all the linguistically important properties of a word, much like the information found in a dictionary entry (Spencer (2016: 27)).” Derivation is lexeme formation. This is not true of inflection, whose main function is to change the word-forms of base lexemes to morphosyntactically required ones. Word-forms are actual forms that abstract lexemes select in particular morphosyntactic contexts. The following *drives* is an example of a verbal word-form.

(4) He drives 12 miles to work. (LDCE, s.v. *to drive*)

This sentence contains the third-person singular subject *he* and the present tense. *Drives* is a word-form selected by the verbal lexeme DRIVE in this morphosyntactic context.

Let us keep these considerations in mind and return to transposition. Spencer (2013) and Nikolaeva and Spencer (2020), among others, analyze it as a kind of inflection because it functions to change word-forms. In particular, Nikolaeva and Spencer (2020) explain that RAs are adjectival word-forms that nominal lexemes select in the morphosyntactic context of attributive modification, which requires adjectives. According to this explanation, an adjective is the only morphosyntactic category available for attributive modification, which is inherently not open to nouns. If so, the context of attributive modification categorially requires adjectives; nouns cannot meet this morphosyntactic requirement as they stand. Therefore, they undergo transposition and change their morphosyntactic categories from nouns to adjectives. Owing to this categorial change, nouns get word-forms that meet the relevant requirement to qualify as attributive modifiers. As such, RAs are adjectival word-forms of their base nouns because these adjectives are syntactically required by attributive modification. In contrast, QAs are produced through derivation to form new lexemes.

3. Modifying Nouns as N-to-A Transpositions: Morphologically Inert Transposition

The previous section showed that RAs are like inflected forms in that they are instances of word-forms that nouns can take in particular morphosyntactic contexts. This implies that attributive modification by RAs is virtually attributive modification by nouns. Nikolaeva and Spencer (2020: 40) explicate this fact by stating that “in addition to canonical attributive modification, which involves a property word, nouns can be modified by an entity with a noun-like denotation [...]” Spencer (2013) and Nikolaeva and Spencer (2020), among others, refer to such noncanonical attributive modification as modification-by-noun. These morphologists also point out that English has N-N compounding as another option for modification-by-noun. Interestingly, Spencer (2003: 334, 2005: 121-122) and Nikolaeva and Spencer (2020: 87) consider productive (nonlexicalized) N-N compounds in English and analyze their modifying nouns (e.g. *coffee table*) as virtual RAs; these nouns undergo N-to-A transposition to acquire adjectival morphosyntax. In this case, the process does not induce suffixation. Spencer refers to such transposition as morphologically inert transposition. According to this analysis, modifying nouns are categorially adjectivized, whereas they morphologically remain nouns.

Spencer (2003, 2005) and Nikolaeva and Spencer (2020) mention that it is difficult to confirm the transpositional adjectivization of modifying nouns in English, where adjectives do not agree with their

head nouns. However, we can receive confirmation from adverbial modification. The following examples show that RAs can be modified by a certain type of adverb:

- (5) a. The most recent CDP, [...], envisions the Electronics City area as an almost exclusively industrial development.

(*Building Bangalore: Architecture and urban transformation in India's Silicon Valley*, John Stallmeyer)

- b. It was located near the freeway in a largely industrial area, [...].

(*Isky: Ed Iskenderian and the History of Hot Rodding*, Matt Stone)

- c. [...] this country developed a predominantly industrial structure [...].

(*Green Accounting*, Peter Bartelmus and E.K. Seifert)

- d. [...], or they have been compelled to sacrifice their purely industrial interests to other political considerations.

(*Writings on Imperialism and Internationalism*, John Hobson)

- e. The gradual conversion of the strictly industrial economy into a post-industrial economy is thus confirmed by numerous examples, [...].

(*The Digital Era 2: Political Economy Revisited*, Jean-Pierre Chamoux)

(underlines mine)

The same is true of modifying nouns, as shown in (6), in which they occur with the same adverbs as those in (5).

- (6) a. By the mid-1920s Conversat had become the highlight of the social season and an almost exclusively student event, [...].

(*Macdonald Institute: Remembering the Past, Embracing the Future*, James G. Snell)

- a'. an event almost exclusively for students

- b. [...] Mies deploys the largely steel skin to articulate the steel skeleton (fig. 63).

(*Frame and Generic Space: A Study into the Changeable Dwelling*, Bernard Leupen)

- b'. the skin made up largely of steel

- c. Not even in Cuba, which was moving towards a predominantly sugar economy, were there any major signs of progress.

(*The Roots of Caribbean Identity*, Peter A. Roberts)

- c'. an economy depending predominantly on sugar

- d. The price of coffee is influenced by factors beyond purely coffee factors.

(*International Coffee Agreement, 1962: Hearing before the Committee on Foreign Relations*)

- d'. factors associated purely with coffee

- e. The Knights of Labor was not a strictly working-class organization.

(*The Rising of the Women: Feminist Solidarity and Class Conflict, 1880-1917*, Meredith Tax)

- e'. an organization strictly for the working class

(underlines mine)

It is noteworthy that the underlined parts in (6a-e) can be paraphrased as in (6a'-e'), which indicates that the adverbs do not modify the relevant nouns but, rather, certain kinds of predicates. Note also that the

adverbs in question follow the articles *a* and *the* (except for (6d)). This means that these adverbs are included in DPs, where modifying nouns are the only possible targets for their modification. Adverbs can target adjectives for their modification, but “it is absolutely impossible for an adverb to modify a regular noun (Nikolaeva and Spencer (2020: 141)).” Moreover, Pullum and Huddleston (2002: 535-538, 562-563) point out that the possibility of adverbial modification syntactically distinguishes adjectives from nouns. Given these considerations, the modification of modifying nouns by adverbs corroborates that they are categorially adjectives and not nouns. If so, it is plausible that these nouns experience a categorial shift through morphologically inert transposition to obtain adjectival morphosyntax.

4. Analysis Based on a Competitive Approach

As is clear from the discussion in the previous section, modifying nouns are similar to RAs in that both are products of N-to-A transposition. These two differ in whether this process is morphologically inert or accompanied by suffixation. Henceforth, adopting Spencer’s (2005, 2013) terminology, we refer to the former type of transposition as m-inert N-to-A transposition. On the other hand, we refer to the latter type as suffixal N-to-A transposition. Based on Aronoff’s (2016, 2019, 2023) competitive approach to morphology, this section demonstrates that the RA-to-QA shift is reducible to the default status of m-inert N-to-A transposition; it is preferable to the suffixal type as the default N-to-A transposition.

4.1. Aronoff’s (2016, 2019, 2023) Competitive Approach to Morphology

Aronoff’s competitive approach is based on the principle of competitive exclusion. The concept was originally proposed as a biological principle. He claims that this principle holds true for languages and can account for a variety of morphological phenomena that are seemingly distinct in a unified fashion. This principle states that no two species can occupy the same ecological niche in the same environment. Specifically, competition occurs whenever two or more species with the same niche exist in the same environment. The result is that all but one are excluded from the relevant niche and go extinct. Nevertheless, competition does not always result in the elimination and extinction of the losers, as they can survive if they are differentiated from their competitors. This differentiation means that they undergo adaptive changes to obtain new niches. In a series of works, Aronoff emphasizes that such a phenomenon is often observed in morphology. For example, Aronoff (2016: 42) points out that “[i]n cases of *differentiation*, one affix/pattern becomes specialized either in meaning or in distribution.” To exemplify the specialized meanings, he explains the semantic difference between *collectivity* and *collectiveness*; the former has taken on a special meaning in political and sociological discourse, denoting ‘the collective body of people forming a community or state,’ while the latter has the predicted sense ‘collective quality or condition.’ Another example can be found in pairs of *-ncy* and *-nce*, which both derive abstract nouns. Aronoff and Lindsay (2014: 71) observe that *-ncy* nouns (e.g. *excellency*) are more likely to be specialized in meaning because they are less productive than *-nce* nouns (e.g. *excellence*). The present analysis states that the semantic specialization under discussion illustrates adaptive changes.

4.2. RA-to-QA Shift as an Adaptive Change

Given the principle of competitive exclusion, the RA-to-QA shift can be captured as an instance of

adaptive changes. According to the present analysis, RAs and modifying nouns share the status of N-to-A transpositions. The principle tells us that these two compete because they have the same niche of N-to-A transpositions and occur in the same environment of attributive modification. Our assumption is that the competition excludes RAs from the transpositional niche; consequently, these adjectives undergo an adaptive change to obtain a new niche as QAs.

4.2.1. English RAs ≠ N-to-A Transpositions

In fact, the exclusion has been suggested by Spencer (2013) and Nikolaeva and Spencer (2020), among others. These authors challenge the transpositional status of English RAs and claim that most of them are not N-to-A transpositions in a true sense. Like inflection, transposition changes the word-forms of its bases. Thus, this process retains some syntactic properties of the bases. Consequently, the morphosyntax of the transposed and base categories can be mixed in the transpositions. The aforementioned authors refer to this mixing as syntagmatic category mixing. This is illustrated by Udihe.² In this language, RAs allow other adjectives to modify their base nouns, as shown in (7).

- (7) [niŋka seule]-me tege
 Chinese silk -REL.A gown
 ‘a gown made of Chinese silk’

(Nikolaeva and Spencer (2020: 95))

In this example, the base noun *seule* of the RA *seuleme* is modified by the adjective *niŋka* ‘Chinese.’ Nikolaeva and Spencer (2020) refer to the availability of such inbound modification as the Base Noun Modifiability Property (BNMP). The authors regard this as the defining property of N-to-A transpositions. Thus, they claim that “[i]t is the BNMP that gives rise to the most important types of syntagmatic mixing in denominal adjectives (Nikolaeva and Spencer (2020: 34)).” Modifying nouns in English exhibit the BNMP, as shown in (8a), which corroborates that they are N-to-A transpositions.

- (8) a. [high tide] currents b.* [[high tid]al] currents (Nikolaeva and Spencer (2020: 34))

In (8a), the modifying noun *tide* is modified by the adjective *high*. By contrast, RAs are devoid of the BNMP because they do not allow for such inbound modification. This can be seen in the ungrammaticality of (8b), where *high* targets the base noun *tide* of the RA *tidal* for its modification. These facts lead Spencer (2013) and Nikolaeva and Spencer (2020), among others, to conclude that in most cases, English RAs are not genuine transpositions but special cases of lexemes, which these authors term transpositional lexemes.³

4.2.2. Default Options and their Priority

If the present analysis is on the right track, one might wonder why RAs but not modifying nouns are ruled out from the niche of N-to-A transpositions; why the nouns compete with the adjectives to win this niche. We assume that this is because the m-inert type is the default option for N-to-A transposition,

which means that the type places no restrictions on its inputs, whereas the suffixal type restricts its inputs to particular types of nouns. In fact, as mentioned in the introduction, Nikolaeva and Spencer (2020: 94) note the restricted occurrences of RAs in English, which are partly due to the standard status of N-N compounds. Spencer (2013: 360) also observes that “relational adjective formation is not entirely productive and is lexically restricted [...]” This restriction is related to the fact that the vast majority of RAs in English are borrowings from Latin, (Ancient) Greek, French, and so on, some of which are given in (9a); the examples given in (9b) are native RAs.

- (9) a. alcoholic, alphabetical, bulbous, crystalline, dietary, industrial, polar, republican
 b. blue-eyed, daily, rainy, woollen

Regarding this fact, Beard (1995: 188) explains that “[t]he rule for English is that Latinate nouns are subject to affixation; Germanic nouns and, optionally, Latinate nouns are used without morphological marking, [...]” In terms of transposition, this explanation tells us that suffixal N-to-A transposition mostly restricts its inputs to borrowed nouns, which is not found in the m-inert type. Let us keep this restriction in mind and return to the principle of competitive exclusion. To explicate this principle, Aronoff (2023: 55) states that “[w]hen two species compete for exactly the same requirements, one will be slightly more efficient than the other and will reproduce at a higher rate.” Given this statement, we can assume that the m-inert type, whose inputs involve no restriction, is more efficient than the suffixal type, whose inputs are restricted, and thus wins the competition.

Some facts suggest that the m-inert type is preferred as the default option for N-to-A transposition. For example, the suffix *-en* originally functioned to derive RAs denoting ‘made of.’ However, it has been observed that this original function has ceased to be productive since the 16th century. More commonly, *-en* adjectives are used with figurative meanings like ‘resembling,’ as seen from the contrast in *golden wedding* vs. **golden watch* (Giegerich (2004: 7)). Only a few of these adjectives are available as material denoting RAs. According to Marchand (1969: 270), they include *birchen*, *earthen*, *wooden*, and *woollen*. However, Giegerich (2004: 7) notes that *wooden* and *woollen* alone retain the original RA function to denote ‘made of.’ Modifying nouns are now more common for the relevant purpose, as exemplified in (10).

- (10) gold and silver watches, leather cases, silk stockings (Marchand (1969: 270))

Moreover, Feist (2012: 216) finds a trend from the 18th century toward replacing RAs with the corresponding nouns (e.g. *historical lecture* → *history lecture*, *geographical book* → *geography book*), which continues, as in the current increase in the use of phrases like *science instruments*. Given the present analysis, plausibly, this trend means that m-inert N-to-A transposition is selected even if the suffixal type is available.

4.3. Motivation for the Present Analysis: Type Shift in Deverbal Nouns

The present analysis is independently motivated because deverbal nouns (e.g. *acceptance*, *denial*,

inert transposition is involved. Morphologically, the outputs are still nouns. In the case of RAs, the relevant process induces suffixation. The m-inert type places no restrictions on its inputs, whereas the suffixal type restricts its inputs to particular types of nouns. In this sense, the former can be seen as the default option for N-to-A transposition. Under the principle of competitive exclusion, the RA-to-QA shift can be captured as an illustration of an adaptive change and the resultant acquisition of a new niche. Because of their default status, modifying nouns (i.e. the outputs of m-inert N-to-A transposition) are prioritized to exclude RAs (i.e. the outputs of suffixal N-to-A transposition) from the niche of N-to-A transpositions. Consequently, these adjectives shift to QAs through adaptive changes in order to acquire a new niche. The present analysis has an independent motivation in that a similar type shift is observed in deverbal nouns. Our exploration reveals that the priority of the default option brings about new usage or meanings in other competing options. Similar phenomena are widely observed in morphology. Our competitive approach tells us that these phenomena are parallel to the RA-to-QA shift in that they follow from the principle of competitive exclusion.

NOTES

¹ For the sake of convenience, this paper refers to English N-N combinations as N-N compounds. Notoriously, these combinations are quite frequently ambiguous between nominal phrases and N-N compounds. We do not consider their formal status, although it has been controversial.

² It is a member of the Tungusic family and is spoken in the southern part of the Russian Far East.

³ According to Spencer (2013) and Nikolaeva and Spencer (2020), among others, transpositional lexemes are derivational in that canonical derivation defines new lexemes; on the other hand, they are transpositional because the formation involves no semantic addition. For example, Nikolaeva and Spencer (2020: 34) state that “[i]n a sense it [= *tidal*] is a genuine instance of derivational morphology which happens not to introduce any additional semantic content to the derived lexeme and which therefore partially fulfils the function of the true transposition.”

REFERENCES

- Aronoff, Mark (2016) “Competition and the Lexicon,” *Livelli di Analisi e Fenomeni di Interfaccia: Atti del XLVII Congresso Internazionale di Studi Della Società di Linguistica Italiana*, ed. by Annibale Elia, Claudio Iacobini and Miriam Voghera, 39-51, Bulzoni Editore, Roma.
- Aronoff, Mark (2019) “Competitors and Alternants in Linguistic Morphology,” *Competition in Inflection and Word-Formation*, ed. by Franz Rainer, Francesco Gardani, Wolfgang U. Dressler and Hans Christian Luschützky, 39-66, Springer, Cham.
- Aronoff, Mark (2023) “Three Ways of Looking at Morphological Rivalry,” *Word Structure* 16, 49-62.
- Aronoff, Mark and Mark Lindsay (2014) “Productivity, Blocking, and Lexicalization,” *The Oxford Handbook of Derivational Morphology*, ed. by Rochelle Lieber and Pavol Štekauer, 67-83, Oxford University Press, Oxford.
- Bauer, Laurie (2003) *Introducing Linguistic Morphology* (2nd ed.), Edinburgh University Press, Edinburgh.
- Bauer, Laurie, Rochelle Lieber and Ingo Plag (2013) *The Oxford Reference Guide to English*

- Morphology*, Oxford University Press, Oxford.
- Beard, Robert (1995) *Lexeme-Morpheme Base Morphology: A General Theory of Inflection and Word Formation*, State University of New York Press, Albany.
- Bisetto, Antonietta (2010) "Relational Adjectives Crosslinguistically," *Lingue e Linguaggio* 9, 65-85.
- Farsi, A. A. (1968) "Classification of Adjectives," *Language Learning* 18, 45-60.
- Feist, Jim (2012) *Premodifiers in English: Their Structure and Significance*, Cambridge University Press, Cambridge.
- Giegerich, Heinz J. (2004) "Compound or Phrase?: English Noun-plus-Noun Constructions and the Stress Criterion," *English Language and Linguistics* 8, 1-24.
- Grimshaw, Jane (1990) *Argument Structure*, MIT Press, Cambridge, Mass.
- Gunkel, Lutz and Gisela Zifonun (2008) "Constraints on Relational-Adjective Noun Constructions: A Comparative View on English, German and French," *Zeitschrift für Anglistik und Amerikanistik* 56, 283-302.
- Marchand, Hans (1969) *The Categories and Types of Present-Day English Word-Formation: A Synchronic-Diachronic Approach* (2nd ed.), C. H. Beck'sche Verlagsbuchhandlung, München.
- Nagano, Akiko (2018) "A Conversion Analysis of So-Called Coercion from Relational to Qualitative Adjectives in English," *Word Structure* 11, 185-210.
- Nikolaeva, Irina and Andrew Spencer (2020) *Mixed Categories: The Morphosyntax of Noun Modification*, Cambridge University Press, Cambridge.
- Payne, John and Rodney Huddleston (2002) "Nouns and Noun Phrases," *The Cambridge Grammar of the English Language*, ed. by Rodney Huddleston and Geoffrey K. Pullum, 323-524, Cambridge University Press, Cambridge.
- Pullum, Geoffrey K. and Rodney Huddleston (2002) "Adjectives and Adverbs," *The Cambridge Grammar of the English Language*, ed. by Rodney Huddleston and Geoffrey K. Pullum, 525-596, Cambridge University Press, Cambridge.
- Spencer, Andrew (1999) "Transpositions and Argument Structure," *Yearbook of Morphology 1998*, ed. by Geert Booij and Jaap van Marle, 73-101.
- Spencer, Andrew (2003) "Does English Have Productive Compounding?," *Topics in Morphology*, ed. by Geert Booij, Janet DeCesaris, Angela Ralli and Sergio Scalise, 329-341, IULA, Barcelona.
- Spencer, Andrew (2005) "Towards a Typology of 'Mixed Categories'," *Morphology and the Web of Grammar: Essays in Memory of Steven G. Lapointe*, ed. by C. Orhan Orgun and Peter Sells, 95-138, Stanford, CSLI.
- Spencer, Andrew (2013) *Lexical Relatedness: A Paradigm-Based Model*, Oxford University Press, Oxford.
- Spencer, Andrew (2016) "Two Morphologies or One?: Inflection versus Word-formation," *The Cambridge Handbook of Morphology*, ed. by Andrew Hippisley and Gregory Stump, 27-49, Cambridge, Cambridge University Press.

DICTIONARY

Longman Dictionary of Contemporary English (LDCE) (6th ed.), Pearson Education, Essex.

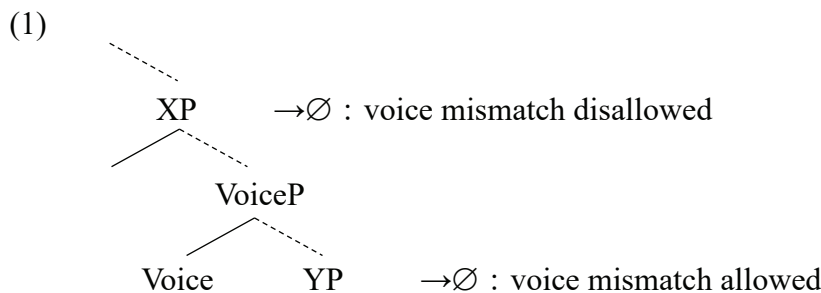
動詞句省略と非対格性のミスマッチ*
(VP Ellipsis and Unaccusativity Mismatches)

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キーワード：動詞句省略, 統語的同一性, 非対格動詞, 非能格動詞, 様態動詞

1. 序

Merchant (2013)では、態の交替は、論理的意味に影響を及ぼさないにも関わらず、sluicing、fragment answer、gapping、stripping などでは、先行詞との間で態の不一致が許されないことから、省略における同一性には統語構造の同一性も重要であると論じている。より具体的には、(1)で示すように、態の情報を言語化する Voice 主要部を仮定した上で、これらの省略は、VoiceP を含むより大きな構造 XP をターゲットとする想定する。この場合態の不一致が許されないのは、省略される構造内の Voice 主要部の値が active と passive で異なるためであると分析する。一方で動詞句省略において態の不一致が許されるのは、Voice 主要部を含まないより小さな構造、つまり(1)の YP が省略の対象であり、統語的同一性を満たすためであると主張する。



(Merchant (2013: 89))

Merchant の分析は、省略の対象が VoiceP を含む大きな構造 XP であるか、それを除く小さな構造 YP であるかの観点から、様々な省略現象における態の不一致の可否を統一的に説明できる点で大変重要な研究である。しかし一方で、(1)のより小さい構造 YP の省略に関する分析には経験的な面で不十分な点もある。例えば、Merchant (2013)のさらなる予測として、たとえ小さな構造 YP の省略であっても、その中に何らかのミスマッチが生じている場合には、統語的同一性が満たされず省略は許されない。これを支持する証拠は、(2)の項交替のミスマッチが生じている例から得られる。

- (2) a This can freeze. *Please do.
 b. *Bill melted the copper vase, and the magnesium vase did, too.

(ibid.: 94)

(2)の状態変化動詞の自他交替のミスマッチは、自動詞を先行詞にしようとも他動詞を先行詞にしようとも省略は不可能である。Merchantはこの事実を、(3)で示す構造を想定し、(3a)の他動詞形と(3b)の自動詞形に關与する輕動詞の種類が異なるため、統語的同一性条件に違反し、省略が不可能であると説明する。

- (3) a. [VoiceP Voice_[+Active] [VP EA [v' V_{transitive} [VP melt IA]]]]
 b. [VoiceP Voice_[+Active] [VP V_{unaccusative} [VP melt IA]]]

しかしこの分析には、經驗的な面で不十分な点がある。例えば、Sugimoto (2018)では、実は項交替のミスマッチは、一律不可能というわけではなく、(4)で示すように非対称性があることを觀察している。

- (4) a. John believed that the sunshine would melt the big snowballs_i, but they_i didn't
 <melt>.
 b. *John believed that the big snowballs_i would not melt, but the sunshine did
 <melt them_i>.

(Sugimoto (2018: 146-147))

(4)では状態変化動詞の他動詞形を先行詞にし、自動詞形を省略する場合においてのみ動詞句省略が許されることを示している。Sugimoto (2018)では、この非対称性を、(5)で示すように、他動詞形の構造はその構造の一部として自動詞形の構造を包含していると提案することで説明しようとしている。

- (5) a. [VoiceP Voice_[+Active] [VP EA [v' V_{cause} [VP melt IA]]]]
 b. [VoiceP Voice_[+Active] [VP melt IA]]

つまり、(4a)の場合のみ、先行詞の他動詞構造が省略部の自動詞構造を包含する関係になっているために統語的同一性を満たし、文法的になると説明している。

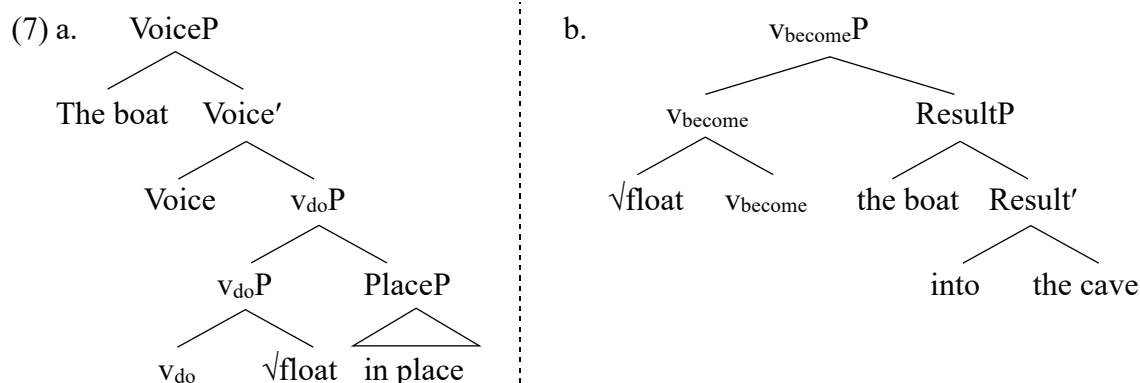
この考えをさらに推し進め、本論ではこのような非対称性は実は状態変化動詞のみではなく、様態動詞にも觀察され、ここでも構造の包含関係によって非対称性を説明できることを示す。具体的には様態動詞 float が示す非能格と非対格の交替（非対格性のミスマッチ）が動詞句省略の先行詞と省略部の間で許される場合があることを示し、この事実を説明するために、非対格構造は、その構造の一部として非能格構造を含む構造であると提案し、Merchant の省略の研究にさらなる支持を与えるを試みる。

2. 問題提起

Float のような動詞には、2つの用法がある。1つ目は(6a)のように、(その場で) 浮かぶか浮くという、動作様態を表わす動詞として解釈される場合である。2つ目は(6b)で示すように、着点などの経路を表す句を伴い、移動と動作様態の両方の意味を表わす動詞として解釈される場合である。(6b)の float が移動と動作様態の2つの意味要素を内包していることは、(6c)のようにパラフレーズできることからわかる。(6c)では、動作様態の意味を持つ float が分詞構文に用いられ、移動を表す動詞 move を修飾している (Jackendoff (1983), Levin (1993)などを参照)。

- (6) a. The boat floated₁ (in place). (float₁=動作様態)
 b. The boat floated₂ into the cave. (float₂=移動+動作様態)
 c. The boat moved into the cave, floating₁. (move=移動、float₁=動作様態)

次に、Harley (2005)、Folli and Harley (2005, 2008, 2019)などに従い、(6a)は(7a)の非能格構造をもち、(6b)は(7b)の非対格構造を持つと想定する。



Folli and Harley の動詞句構造では、v_{do} や v_{become} といった異なる種類の軽動詞が想定される。v_{do} は、名詞的な語根 (ここでは√float) を補部にとり、さらにこの語根が、v_{do} に編入することで、(7a)で示す非能格動詞が得られる。またここでは非能格であることを明確にするために in place のような場所句を付加している。またさらに Acedo-Matellán (2016)などに従い、この v_{do}P の上位には Voice が併合され、その指定部に Agent として解釈される外項が併合すると想定する。¹一方 v_{become} は、状態変化や位置変化の結果を表す句、ここでは ResultP を補部として選択し、v_{become}P を形成する。ただしこの構造内には軽動詞の語彙内容となる語根の√float がないため、√float は移動によってではなく、様態編入という Harley (2005)で提案される特殊な操作によって v_{become} 主要部に編入し、(7b)で示すような非対格構造が得られる。²

次に、省略には、Merchant (2013)の統語的同一性条件が課せられると想定すると、(7a)と(7b)の構造間では、軽動詞の種類が異なるため統語的同一性が満たされず、どちらの構造を先行詞にしようと、もう一方の省略は許されないことになる。しかしこの予測は、(8)で示されるように支持されない。^{3,4}

- (8) a. John believed that the boat would float into the cave, but it did in place.
 b. ??John believed that the boat would float in place, but it did into the cave.

ここでは、Jayaseelan (1990, 2001)、Gengel (2013)に従い、(8)では、省略部にある焦点要素 (in place と into the cave) が動詞句外に移動した後で、vP レベルに動詞句省略が適用されると想定すると、(8a)のように非対格を先行詞にして、非能格を省略する場合、容認可能であるが、(8b)のようにその関係を逆にした場合、容認不可能であることを示している。また(8)では、先行詞と省略部の主語にボートが用いられているが、(9)と(10)で示すようにそれ以外の主語でも同じ対比が生じる。

- (9) a. John believed that the boy would float into the cave, but he did in place.
 b. ??John believed that the boy would float in place, but he did into the cave.
 (10) a. John believed that the ball would float into the cave, but it did in place.
 b. ??John believed that the ball would float in place, but it did into the cave.

また(11)のように先行詞と省略部の主語が異なる場合でも、同様の結果が得られる。

- (11) a. John's beach ball floated into the cave, but he did in place.
 b. ??John floated in place, but his beach ball did into the cave.

さらに、上記の例では非能格と非対格のミスマッチが生じているが、ミスマッチがない場合には、省略が可能であると判断される。(12a)は先行詞と省略部の両者に非能格構造が用いられている例であり、(12b)は非対格構造が用いられている例である。

- (12) a. The three white boats floated near the dock, but the blue boats did in the center of the lake.
 b. The three white boats floated into each of the three caves, but the blue ones did just into one of them.

ここまでのデータをまとめたものが(13)である。要点は非対格性のミスマッチの下で、省略が許されるのは、動作様態と移動の2つの意味を融合した float を先行詞にして、省略部に動作様態のみを表す float を用いた場合に限られるということである。

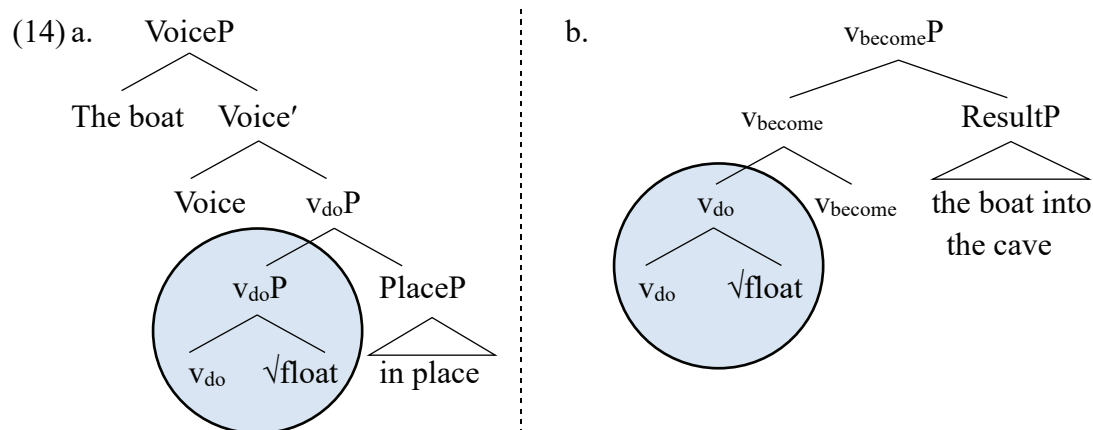
(13)

	先行詞	省略部	省略の可否
①	V (動作様態+移動) + 着点	V (動作様態) + 場所	可
②	V (動作様態) + 場所	V (動作様態+移動) + 着点	不可

本論ではなぜ、この①のパターンだけが容認可能であると判断され、このような対比が生じるのかを問題として取り上げ、その解決を試みる。

3. 提案と分析

本論では、Harley (2005)、Folli and Harley (2005, 2008, 2019)などの提案に従い、様態語根√float が補部として軽動詞 v_{do} と併合し、次にこの構造を核として、その後の派生方法によって、(14a)の非能格構造と、(14b)の非対格構造が生じると提案する。

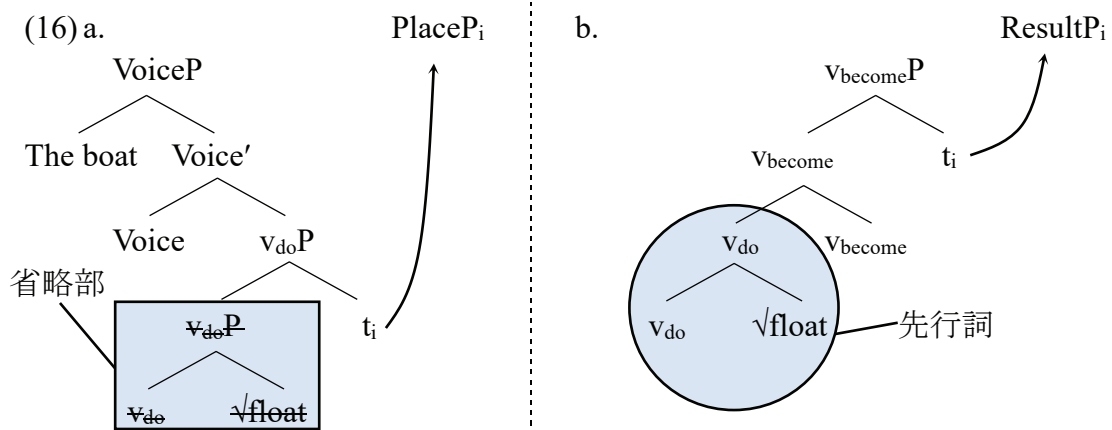


まず√float と v_{do} が結合してできた構造は、最大投射としても、主要部としても見なすことができると想定する。(14a)のように最大投射 v_{do}P とみなされる場合、(7a)と同じ非能格構造を形成する。一方、この構造が主要部とみなされる場合、(14b)の丸印で示すように、この主要部が、v_{become} 主要部に付加する。具体的には、v_{become} がその補部の ResultP と併合したのち、丸印の主要部が、v_{become} 主要部に様態編入することにより、非対格構造が得られる。ここでの要点は、両構造の軽動詞主要部をみた時、非対格構造がその構造の一部として丸で囲んだ非能格構造を含んでいることである。Folli and Harley との違いは、彼女らは v_{become} に語根のみを様態編入しているが、本論では語根と v_{do} からなる主要部を様態編入している点である。⁵

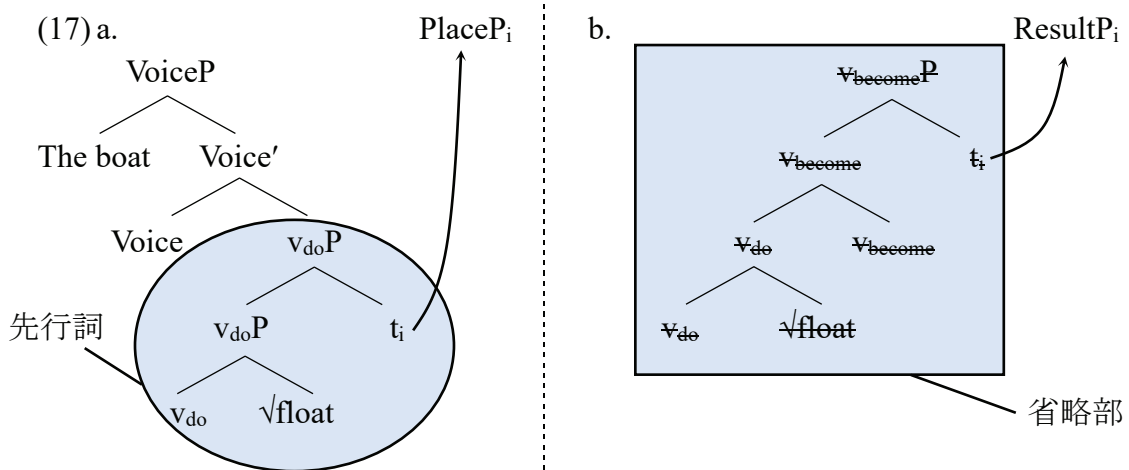
次にこの提案が2節で問題として取り上げた省略のデータ(8)から(11)を統語的同一性条件を遵守したまま説明できることを示す。ここでは代表例として(8)のデータを(15)として再掲する。

- (15) a. John believed that the boat would float into the cave, but it did in place.
 b. ??John believed that the boat would float in place, but it did into the cave.

まず Jayaseelan (1990, 2001)や Gengel (2013)に従い、(15)の動詞句省略は into the cave と in place の焦点要素が動詞句外に移動した後で適用されると想定する。また Merchnat (2013)に従って、省略は vP レベルに適用されると想定する。さらに統語的に同一であるかどうかは先行詞と省略部に関与する機能投射と語根から成る構造が同一であるかどうかで判断する。この想定のもとでは、(15)の対比を次のように捉えることができる。まずは(15a)の文法性について、下記(16a)の非能格構造の四角で囲まれた v_{do}P に省略が適用されると考えると、これと統語的に同一である先行詞を非対格構造(16b)の丸で囲まれた部分に見出すことができるため省略が可能であると説明できる。



一方先行詞と省略部の関係を逆にした場合、下記(17b)の非対格構造の四角で囲まれた $v_{become}P$ が省略されると考えると、これと統語的に同一である先行詞を非能格構造(17a)の丸で囲まれた vP 領域に見つけることができない。より具体的には v_{become} の軽動詞がなく、統語的同一性条件を満たさないため省略ができないと説明できる。⁶



次に(15)の対比の説明に統語的同一性条件が関与することを裏付けるさらなる証拠を示す。まず(15)では省略される単位が vP という小さい単位であることによって、統語的同一性条件を満たすかどうかには差が生じた。しかし一方で節などのより大きな単位が省略される場合、このような差は消失する。例えば、非能格構造を含むより大きな単位が省略される場合、先行詞の非対格構造には $voice$ 主要部が存在しないので統語的同一性が満たされない。⁷ また逆に、非対格構造を含むより大きな単位が省略される場合、先行詞の非能格構造には v_{become} の軽動詞が存在しないので統語的同一性は満たされない。したがって、節などのより大きな単位が省略される場合には、非対格、非能格のどちらが先行詞であっても、もう一方の省略は、統語的同一性が満たされず、非文法的になると予測する。この予測を検証するデータとして、**fragment answer**、**gapping**、**stripping** を用いることができる。Merchant (2013)の考えを想定すると、この3つの省略は残余句が節の外に移動した後で節というより大きな箇所省略が適用されることによって派生される。したがってこの3種類の省略では非能格と非対格の

交替が許されないことになるが、予測通り(18)の *fragment answer*、(19)の *gapping*、(20)の *stripping*、いずれの省略においてもインフォーマントは容認できないと判断する。

- (18) a. ??Did the boat float into the cave? No, in place.
b. ??Did the boat float in place? No, into the cave.
(19) a. ??Mary floated into the cave and John, in place.
b. ??John floated in place and Mary, into the cave.
(20) a. ??The boat didn't float into the cave yesterday, but in place.
b. ??The boat didn't float in place yesterday, but into the cave.⁸

以上本節では、非対格構造に新たな派生を提案し、それが動詞句省略、*fragment answer*、*gapping*、*stripping* の観点から支持されることを論じた。

4. do so 代用

本論の帰結として、*do so* 代用について議論する。まず Hankamer and Sag (1976)などによると、*do so* 代用は動詞句省略と同様に、表層照応に分類される。このため *do so* 代用も統語的な先行詞を必要とする照応であり、先行詞とその *do so* の適用対象の間で統語的同一性条件が要求されることになる。次に本論で検討してきた非能格と非対格の対比が、*do so* 代用でも観察されるのかを検証した結果が(21)である。

- (21) a. John believed that the boat would float into the cave, but it did so in place.
b. ??John believed that the boat would float in place, but it did so into the cave.

インフォーマントによると、*do so* 代用においても動詞句省略と同様の対比が見られるという。つまり非対格構造を先行詞にして、非能格構造を *do so* 代用する場合のみが許される。また(21)では、非対格と非能格に共通の主語としてボートが用いられているが、(22)と(23)で示すようにそれ以外の主語でも同じ結果が得られる。

- (22) a. John believed that the boy would float into the cave, but he did so in place.
b. ??John believed that the boy would float in place, but he did so into the cave.
(23) a. John believed that the ball would float into the cave, but it did so in place.
b. ??John believed that the ball would float in place, but it did so into the cave.

また(24)のように、先行詞と *do so* 代用の主語が異なる場合でも、同様の容認性の対比が観察される。

- (24) a. John's beach ball floated into the cave, but he did so in place.
b. ??John floated in place, but his beach ball did so into the cave.

またさらに、上記の例は非対格性のミスマッチが生じている例であるが、ミスマッチ

がない場合には、do so 代用が可能であると判断される。(25a)は先行詞と do so 代用部分のいずれにも非能格構造が用いられている例であり、(25b)はいずれにも非対格構造が用いられている例である。

- (25) a. The three white boats floated near the dock, but the blue boats did so in the center of the lake.
b. The three white boats floated into each of the three caves, but the blue ones did so just into one of them.

したがって本論の帰結として、ここでの分析と、データの容認度が正しい限りにおいて、do so 代用においても、その適用対象は動詞句省略と同じ動詞句領域であること、つまり vP であることが示唆される。

5. 結論

本論では、様態動詞 float が示す非対格性のミスマッチが動詞句省略において観察されることを示し、この事実が、非対格構造は、その構造の一部に非能格構造を含む構造であると提案することによって説明できると論じた。またこの提案の妥当性を、fragment answer, gapping, stripping といった節が省略されるタイプの構文との比較を通して検証した。またさらなる証拠として、ここで提案される構造は、do so 代用にみられる非対称性にも説明を与えることができることを示した。最後に本論の提案が正しい限りにおいて、Folli and Harley の一連の研究で想定される、軽動詞のフレイバーを利用した分裂 VP 構造が支持されることになる。また Merchant (2013)の省略の考えにさらなる支持を与えるとともに、統語的同一性を満たしながら動詞句省略の非対称性を捉えるためには、構造の包含関係が必要であることを示した。

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注

¹ 久米祐介先生から、一般に非能格の主語の意味役割は Agent であり、有生項によって具現化されるはずであるが、(6a)のデータでは無生物の the boat によって具現化されていることについてご質問を頂いた。本論では Agent について、Folli and Harley (2008)に従い、Agent を担う項は、teleological capability (目的達成能力)を持たなければならないと想定している。これに基づくとボートは無生物であるが、通常ふかふか浮くという動きを自ら生み出せる目的達成能力を持つものであるため、Agent の意味役割を担うことができる。一方(ia)で示すように、噂にはそれ自体にふかふか浮く動作

をする能力はないので、非能格構造には生じることができない。

(i) a. *The rumor floated (in place / in the town).

b. The rumor floated about / around / through / into the town.

また非対格の場合、主語は単に位置変化を受けるものという意味で Theme と解釈される。このため(ib)で示すように、噂のような目的達成能力がないものが主語であっても文法的である。本論ではこのような主語の意味役割における相違から、(6a)は非能格構造であり、(6b)は非対格構造であり、両者は異なる構造を持つと考えている。

² Folli and Harley (2019)では、特にこの(7b)のような head adjunction 構造は、Matushansky (2006)の主要部移動の提案の帰結として、主要部や語根が vP に外的併合し、その後形態的併合することによって得られると論じている。

³ 以下引用がないデータはインフォーマントによるものであり、省略を適用しない文は全て容認可能であると判断されている。

⁴ 永次健人先生から、(8b)では in place と into the cave が対比要素になっているが、in place の指示性が弱く、そのせいで容認度が落ちている可能性があるとのこと指摘を頂いた。これについては in the pond のような表現に変えて再調査したいと考えている。

⁵ 前田宏太郎先生から、語根が様態であるのか結果であるのかは統語的位置によって決まるという考えがあるが、本論の提案からは、v_{do} と結合する語根が様態として解釈されるという帰結が導かれるのではないかというご助言を頂いた。これについては今後の検討課題とする。

⁶ (17b)の構造において、√float と v_{do} が結合してできた構造を最大投射 v_{do}P とみなし、これを v_{become} に付加することはできないのか、またできる場合には v_{become}P ではなく v_{do}P を省略対象とすることができるので、動詞句省略が事実と異なり可能になるのではないかという趣旨の質問を、島越郎先生、瀧田健介先生、戸澤隆広先生、三好暢博先生から頂いた。本論では、そのような付加の可能性はそもそも生じないと考えているが、これは次のような制約を想定しているためである。

(i) Like-Adjoins-to-Like Constraint

Adjunction can only adjoin like to like.

(Radford (2020: 122))

(i)は付加操作に関わる普遍的制約であり、主要部は主要部にしか付加できず、また句は句にしか付加できないことを意味している。したがって、v_{do}P が v_{become} に付加することはないことになる。

⁷ 永次健人先生から、非対格構造にはなぜ VoiceP がいないのかについてご質問を頂いた。本論では非対格では外項を投射しないことや受動化できないことを考慮し、VoiceP はないと想定した。仮に VoiceP があると想定しても、その場合外項を投射しないタイプの（非能格とは別の）VoiceP を想定することになる。2種類の Voice が外項の有無を決定する統語素性で区別されるとすると、最終的には、非対格に VoiceP を仮定しても、非能格の VoiceP とは統語素性において異なるものであり、統語的同一性を満たさないことになる。つまり VoiceP の仮定にかかわらず省略に関しては本論で示した予測と同じ予測になる。また漆原朗子先生から、非対格構造に VoiceP が存在するかどうかについては、本論の様態動詞ではなく、Sugimoto (2018)で扱っている状態変化動詞の省略現象を観察することによって検証できるのではないかとのご助言を

頂いた。この点については今後の検討課題とする。

⁸ 下記の(i)は、先行節が否定文で、省略部分が肯定文という点で、(20)と同一のタイプの *stripping* であるが、(i)では(20)と異なり、全く同一の他動詞 *drink* が先行節と省略部に用いられている。

(i) John didn't drink coffee, but tea.

インフォーマントによると、(i)は容認可能であり、(20)の容認性とは明らかな対比があるという。

参考文献

- Acedo-Matellán, Víctor (2016) *The Morphosyntax of Transitions: A Case Study in Latin and Other Languages*, Oxford University Press, Oxford.
- Folli, Raffaella and Heidi Harley (2005) "Flavors of *v*: Consuming Results in Italian and English," *Aspectual Inquiries*, ed. by Paula Kempchinsky and Roumyana Slabakova, 95-120, Springer, Dordrecht.
- Folli, Raffaella and Heidi Harley (2008) "Teleology and Animacy in External Arguments," *Lingua* 118, 190-202.
- Folli, Raffaella and Heidi Harley (2019) "A Head Movement Approach to Talmy's Typology," *Linguistic Inquiry* 51, 425-470.
- Gengel, Kirsten (2013) *Pseudogapping and Ellipsis*, Oxford University Press, Oxford.
- Hankamer, Jorge and Ivan A. Sag (1976) "Deep and Surface Anaphora," *Linguistic Inquiry* 7, 391-426.
- Harley, Heidi (2005) "How do Verbs Get Their Names? Denominal Verbs, Manner Incorporation, and the Ontology of Verb Roots in English," *The Syntax of Aspect: Deriving Thematic and Aspectual Interpretation*, ed. by Nomi Erteschik-Shir and Tova Rapoport, 42-64, Oxford University Press, Oxford.
- Jackendoff, Ray (1983) *Semantics and Cognition*, MIT Press, Cambridge, MA.
- Jayaseelan, K. A. (1990) "Incomplete VP Deletion and Gapping," *Linguistic Analysis* 20, 64-81.
- Jayaseelan, K. A. (2001) "IP-Internal Topic and Focus Phrases," *Studia Linguistica* 55, 39-75.
- Levin, Beth (1993) *English Verb Class and Alternations: A Preliminary Investigation*, University of Chicago Press, Chicago.
- Matushansky, Ora (2006) "Head Movement in Linguistic Theory," *Linguistic Inquiry* 37, 69-109.
- Merchant, Jason (2013) "Voice and Ellipsis," *Linguistic Inquiry* 44, 77-108.
- Radford, Andrew (2020) *An Introduction to English Sentence Structure*, Cambridge University Press, Cambridge.
- Sugimoto, Kenji (2018) "An Argument Structure Alternation of Change-of-State Verbs under VP-Deletion," *JELS* 35, 145-151.

Language Change to a DP Language in the History of English: Implications from Discontinuous NPs*

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Keywords : discontinuous coordination, left branch extraction, development of articles,
NP/DP language

1. Introduction

This paper attempts to resolve an ongoing debate on the syntactic status of noun phrases, i.e., whether they are NP or DP, by focusing on the possibility of discontinuous noun phrases in Old English (OE) and Middle English (ME). Since Abney (1987), the maximal projection of English noun phrases has been assumed to be DP, whose head (i.e., D) takes an NP as its complement, and that articles are the representative lexical item of the D position. In the literature on the historical generative syntax, a question has emerged regarding whether the functional head D exists within the nominal domain even in OE and ME, which lack articles (either definite or indefinite). Some researchers give a negative answer to this question (e.g., Yamamoto (1989), Osawa (2000)). Their claim can be roughly summarized as follows:

- (1) a. The DP layer emerged after the development of articles, which means that English underwent a historical change from an NP language to a DP language.
- b. Prenominal modifiers show more flexible order patterns in OE and ME than in Present-day English (PE), which illustrates the difference in the internal structure of the nominal domain.

Others contend that even languages without articles have the DP layer and hence the noun phrases are categorially unified under the DP hypothesis (e.g., Progovac (1998), Wood (2007), Ibaraki (2009, 2010)). Both the ‘emergence of D’ and ‘universality of D’ perspectives have tried to provide empirical and theoretical evidence for this controversial topic, but no decisive answer to this question has arisen. This paper argues that the DP layer has emerged in the course of its history, and demonstrates that this argument is well-supported by the decline of discontinuous noun phrases, especially in the extraposition of genitive (or possessive) expressions and discontinuous coordinated noun phrases. This paper propounds that the loss of the relevant extraposition indicates the emergence of the DP layer in the history of English, by assuming, along with Bošković (2014 et seq.) and Oda (2021), that the highest extended projection serves as a phase and every Internal Merge (IM) cannot violate both locality and

antilocality constraints. Furthermore, this paper presents the results of corpus research to identify when the functional head D emerged.

2. Previous Studies of Old English Noun Phrases

OE has the demonstratives such as *se* ‘that’, which is the origin of the definite article *the*. A question related to the NP/DP debate is whether demonstratives function as the functional head D. From the ‘emergence of D’ perspective, they are not a functional item. Osawa (2000) points out OE examples of bare noun phrases (e.g., *wælstowe gewald* [lit. battlefield-FEM-GEN command] ‘command of the battlefield’). As the translation shows, PE requires a definite article in the relevant context. This suggests that PE contains a DP layer, whereas OE does not. Yamamoto (1989) claims that demonstratives were, in principle, the same as adjectives, because they can cooccur with either possessive pronouns or nouns in the genitive case, as in (2).

- (2) a. Hie þa lærde *se heora halga bisceop* (lit. them then instructed *that their holy bishop*)
 ‘Then their holy bishop instructed them’ (BIHom 201.24 / Yamamoto (1989: 3))
- b. ðe gehyrað *ðæt halige Godes word* (lit. who hear *that holy God's word*)
 ‘who hear the holy word of God’ (ÆHom IV. 294–Allen / Yamamoto (1989: 3))

The demonstratives in OE show rich inflections according to the gender, number, and case of the head noun that they modify, identical to the adjectives in OE, so her claim is not unnatural. Furthermore, the fact that an adjective may precede them, as shown in (3), supports their adjectival status.

- (3) a. [...] he wæs *sop Godes Sunu* (lit. he was *true God's Son*)
 ‘he was the true son of God’ (BIHom 29.26 / Yamamoto (1989: 3))
- b. mid *sele þan kinge* (lit. with *good the king*)
 ‘with the good king’ (Lawman–Lightfoot / Yamamoto (1989: 4))

She claims that semantic and pragmatic factors allow for this kind of flexible word order for prenominal modifiers.

However, from the ‘universality of D’ perspective, the DP layer exists throughout the history of English, and its existence is independent from the historical changes described above. Ibaraki (2009, 2010) claims that English noun phrases have had a DP layer throughout its history, and proposes the following internal structure of nominal phrases, where the demonstratives are generated as the functional head D:

- (4) [DP Pre-D [DP Pre-D [D' Cent-D [NumP Spec [Num' Post-D [NP Spec [N' N]]]]]]] (Ibaraki (2009: 85))

He conducted corpus research on the relative word order of prenominal modifiers, such as predeterminers (Pre-D; e.g., *all, both, half*), central determiners (Cent-D; e.g., articles, demonstratives, *any, every, some*), postdeterminers (Post-D; e.g., cardinal numbers, ordinal numbers, *few, many*) and

prenominal adjectives. Based on the results of his corpus research, he claims that relative word order patterns have been almost the same throughout the history of English and concludes that word order in the nominal domain was not so flexible even in OE. Hence, prenominal elements are generated in the designated positions, basically in the same manner as in PE, while word order patterns attested in OE, which are unusual in PE, are accounted for by assuming movement operations to derive the relevant word order (e.g., movement of a possessor phrase in Spec, NumP to Spec, DP for feature checking).

To summarize, the morphosyntactic behavior of demonstratives in OE is puzzling. Previous studies on both perspectives have made important observations on this topic, and the evidence they provide seems convincing to some extent; however, none of them are decisive. Hence, we need evidence from a different aspect. In the next section, this paper proposes that discontinuous noun phrases play an important role.

3. The Phasehood of NP/DP and Discontinuous Noun Phrases

It has been argued that noun phrases in Slavic languages such as Serbo-Croatian lack a DP layer (Corver (1989)). This argument is based on cross-linguistic differences in sensitivity to the left branch condition.

- (5) **Left Branch Condition:** No NP which is the left most constituent of a larger NP can be reordered out of this NP by a transformational rule. (Ross (1967: 207))
- (6) a. *Smart_i, they are [_{t_i} students]. (Oda (2021: 619))
- b. *Serbo-Croatian*
 Pametni_i, su oni [_{t_i} studenti]. (lit. smart are they student)
 ‘They are smart students’ (Oda (2021: 619))

This contrast is analyzed by the difference in the internal structure of the noun phrases: the left branch condition is violable in languages without a DP layer (i.e., NP languages), while languages with a DP layer (i.e., DP languages) conform to the relevant condition. Recently, it is attributed to the phasehood of the noun phrases and antilocality (e.g., Bošković (2014), Oda (2021)).

- (7) The highest projection in the extended domain of every lexical head functions as a phase. (Bošković (2017: 11))
- (8) [A]ntilocality requires movement to cross at least one full phrasal boundary (not just a segment) (Bošković (2017: 11))

Under this analysis of phases, any movement must stop by a phase edge. In NP languages, the NP is the highest projection of a head noun. This means that an adjunct to an NP (i.e., XP in (9)) originates at the edge of the NP phase, so that it can be extracted from its base-generated position. Contrarily, in the DP languages, the DP is the highest projection of a head noun; therefore an adjunct to an NP cannot raise without stopping by the DP edge, and this movement violates the antilocality requirement in (8).

(15) þæt he sceolde & his ofspring his wed healdan
that he should and his offspring his oath keep
'that he and his offspring should keep his oath'

(cocathom1,+ACHom_I,_6:225.49.1090 / Taylor and Pintzuk (2017))

If this is derived by deletion, we must assume that deletion is applied twice; that is, one is the deletion of the nonfinite verb and its object at the first conjunct and the other is the deletion of the subject and finite auxiliary at the second conjunct. Such an intricate application of deletion is unnatural; therefore, it is safe to assume that the example in (15) is derived by the extraction of the conjunct out of the coordinated structure, as represented in (14a).

Following Taylor and Pintzuk (2017), Yamamura (2022) conducted corpus research on the discontinuous coordination involving both the finite auxiliary and nonfinite verb. He found the last instance of the relevant construction, as in (15), in Early ME text, which was composed in 1225. Consider the following example.

(16) þe deules þralsipe. þe hie hadden and al \$ofspring one **wuned**.
the devil's slavery that they had and all offspring on habituated
'the devil's slavery that they and all offsprings had been habituated to'

(CMTRINIT-MX1,101.1355 / Yamamura (2022: 121))

The fact that such instances were not attested after 1225 suggests that the extraction of the conjunct became unavailable in English in the Early ME period; therefore, we can conclude that D emerged in this period.

We expect that the same is true for the sensitivity to the left branching condition. Although the extraction of an adjective out of a noun phrase is not attested in texts in historical corpora, the extraction of genitive phrases is (see (13b)). I conducted corpus research on the extraction of genitive phrases in the history of English, by employing the following historical corpora.

- (17) a. The York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE)
- b. The Penn-Helsinki Parsed Corpus of Middle English, Second edition (PPCME2)
- c. The Penn-Helsinki Parsed Corpus of Early Modern English (PPCEME)
- d. The Penn Parsed Corpus of Modern British, Second edition (PPCMBE2)

The results indicate that the relevant construction is mainly attested in YCOE, and only two instances are found in PPCME2. No such instances in the rest of the corpora (i.e., PPCEME and PPCMBE2). Here, we follow examples attested in OE texts.

- (18) a. & nan þing gecnawað mid ænigean grade þas ðe eow þearf sy,
 and no thing understand with any consideration that-GEN CL you-DAT need-NOM is
 ‘and understand nothing that you need with any consideration’
 (cowulf,WHom_11:163.1084)
- b. and þæs ne wurð nan ende
 and that-GEN not is no end
 ‘and there is no end of this’ (coaelive,+ALS_[Sebastian]:77.1255)
- c. Se man þe nan ðing ne cann þæs ecan leohtes: He is blind
 that man CL no thing not knows that-GEN eternal-GEN light-GEN he is blind
 ‘The man who knows nothing of the eternal light is blind.’
 (cocathom1,+ACHom_I,_10:260.59.1864)

The following example is from an ME text, which was composed in 1200.

- (19) a. gumenen ich aem aelder.
 worrier's I am leader
 ‘I am a leader of worriers’ (1200-BRUT-M1,652.2645)
- b. Kai wuste an stiward waes kinges
 Kai commanded one servant was king's
 ‘Kai commanded one who was the king's servant’ (coaelive,+ALS_[Sebastian]:77.1255)

The result is summarized in Table 1.

(20)	Leftward	Rightwad
10th Century	10	10
11th Century (1st half)	57	137
11th Century (2nd half)	3	10
12th Century (1st half)	1	1

Since the examples in (19) are the last instances of the relevant construction, such an extraction appears to have become unavailable after 1200. Thus, the decline of relevant discontinuous noun phrases allows us to conclude that English underwent a historical change to a DP language during the Early ME period, more specifically, between 1200 and 1225.

5. Conclusion

This article discussed the emergence of the functional head D in the history of English. While some argue that the noun phrases are universally DP, this paper proposed that they were NP in OE and became DP in Early ME. This paper showed that this conclusion is supported both empirically and theoretically: the presence/absence of the DP layer reflects the (in)sensitivity to the left branch condition and coordination structure constraint. We observed that English became sensitive to the constraints in Early

ME, and concluded that this indicates the emergence of the functional head D in this period.

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REFERENCES

- Abney, Steven Paul (1987) "The English Noun Phrase in Its Sentential Aspect," doctoral dissertation, Massachusetts Institute of Technology.
- Bošković, Željko (2014) "Now I'm a Phase, Now I'm Not a Phase: On the Variability of Phases with Extraction and Ellipsis," *Linguistic Inquiry* 45, 27–89. DOI: 10.1162/LING_a_00148.
- Corver, Norbert (1989) "Left Branch Extractions and DP," *Linguistics in the Netherlands 1989*, ed. by Hans Bennis and Ans van Kemenade, 31–40, De Gruyter Mouton.
- Ibaraki, Seishirou (2009) "The Development of the Determiner System in the History of English," *English Linguistics* 26, 67–95. DOI: 10.9793/elsj.26.1_67.
- Ibaraki, Seishirou (2010) "On the Distribution of Genitives in the History of English; With Special Reference to the Development of -'S," *English Linguistics* 27, 329–43. DOI: 10.9793/elsj.27.2_329.
- Iwata, Ryoji (2008) *Eigo no Hurenzoku-koubun no Rekisiteki-kousatsu* (A Historical Study of Discontinuous Constructions in English), Eiko-sya, Tokyo.
- Oda, Hiromune (2021) "Decomposing and Deducing the Coordinate Structure Constraint," *The Linguistic Review* 38, 605–44. DOI: 10.1515/tlr-2021-2077.
- Osawa, Fuyo (2000) "The Historical Emergence of DP in English," *English Linguistics* 17, 51–79. DOI: 10.9793/elsj1984.17.51.
- Rissanen, Matti (1967) *The Uses of One in Old and Early Middle English*, vol. 31, Société néophilologique, Helsinki.
- Ross, John Robert (1967) "Constraints on Variables in Syntax.," doctoral dissertation, Massachusetts Institute of Technology.
- Talić, Aida (2015) "Adverb Extraction, Specificity, and Structural Parallelism," *Canadian Journal of Linguistics/Revue Canadienne de Linguistique* 60, 417–54. DOI: 10.1353/cjl.2015.0027.
- Talić, Aida (2017) "From A to N and Back: Functional and Bare Projections in the Domain of N and A," doctoral dissertation, University of Connecticut.
- Taylor, Ann, and Susan Pintzuk (2017) "Chapter 8. Split Coordination in Early English," *Linguistik Aktuell/Linguistics Today*, vol. 243, ed. by Bettelou Los and Pieter De Haan, 155–83, John Benjamins Publishing Company, Amsterdam.
- Traugott, Elizabeth Closs (1972) *A History of English Syntax: A Transformational Approach to the History of English Sentence Structure*, Holt, Rinehart and Winston, New York.
- Wood, Johanna L. (2007) "Is There a DP in Old English?," *Historical Linguistics 2005: Selected Papers from the 17th International Conference on Historical Linguistics, Madison, Wisconsin, 31 July - 5 August 2005, Current Issues in Linguistic Theory*, ed. by Joseph C. Salmons and Shannon Dubenion-Smith, 167–87, John Benjamins Publishing Company, Amsterdam/Philadelphia.
- Yamamoto, Keiko (1989) "The Historical Development of Determiners: A Parametric Approach," *English Linguistics* 6, 1–17. DOI: 10.9793/elsj1984.6.1.

Yamamura, Shuto (2022) “A Corpus Study on the Historical Development of Split Coordinated Subjects in English,” *Tsukuba English Studies* 40, 111–35.

CORPORA

The Penn Parsed Corpus of Modern British, Second edition (PPCMBE2)

The Penn-Helsinki Parsed Corpus of Early Modern English (PPCEME)

The Penn-Helsinki Parsed Corpus of Middle English, Second edition (PPCME2)

The York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE)

I saw them to be obnoxious.の容認可否性について
(On the Acceptability of *I saw them to be obnoxious*)

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1. はじめに

現代英語における知覚動詞は、(1)に見られるように補文に原形不定詞をとり、to 不定詞を用いた例は非文法的であると見なされる。しかし、補文内部の動詞が **be** や **have** である場合には、(2)のように to 不定詞が用いられ、直接知覚に基づく推量や間接知覚を表す。

- (1) Someone {*saw / heard*} Mary {*slam / * to slam*} the door. (Schüle (2000: 73))
(2) a. I *saw* them **to be** obnoxious. (Bolinger (1974: 66))
 b. I *saw* the house **to have been repainted**. (Declerck (1991: 490))

see の用例は Jespersen (1940: 440)などの伝統文法に始まり、現代でも多くの先行研究によって適格文と見なされ、非文と見なすものは確認できない(cf. Bolinger (1975: 399)、Felser (1999: 41)、Huddleston and Pullum (2002: 1236)、Sheehan and Cyrino (2024: 772)等)。この to 不定詞補文について、Zandvoort (1975: 17)や Declerck (1991: 410)はフォーマルな英語や文語に見られるというが、BNC や COCA を用いて調査を行った結果、後述するように多くは検出されなかった。さらに、Google Books を用いて補文主語を代名詞に限定して調査を行った結果、20 世紀以降の用例はほとんど検出されず、Jane Austen や George Eliot の作品など 18~19 世紀の用例が多く検出された。なお近年出版されたものにおいても、18~19 世紀の作品のリプリントや聖書に関連するものが多く検出された。ウィズダム英和辞典とジーニアス英和辞典ではそれぞれ第四版まで当該の用例に関する記述が見られるが、ジーニアス英和辞典では第五版以降、当該の記述は削除されている。インフォーマント調査においても、to 不定詞補文は話し言葉においては一切使われず、書き言葉でも稀な表現であり、to 不定詞補文よりも that 節を用いる方が一般的であるという。Bolinger (1974: 66)も to 不定詞補文と that 節の意味的類似性を指摘する。しかし、この分析は Bolinger (1977: x)の形と意味の一対一の原則に反する。

本研究では、(2)の知覚動詞の能動態に後続する to 不定詞補文が that 節と同一の意味を持つ可能性について意味的・統語的観点から分析し、Bolinger (1974: 66)の分析が妥当であることを検証する。また、to 不定詞補文と that 節は基本的に同等の意味を持つが、to 不定詞補文には that 節よりも多くの統語的・意味的制約が課されるため、大補文推移(that 節から非定形節

への歴史的変化)に逆行して *that* 節に吸収され、消失したことを実証する。

2. *see* を除く知覚動詞の *to* 不定詞補文

see 以外の知覚動詞について、*hear* の場合は以下のように先行研究でも揺れが見られ、Kruisinga (1931: §285)、Jespersen (1940: 281)、Zandvoort (1975: 18)、Spears (1977: 90)、Bolinger (1974: 88)、Palmer (1987: 189)、Schüle (2000: 60)、Moulton (2009: 140)、Sheehan and Cyrino (2024: 772)は適格文と見なす一方で、Rosenbaum (1967: 27)、Bolinger (1974: 88)、Bowers (1981: 108)、Palmer (1987: 199)、Huddleston and Pullum (2002: 1237) は非文とみなす。

- (3)a. Mary *heard* the teacher *to be dropping* a book. (Moulton (2009: 140))
b. * We'd *heard* him *to be* an impostor. (Huddleston and Pullum (2002: 1237))

watch、*listen to*、*look at*、*smell* については、多くの先行研究が非文と見なしている (cf. Bolinger (1974: 67)、Bowers (1981: 108)、Declerck (1983: 37)、Palmer (1987: 200)、Ishii (1987: 88)、Schüle (2000: 85))。feel については多くの先行研究がその用例を提示するが、Christophersen and Sandved (1969: 156)によれば、不定詞よりも *that* 節の使用頻度が高いという。

- (4)a. We *felt* the ground *to be giving* way under foot. (Bolinger (1974: 68))
b. I *felt* him *to be* a rather timid individual. (Akmajian (1977: 453))

3. 知覚動詞の能動態に後続する *to* 不定詞補文の意味

3.1. 直接知覚を表す知覚動詞構文

知覚動詞の *to* 不定詞補文は間接知覚を表す一方で、知覚動詞の原形不定詞と現在分詞補文は直接知覚を表す (cf. Haspelmath et al. (2001: 984)、Verspoor (2000: 215))。このうち、原形不定詞は知覚事象の完結性を表し、現在分詞は非完結性や一時性を表すと分析されている (cf. Akmajian (1977: 440)、Dirven (1989: 123))。また直接知覚を表す知覚動詞構文では、知覚行為と同時に知覚事象が生じていなければならないため、以下に示す例は非文と見なされる。

- (5)a. * At 6 o'clock, John *saw* Bill {*leave* / *leaving*} at 7 o'clock. (葉原・松山 (2001: 120))
b. * We *saw* Mary *have finished* her breakfast. (Felser (1999: 32))
c. * I *saw* the man *having finished* the work. (岡田 (1985: 239))
d. * I *saw* John *be sleeping*. (Declerck (1991: 91))
e. * I *saw* the man *being crossing* the road. (岡田 (1985: 239))

このうち、進行形は一般的に基準時の前後に時間枠を形成すると分析されているが(cf. Leech (2004: 22))、佐藤 (2014: 101)は基準時以前の時間枠の形成は義務的である一方で、基準時以降の時間枠の形成は文脈によるという。そのため、(5d-e)は(5b-c)の基準時より過去を表す完了形と同等の理由で非文と見なされる。また(6)のように直接知覚を表す知覚動詞構文はその補文に状態動詞を取ることができない。これは内的状態を直接知覚できないことに起因する。更に直接知覚を表す原形不定詞補文は *be* + *-en* (状態受動)を取らない。

- (6) a. * I **SAW** him *be* intelligent. (Linhares-Dias (2006: 35))
 b. * I *saw* Tom still *resembling* your father. (Declerck (1981: 89))
- (7) a. I *saw* him {**be* / *get*} *rejected*. (Bolinger (1974: 69))
 b. I *saw* the children *being beaten* by their rivals. (Palmer (1987: 199))

また直接知覚を表す知覚動詞構文において、原形不定詞は完結性を、現在分詞は非完結性を表すと言われている。そのため、(8)に示すようにその完結性を否定する表現が原形不定詞補文に後続できない。最後に直接知覚を表す知覚動詞の補文には(9)のように否定辞が出現できない。これは起きていないことを直接知覚することができないことに起因する。

- (8) I *saw* her {**drown* / *drowning*}, but I rescued her. (Kirsner and Thompson (1976: 215))
 (9) We *saw* the girl (**not*) *cry*. (Haspelmath et al. (2001: 985))

3.2. 間接知覚を表す知覚動詞の to 不定詞補文

to 不定詞補文は原形不定詞や現在分詞と異なり、間接知覚を表す。その証拠として(10a)を除き、完了不定詞など主節動詞よりも過去や時間差を表す表現が後続できる。更に動作動詞の使用は認められず、be や have に限定されるが、(11)のように状態表現が後続できる。

- (10) a. * Yesterday, Kim *saw* Sam *to be* sad tomorrow. (Sheehan and Cyrino (2024: 778))
 b. I *saw* the library *to have burned* down. (Felser (1999: 41))
 c. She *saw* him *to be falling* over the bridge. (Hudson (1971: 177))
- (11) a. I **SAW** him *to be* intelligent. (Linhares-Dias (2006: 35))
 b. I *saw* the house *to be painted* white. (Declerck (1981: 86))

知覚内容の打消しについて、直接知覚を表す知覚動詞構文の場合、準動詞のアスペクトにより容認可否性が異なることを見たが(cf. (8))、間接知覚を表す to 不定詞補文はアスペクトの影響を受けず、知覚内容を打消すことができる。また、間接知覚を表す知覚動詞構文の場合、実際に当該の事象を見聞きすることを表さないため、補文に否定辞が出現できる。

- (12) Martha *saw* Fred *to be driving* too fast, but he actually wasn't. (Moulton (2009: 129))
 (13) Mary *saw* Jim *not to be* a fool after all. (Miller (2007: 288))

4. 知覚動詞の能動態に後続する that 節に見られる意味特徴

前述の通り、that 節をとる知覚動詞もまた間接知覚を表すとされている(cf. Declerck (1991: 490)、Dik (1997: 108)、Dixon (2005: 135)、Singer (2007: 268))。その証拠として、以下のように直接知覚を表す知覚動詞構文には後続できない要素が that 節に後続できることが挙げられる。ただし、使用できる動詞は to 不定詞補文と異なり、be や have に限定されない。

- (14) a. I *see* that you went to bed late yesterday. (Casalicchio (2021: 73))
 b. I *saw* that Mary *had been crying*. (Dik and Hengeveld (1991: 238))

- c. She *saw that he was crossing* to the other side. (den Dikken (2018: 21))
 (15) a. I *SAW that he was* intelligent. (Linhares-Dias (2006: 35))
 b. I *saw that his leg was broken*. (Dixon (2005: 135))

また to 不定詞補文と同様に、that 節も知覚事象の打消しや否定辞の出現が許容される。そのため、to 不定詞補文と that 節は意味的・統語的に類似した表現であると考えられる。

- (16) I have *heard that* the sun is over 93 million miles away from the earth, but {it's not true / I don't believe it}. (中右 (1983: 560))
 (17) We *saw that* the girl was (*not*) crying. (Haspelmath et al. (2001: 985))

5. to 不定詞補文と that 節に見られる統語的・意味的差異

これまで to 不定詞補文と that 節の類似性を確認してきたが、(10a)と(14a)のような時間差に加えて、以下の相違点も挙げられる。特に知覚事象の打消しの中でも、(20)のような “but I don't think” のような表現が後続する際には両者は(12)や(16)と異なる振る舞いを見せる。

- (18) a. * He *saw* the president *to must* be friends with everyone. (Schüle (2000: 85))
 b. He *saw that* the president *must* have arrived. (Vendler (1984: 78))
 (19) a. * John *heard* Mary *to be* out of tune (from his friends). (Moulton (2009: 160))
 b. Jane *saw in the paper that* the government was on the ropes. (Gisborne (2010: 146))
 (20) a. # I *heard* her *to be* out of tune ... but I don't think she was. (Moulton (2009: 146))
 b. I *heard* from my friends *that* she was out of tune ... but I don't think she was. (ibid.)

このような to 不定詞補文と that 節に見られる意味的差異について、Felser (1999: 41)は to 不定詞補文について直接知覚を表す原形不定詞と間接知覚を表す that 節の中間的な表現と見なす。しかし、これまで見てきた両者の意味的差異が存在するかについては、to 不定詞補文を適格文と判断する英語母語話者はいないため、検証不能であった。次節では通時的コーパスや英訳聖書によるデータを用いて、to 不定詞補文が that 節に吸収されていることを実証する。

6. to 不定詞補文が that 節に吸収された可能性について

これまで to 不定詞補文と that 節の意味的・統語的類似性を様々なデータを通じて確認してきたが、果たして to 不定詞補文は that 節に吸収されたのだろうか。BNC と COCA を用いて調査した結果、表 1 のように that 節の使用が圧倒的であった。なお、to 不定詞補文と that 節の用例を検索する際に、補文主語と that 節の主語を代名詞に、補文と that 節内の動詞を be と have に限定したため、実際には that の用例は表に示すよりも多くの用例が存在する。

表 1. 大規模共時的コーパスにおける to 不定詞補文と that 節の分布

	BNC		COCA	
SEE PRON to {be / have -en}	8 (7 / 1)	0.8%	9 (9 / 0)	0.1%
SEE that PRON {be / have -en}	947 (816 / 131)	99.2%	7,315 (7,155 / 160)	99.9%
HEAR PRON to {be / have -en}	0 (0 / 0)	0%	6 (6 / 0)	0.3%
HEAR that PRON {be / have -en}	153 (93 / 60)	100%	2,134 (1,758 / 376)	99.7%
FEEL PRON to {be / have -en}	124 (120 / 4)	11%	250 (245 / 5)	3.1%
FEEL that PRON {be / have -en}	1,006 (771 / 235)	89%	7,776 (6,532 / 1,244)	96.9%

一方、EEBO と COHA を用いて調査を行ったところ、表 2 のように、英語の種別は異なるものの、時代を経るにつれ that 節が占める割合が増加していることから、to 不定詞補文は同じく間接知覚を表す that 節に吸収される形で衰退したと考えられる。

表 2. 大規模通時的コーパス EEBO および COHA における to 不定詞と that 節の分布

EEBO	15c		16c		17c	
SEE PRON to {be / have -en}	2 (2/0)	0.9 %	231 (206/25)	17.4 %	1,082 (993/89)	22.6 %
SEE that PRON {be / have -en}	209 (141/68)	99.1 %	1,097 (872/225)	82.6 %	3,702 (2,972/730)	77.4 %
HEAR PRON to {be / have -en}	0 (0/0)	0 %	22 (21/1)	5.9 %	69 (63/6)	6.3 %
HEAR that PRON {be / have -en}	14 (13/1)	100 %	348 (290/58)	94.1 %	1,030 (834/196)	93.7 %
FEEL PRON to {be / have -en}	2 (2/0)	14.3 %	65 (63/2)	50 %	198 (190/8)	58.9 %
FEEL that PRON {be / have -en}	12 (10/2)	85.7 %	65 (61/4)	50 %	138 (128/10)	41.1 %
COHA	19c		20c		21c	
SEE PRON to {be / have -en}	81 (77/4)	2.2 %	55 (54/1)	0.8 %	3 (3/0)	0.3 %
SEE that PRON {be / have -en}	3,654 (2,789/865)	97.8 %	6,585 (5,110/1,475)	99.2 %	1,039 (770/269)	99.7 %
HEAR PRON to {be / have -en}	3 (2/1)	0.6 %	1 (1/0)	0.1 %	0 (0/0)	0 %
HEAR that PRON {be / have -en}	524 (359/165)	99.4 %	714 (482/232)	99.9 %	125 (106/19)	100 %
FEEL PRON to {be / have -en}	482 (473/7)	13.5 %	342 (334/5)	6.9 %	16 (15/1)	3.3 %
FEEL that PRON {be / have -en}	3,083 (2,370/713)	86.5 %	4,617 (3,534/1,083)	93.1 %	473 (383/90)	96.7 %

このように to 不定詞補文は大補文推移(that 節から非定形節への歴史的変化)に逆行して that 節に吸収され、消失したと考えられるが、この仮説の妥当性は以下の英訳聖書に見られる通

時的变化からも裏付けられる。(21a)の古英語や(22a)の中英語では **that** 節が使用され、そののちに **to** 不定詞へと変化すると **that** 節へと逆行していることがわかる。(22b)では、**that** 節と **to** 不定詞が等位接続詞 **and** によって結ばれているため、近代英語では意味的・統語的に両者は同じ性質を持っていたと考えられる。また聖書は翻訳元となる原典の影響を受けている可能性も考えられるが、(23)のように聖書以外にも同様の通時的変化が観察されている。

(21) John 12:18

- a. for ðam þe hi **gehyrdon þæt** he worhte þæt tacn. (West Saxon Gospels)
- b. for þei **herden** `him **to haue don** þis figne. (Wycliffe Bible Early Version)
- c. It was also because they **heard that** he had performed this sign that the crowd went to meet him. (New Revised Standard Version)

(22) Genesis 3:6

- a. Therefore the womman **seyþ that** the tre was good, and swete to ete, and fair to the iyen, and delitable in bi holdyng; (Wycliffe Bible Late Version)
- b. And when the woman **saw that** the tree was good for food, and **that** it was pleasant to the eyes, and a tree **to be desired** to make one wise, (Authorized Version)
- c. And when the woman **saw that** the tree was good for food, and **that** it was a delight to the eyes, and **that** the tree was to be desired to make one wise, (New Revised Standard Version)

(23) The Confessions of St. Augustine, Book II. Chapter VII.

- a. since by that Physician he hath **observed** me **to have been recovered** out of such deep consumptions of sinfulness, by the same hand he **perceives** himself not **to have been incumbered** by the like. (William Watts' Translation in 1631)
- b. since by whom he **sees** me **to have been recovered** from such deep consumption of sin, by Him he **sees** himself **to have been** from the like consumption of sin **preserved**. (Edward Bouverie's Translation in 1840)
- c. for he **sees that** the one who delivered me from the great sickness of my sins is also he through whom he may **see that** he himself has not been a victim of the same great sickness. (Henry Chadwick's Translation in 1991)

このように近代英語以降、**that** 節に吸収される形で消失したため、Zandvoort (1975: 17)や Declerck (1991: 410)らが述べるように、**to** 不定詞補文はフォーマルな英語や文語にのみ用いられると考えられる。Visser (1973: 2438)は I saw it to be done. のような例について、17 世紀から 18 世紀にかけて、まだはっきりした理由はわかっていないが、出現頻度がかなり減少したため、現在では **to be** を伴う構造をとる動詞の数は以前よりずっと少なくなっていると述べる。類似する言語変異として **to** 不定詞補文と同様に間接知覚を表す **hear say** 構文を通時的に調査した村岡 (2022)によれば、(24)のように **hear say** 構文もまた **that** 節に吸収されたという。

(24) Genesis 43:25

- a. (for they **heard say**, that they should eate bread there) (Geneva Bible)
- b. for they had **heard that** they would dine there. (New Revised Standard Version)

秋元 (2023: 243)によれば、このような大補文推移の逆行現象は、*in order to* の通時的変化にも見られるという。知覚動詞の *to* 不定詞補文の場合、使用頻度が低いことも影響していると考えられるが、*to* 不定詞補文が *that* 節に吸収された要因は他にも考えられる。そのひとつとして、後期近代英語まで *that* 節が間接知覚と直接知覚の両方を表していた可能性があり、それ以降、*that* 節が間接知覚を表すマーカーとして確立すると、*to* 不定詞補文や *hear say* 構文が *that* 節に吸収されたと考えられる。片見 (2000)もまた古英語の *þæt* 節は間接知覚だけでなく、直接知覚を表していた可能性を示唆する。その証拠として、以下のようにそれぞれ *þæt* (*that*) 節が現代英語では直接知覚あるいは間接知覚を表す構文として解釈されている。

(25) Matthew 14:26

- a. Ða hi *gesawon þæt*, hi wurdon þa gedrefede, (West Saxon Gospels)
- b. But when the disciples *saw* him *walking* on the sea, (New Revised Standard Version)

(26) John 7:32

- a. The Pharisees *heard that* the people murmured such things concerning him; (Authorized Version)
- b. The Pharisees *heard* the crowd *muttering* such things about him, (New Revised Standard Version)

(27) Mark 12:28

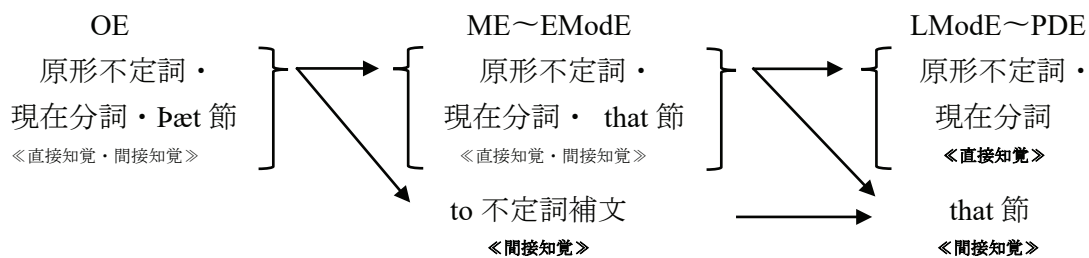
- a. Ða genealæhte him an of þam bocerum þe gehyrde hi smeagende, and *geseah þæt* he him wei andswarode, and ahsode hine hwæt wære ealra beboda mæst. (West Saxon Gospels)
- b. One of the scribes came near and heard them disputing with one another, and *seeing that* he answered them well, he asked him, “Which commandment is the first of all?” (New Revised Standard Version)

Schmid (2005: 179)や Haider (2010: 340)によれば、ドイツ語の「知覚動詞+dass (daß)節」もまた直接知覚と間接知覚の両方を表す可能性を示唆する。(26)のように直接知覚の意味として解釈されている *that* 節が近代英語期にも僅かではあるが確認される。さらに直接知覚を表す知覚動詞構文の意味もまた後期近代英語以降に確立したと考えられる。その証拠として、次例では原形不定詞補文および現在分詞補文が現代英語では *that* 節として解釈されている。これらの言語事実から *that* 節は後期近代英語以降、*to* 不定詞補文や *hear say* 構文を吸収すると、図 1 のように間接知覚を表すマーカーとして確立したと考えられる。

(28) Mark 9:1

- a. ær hi *geseon* Godes rice on mægne *cuman*. (West Saxon Gospels)
- b. til thei *seen* the rewme of God *comynge* in vertu. (Wycliffe Bible Early Version)
- c. till they have *seen* the kingdom of God *come* with power. (Authorized Version)
- d. there are some standing here who will not taste death until they *see that* the kingdom of God has come with power. (New Revised Standard Version)

図 1. 知覚動詞構文の意味的棲み分け



7. まとめ

知覚動詞の *to* 不定詞補文は多くの先行研究によって適格文として見なされているが、*that* 節との類似性が多く確認できることに加えて、*that* 節に比べて *to* 不定詞は使用できる動詞や時間差を表す表現との共起など多くの制約が課されることから、後期近代英語以降、*that* 節に吸収され、大補文推移に逆行する形で消失したことを確認してきた。このことから、*I saw them to be obnoxious.* のような表現は現代英語では殆ど使用されないため、現代英語の用例あるいは適格文として提示し難い表現であると思える。しかし、現代英語の用例として多くの先行研究が *to* 不定詞補文の使用を適格文とみなす理由として、Egan (2008: 5) は伝統文法の影響を受けている可能性を指摘する。しかし、Declerck (私信)、Felser (私信)、den Dikken (私信) は伝統文法による影響を否定する(また Egan (2008) の分析では *hear NP to-Inf* の容認可否性に揺れがあることを説明できない)。Declerck (私信) は「ある構文が一般的でなく、(非常に)フォーマルだからといって、それが非文法的だというわけではない。せいぜい、話し言葉では受け入れられないというだけである。用例の一部として Agatha Christie の作品から引用したが、1991 年の本を書いた当時(つまり 1980 年代後半)、インフォーマントのうち誰一人として、この用例がおかしいとは思わなかった」と述べる。しかし、近年多くのインフォーマントが *to* 不定詞を用いた知覚動詞の使用について疑問視しており、ジーニアス英和辞典においても、第五版以降、*see NP to-Inf* の記述が削除されている。このことから、*see NP to-Inf* は 21 世紀初頭から現代英語の用例あるいは適格文として提示し難い表現になりつつあると考えられる。

参考文献

- 秋元実治 (2023) 「まとめ」, 秋元実治 (編) 『近代英語における文法的・構文的变化』, 229-241, 東京, 開拓社.
- Akmajian, Adrian (1977) “The Complement Structure of Perception Verbs in an Autonomous Syntax Framework,” *Formal Syntax*, ed by Peter Culicover., Adrian Akmajian and Thomas Wasaw, 427-460, New York, Academic Press.
- Bolinger, Dwight (1974) “Concept and Percept: Two Infinitive Constructions and Their Vicissitude,” *World Papers in Phonetics Festschrift for Dr. Onishi’s Kiju*, ed by Phonetic Society of Japan, 65-91. Tokyo, Phonetic Society of Japan.
- Bolinger, Dwight (1975) *Aspects of Language, Second Edition*, New York, Harcorut Brace Jovanovich.
- Bolinger, Dwight (1977) *Meaning and Form*, London, Longman.
- Bowers, John (1981) *The Theory of Grammatical Relations*, Ithaca, Cornell University Press.
- Casalicchio, Jan (2021) “Expressing perception in parallel ways: Sentential Small Clauses in German and Romance,” *Continuity and Variation in Germanic and Romance*, ed by Sam Wolfe and

- Christine Meklenborg, 70-96. Oxford, OUP.
- Christophersen, Paul and Arthur Sandved (1969) *An Advanced English Grammar*. London, Macmillan.
- Declerck, Renaat (1981) "On the Role of Progressive Aspect in Nonfinite Perception Verb Complements," *Glossa* 15.1, 83-114.
- Declerck, Renaat (1983) "On the Passive of Infinitival Perception Verb Complements," *Journal of English Linguistics* 16.1, 27-46.
- Declerck, Renaat (1991) *A Comprehensive Descriptive Grammar of English*, Tokyo, Kaitakusha.
- Dik, Simon and Kees Hengeveld (1991) "The Hierarchical Structure of the Clause and the Typology of Perception-verb Complements," *Linguistics* 29.2, 231-259.
- Dik, Simon (1997) *The Theory of Functional Grammar Part 2: Complex and Derived Constructions*, Berlin, Mouton de Gruyter.
- Dixon, Robert Malcolm Ward (2005) *A Semantic Approach to English Grammar*, Oxford, OUP.
- den Dikken, Marcel (2018) *Dependency and Directionality*, Cambridge, CUP.
- Dirven, René (1989) "A Cognitive Perspective on Complementation," *Sentential Complementation and the Lexicon: Studies in Honour of Wim de Geest*, ed by Dany Jaspers, Wim Klooster, Yvan Putseys and Pieter Seuren, 113-139. Dordrecht, Foris.
- Egan, Thomas (2008) *Non-finite Complementation*, Rodopi, Amsterdam.
- Felser, Claudia (1999) *Verbal Complement Clauses*, Amsterdam, John Benjamins.
- Gisborne, Nikolas (2010) *The Event Structure of Perception Verbs*, Oxford, OUP.
- Haider, Hubert (2010) *The Syntax of German*, Cambridge, CUP.
- Haspelmath, Martin., Ekkehard König., Wulf Oesterreicher and Wolfgang Raible, eds. (2001) *Language Typology and Language Universals: An International Handbook*, Berlin, Walter de Gruyter.
- Huddleston, Rodney and Geoffrey Pullum (2002) *The Cambridge Grammar of the English Language*, Cambridge: CUP.
- Hudson, Richard (1971) *English Complex Sentences*, Amsterdam, North Holland.
- Ishii, Toru (1987) "Inflection-assignment and Perception Verb Complements," *Descriptive and Applied Linguistics* 20, 81-93.
- Jespersen, Otto (1940) *A Modern English Grammar on Historical Principles, Part V*, London, George Allen and Unwin.
- 片見彰夫 (2000) 「動詞の意味特徴と補文構造の関連性における通時的考察」, 『英文学思潮』 73, 101-124.
- Kirsner, Robert and Sandra Thompson (1976) "The Role of Pragmatic Inference in Semantics: A Study of Sensory Verb Complements in English," *Glossa* 10, 200-240.
- 吉良文孝 (2006) 「知覚動詞のアスペクト」, 『英語語法文法研究』 13, 35-50.
- Kruisinga, Etsko (1931) *Handbook of Present-day English, Part 2*, Groningen, P. Noordhoff.
- 栗原和生・松山哲也 (2001) 『補文構造』 東京, 研究社.
- Leech, Geoffrey (2004) *Meaning and the English Verb, Third Edition*, London, Longman.
- Linhares-Dias, Rui (2006) *How to Show Things with Words*, Berlin, Mouton de Gruyter.
- Miller, Philip (2007) "Negative Complements in Direct Perception Reports," *CLS 39-1: The Main Session: Papers from the 39th Annual Meeting of the Chicago Linguistic Society*, 288-303.

- Moulton, Keir (2009) *Natural Selection and the Syntax of Clausal Complementation*, Doctoral Dissertation, University of Massachusetts Amherst.
- 村岡宗一郎 (2022) 「近代英語以降における hear ϕ say 型表現のイディオム化と衰退要因について」, 『歴史言語学』 11, 23-45.
- 中右実 (1983) 「文の機造と機能」, 安井稔・中右実・西山佑司・中村捷・山梨正明. (編) 『意味論』, 548-626, 東京, 大修館書店.
- 岡田伸夫 (1985) 『副詞と挿入文』 東京, 大修館書店.
- Palmer, Frank (1987) *The English Verb*, London, Longman.
- Rosenbaum, Peter (1968) *The Grammar of English Predicate Complement Constructions*, Cambridge, MIT Press.
- 佐藤健児 (2014) 「進行形の「前段階性について」」, 『日本大学英文学論叢』 62, 99-119.
- Schmid, Tanja (2005) *Infinitival Syntax*, Amsterdam, John Benjamins.
- Schüle, Susanne (2000) *Perception Verb Complements in Akatek, a Mayan Language*, Universität Tübingen.
- Sheehan, Michelle and Sonia Cyrino (2024) “Restrictions on Long Passives in English and Brazilian Portuguese: A Phase-Based Account,” *Linguistic Inquiry* 55, 769-803.
- Singer, Rith (2007) “Events Masquerading as Entities: Pseudorelative Perception Verb Complements in Mawng (Australian) and Romance Languages,” *Mental States Volume 2: Language and Cognitive Structure*, ed by Andrea Schalley and Drew Khlentzos, 267-288. Amsterdam, John Benjamins.
- Spears, Kean (1977) *The Semantics of English Complementation*, Doctoral dissertation, University of California.
- van Valin, Robert and Randy LaPolla (1997) *Syntax: Structure, Meaning and Function*, Cambridge, CUP.
- Vendler, Zeno (1984) *The Matter of Minds*, Oxford, Clarendon Press.
- Vespoor Marjolijn (2000) “Iconicity in English complement constructions: Conceptual distance and cognitive processing levels,” *Complementation*, ed by Kaoru Horie, 199-225, Amsterdam, John Benjamins.
- Visser, Frederik Theodoor (1973) *An Historical Syntax of the English Language, Part III, Second Half*, Leiden, E.J. Brill.
- Zandvoort, Willem (1975) *A Handbook of English Grammar*, London, Longman.

コーパス

- British National Corpus (BNC)
 Corpus of Contemporary American English (COCA)
 Corpus of Historical American English (COHA)
 Early English Books Online (EEBO)

辞書

- 『ジーニアス英和辞典』 第四版, 第五版, 第六版, 東京: 大修館書店.
 『ウィズダム英和辞典』 第四版, 東京: 三省堂.

as 構文と同時性の表現
(As-Constructions and the Concept of Simultaneity)

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キーワード : as 前置型, as 後置型, 表現主体, 場面の情報

1. はじめに

本発表では、接続詞 as を含む二種類の構文を検討する。

- (1) As Connie went on speaking, Smiley's memory once again began to supplement her own. (John le Carré. Smiley's People. p.212)
- (2) "(...) Notice how her husband hung over her as she was coming round. (...) (Agatha Christie. And Then There Were None. p.100)

用例(1)は、接続詞 as を含む文が文頭に現れるタイプ (以後 as 前置型と略記) であり、「語る」行為と「思い出す」心の動きが同時並行的に起こっている事態を叙述している。用例(2)は、as を含む文が後続するタイプ (以後 as 後置型と略記) で、先行する文で表された事態と同時に生起した事態を叙述している。この二つの事態の間に絡んだ同時性という時間の概念が関わっている as を用いた構文を、場面に関する事態の捉え方という観点から考察する。具体的には、話し手もしくは書き手 (以後表現主体と表記) と、叙述された場面への表現主体の関り方の、二つの要因を中心にした解釈の可能性を検討していく。結論として、次の二点を主張する。①as 前置型は、表現主体が語りの場面を直にさし示すことで、二つの事態を「一緒にみている」捉え方に従って、叙述内容を提示する構文である。②as 後置型は、表現主体が二つの事態の関係を一つのこととして捉えて、この二つの事態を「一緒とみなす」判断を叙述する構文である。

2. as 前置型の用例分析

as 前置型の用例を検討して、表現主体と場面の情報との関りを調べる。

- (3) Just as she was crossing onto the gangway he caught her up once more. (Agatha Christie. Death on the Nile. p.151)

用例(3)は二つの具体的な動きを叙述している。接続詞 *as* から始まる文で「動き」のある局面に着目してもう一つの事態の生起が時間的に重なる場面を叙述している。副詞 *just* も、後続する文が表す事態と重なっていることに焦点を向ける手段として働く。そして、この事態の重なりにより焦点をあてる所謂「同時性」の解釈が可能である。この同時性の解釈の根拠として、「時間の概念」ではなく、表現主体が二つの事態をどう捉えるかという観点から分析する方法として、「場面の情報」という要素がある。具体的には、進行形の表現形式を用いて、表現主体は当該場面が現実に行進している状況であることを設定している。その背後には、「状況は日々刻々進行する若しくは動いていく」という状況認識に対する一般的な捉え方が存在する。この捉え方も場面の情報の解釈に取り込んで考察を進める。

(4) *As the police head back to their cars she makes a phone call.* (Jeffery Deaver. *The Broken Window*. p.113)

用例(4)は、所謂地の文で現在形の形式を用いて、表現主体は臨場感をだしている。この、現実に行進しているという場面を設定するプロセスは、以下のように説明できる。先行する *as* から始まる文（以後 *as* 文と略記）で事態を叙述する前段階として、語りの場面である事を直に示し、必要条件として認識させる。後続する文の叙述で、別の事態も、その場面に直面して起こっている事を示している。所謂、発話というレベルでは、聞き手も話し手も自身の存在を当事者として想定していて、その場面への関与を直示的に認知する必要性を前提にして、現に展開されつつある事態を直示して叙述する表現形式である。また、この捉え方と平行して、書き手が読み手の存在を含むことを想定して、共有する場面の設定をすることも可能である。

(5) *As she was about to shut the phone off, it chirped loudly.* (Jeffery Deaver. *The Coffin Dancer*. p.385)

用例(5)は、慣用句 *to be about to* の表現形式で瞬間的な局面で起こる事態に焦点をあてている。所謂アスペクトという動きの一局面を捉えて、この局面を叙述する背後にある場面枠の存在を直示的な対象とするために、表現主体は *as* 文を先行させている。その上で、着信音が鳴るというもう一つの事態がその場面に即して生起するという認識が、二つの事態を一緒に見ているという捉え方を示す事につながっていると考える。更に、一緒にみるこの捉え方が具体的な動きから拡張され、発話行為が絡む用例がある。

(6) ‘(...) *As I say, it was a very cleverly planned and well thought out piece of work.* (...)’ (Agatha Christie. *Death on the Nile*. p.355)

用例(6)は、各々、表現主体の発話行為のタイプとその発話の内容を叙述していて、この二つの事態を一つの語りの場面枠で捉えている。即ち、発話するまさにその場面

で、発話とその内容とが一体となっている事を示している。表現主体は it 以下で表された実際に起こった出来事を先取りして、「この場で伝えておく」というような場面を直示するような意識を表している」と解釈できる。

(7) She paid for it with plastic. As the clerk ran the card through, she picked the tags off, and put the parka on. (John Grisham. The Pelican Brief. p.145)

用例(7)は、服を買う場面の描写である。クレジットカードの番号を店員が照会している動きと、値札をとってパーカをすぐ着る主人公 Darby の動作を一つの場面枠の中で捉えて叙述しているとする解釈が可能である。起こった出来事を時系列的に一つ一つ述べるのではなく、二つの事態を同期させるために、表現主体がその場面にいることを想定してその枠内での状況を再現しているとする見方が成り立っていると考えられることができる。

3. as 前置型の特徴

3.1. 「現象文」としての as 前置型

今までの考察から、as 前置型の構文が持つ特徴を分析する。as 文を用いて事態を表す表現形式を介して、表現主体は、個々の事態が生起する場面の存在を認識させるように注意を方向づけている。そして、この事態生起の前提となる場面の存在は、as 文を介して直に示されて、この場面枠のなかで、眼前で起こっている、進行する状況を表現主体が叙述する状況設定が可能になると考える。as 文は、場面の情報を導入する契機となると共に、後続する文をもう一つの事態として導入する機能を担っていると考えられる。二つの事態は、共有された場面の設定枠で表現主体が「一緒に見る」対象となっている。

as 前置型を所謂「現象文」として規定する前に、先行研究、森田(2002)で記述された現象文の定義を概観する。森田(2002)の現象文の定義とその具体的な例文の一部を以下に示す。

すなわち、表現者たる己(内)の視点において外の事象を把握認識する発想である。したがって、この文型で表される事態は、己のあずかり知らぬ事態であって、発話される今の時点において認識した事柄との発想である。

(p. 248)

これらの①グループの例は、動詞の表す状況がある時点に成立して、その結果が現状として存在し、それを話者が現状認識として述べることである。

(p. 248)

(1)の「地球は丸い」が外の世界に加える判断の最右翼で、その正反対の座標に位置するのが、(5)「ああ、眠い!」の内なる主観からの認識である。

(p. 96)

この考え方に沿って、as 前置型を現象文として規定するには次の三つの要素が必要である。①現に進行している場面の存在。②表現主体がその場面にいること（表現主体の存在）。③眼前で展開されている叙述の対象の存在。以上の要素で as 前置型の構文は次のように規定できる。

表現主体は、記述する装置として、眼前で進行している現実の状況を認識し、as 文という手段を介してこの現実の状況を直示的に指し示していることを認識させる。即ち、表現主体は、記述している現在の「立ち位置」を as 文に含まれる表現形式を用いて明示する。as 文で提示された場面の情報は、後続する文をこの場面に取り込んで、共有された場面にして、二つの事態を「一緒に見る」条件をつくりだしている。

以上は、表現主体が二つの事態を「一緒に見る」ためのステップを踏んだ結果として、所謂「現象文」のタイプとして分類するためのモデルである。

3.2. 「現象文」と「場面」の情報

次に、論理的関係のレベルから、「場面」の情報の取り扱いに関して検討する。既に指摘したように、as 文は、表現主体が場面に即して展開する事態を叙述するために、前提とする場面の情報、即ち、進行している現実の状況という場面設定を提示する機能を持つ。そして、もう一つの事態を導入するための、この場面提示の機能と、表現主体の場面への直接的関与との間には次の論理的関係がある。

(8) as 前置型の構文機能⇒場面の概念の認知

表現主体が場面の存在を認識して、場面への関与を直示することは、as 文が表す意味内容が成立するために、必要条件となっている。このことは、論理的関係として次のように型式化して示すことができる。

(9) [【事態】 + 【場面】] + 【事態】

発話のレベルで、表現主体は場面の存在をまず認識して、その場面と直に関係する二つの事態を「一緒にみる」捉え方にたってその内容を叙述している。この叙述のやり方は、捉え方それ自体をも反映しているといえる。型式(9)の[【事態】 + 【場面】]で「+ 【場面】」の表示は、発話レベルでの表現主体にとって、事態を叙述する as 文の意味内容と切り離して、「場面の情報」をそれ自体として認識することが不可欠である事を示している。

4. as 後置型の用例分析

次に、as 文のもう一つのタイプである as 後置型の構文を検討する。

- (10) “The murderer must have crept up behind him, swung the chopper once and brought it down on his head as he was bending over.” (Agatha Christie. *And Then There Were None*. p.185)

用例(10)は既に生じた殺人事件に対して、その原因を究明する場面である。この「結果→原因」という論理的関係に基づいた推論を表現主体がおこなっている。具体的に

は、「頭への一撃」につながる一連の動きが結果として死につながっていて、その死に至った根拠として、「被害者の体勢の状態」を死の原因として着目している。ここで取り上げる as 後置型の構文に共通する特徴を先取りすると、先行する文と後続する as 文とからなる二つの文の間の関係を論理的関係から捉える推論のプロセスを読み取ることができる。これは、とりもなおさず、表現主体の判断を叙述している。

また、用例(10)で先行文から予想される「体の動きが止まる」という含意の意味内容は、as 文の進行形が表す継続相の意味内容と矛盾しているかに見える。次の用例を用いて先行文が示す含意について検討する。

(11) *John collapsed when he was jogging around Ohori Park.

(12) John was jogging around Ohori Park when he collapsed.

用例(11)と用例(12)との対比から、用例(11)では、「倒れた」という表現から含意される「動けない」という意味内容に、when 以下で表される「進行している動き」の意味内容が繋がっていて不自然である。先行文は確立した事実を表し、その直後に「進行する動きの事態」を繋ぐことは、含意された意味内容と不整合な状況を想定することになる。しかし、用例(10)は、具体的な場面の情報を含めた解釈をすることをせずに、論理のレベルで二つの事態を事実と捉えて、その関係性を明示する解釈が可能である。すると、as 前置型の構文にない特徴が浮かびあがってくる。そうすると、先行文は真か偽の真偽値を持つことになり、as 文も事実か否かの真偽値を読み込んだ上で論理的関係を推論することが可能になってくる。更に、談話レベルの観点からみると、先行文で叙述された文形式の表現を所謂トピックとして、as 文で叙述された文形式がコメントであるという解釈ができる。

(13) She shivered as she remembered that cold clammy touch on her neck. (Agatha Christie.

And Then There Were None. p.230)

用例(13)では、「体が震える」という感覚を自覚した原因を「以前の記憶」に求める推論を叙述している。この感覚に関する叙述と思考に関する叙述とを意味的につなぐ客観的な関連性を見出し難い。しかし、この二つの事態を表す文に、各々真偽値を付与して、論理的関係を推論することは容易である。つまり、先行文と as 文の二つの文を使い、一つの推論をして関係性をつくる操作である。表現主体は、二つの事態を「一緒とみなす」判断をするプロセスである。また、既述したように、談話レベルでは、先行文をトピックとして as 文をそのコメントとする解釈も可能性として考えられる。

(14) 'She was asleep—there was no struggle—the murderer crept up in the dark and shot her as she lay there.' (Agatha Christie. Death on the Nile. p.170)

用例(14)では、既に起こった殺人という事態が話題になっている。具体的には、「撃

たれた」という結果の事態から推測して、「睡眠中」という事態をその原因とする論理的関係が成り立つことを叙述している。as 文は、冒頭の表現 *she was asleep* と同一の状況を表している。*she was asleep* は主語の「寝ている」という動作のタイプを表し、*she lay there* は主語の対象が「どこにいる」のかという場所の情報を表している。「銃で撃った」という結果から原因を推論する場合、この文脈の「暗やみ」という状況設定を中心に考えると、事実在即して原因を特定する推論の仕方の観点から、as 文で位置情報を使った表現の方が適切になってくる。即ち、この先行する表現の「暗やみ」という状況では、位置情報を表す表現を使った as 文で叙述する方が、適切に原因を特定する切り口になっている。従って、冒頭の表現と差し替えて、as 文の所を *she was asleep* にすると不自然になる。今まで検討してきた as 後置型の構文は、論理的関係のレベルで先行文を一つの事実として、as 文をもう一つの事実とする、二つの事実の論理的関係、つまり「結果→原因」の推論をする解釈が成立する。そして、表現主体が行うこの推論のプロセスは判断の仕方であり、その結果としての判断文の特徴を読み取ることができる。

(15) His name was Herschel, and for two years the family suffered as Herschel stalled and lied and bungled the case. (John Grisham. *The Pelican Brief*. p.117)

用例(15)は、父親の飛行機事故で悪徳弁護士に翻弄される状況を記述する場面である。先行文を事実と認識したうえで、as 文の事態をもう一つの事実として、結果に対する原因を特定する推論のステップが含まれていると解釈できる。一方、表現主体の事態に対する捉え方によっては、別の解釈が可能でもある。つまり、先行文の意味内容をトピックと認識して、そのコメントの部分で、先行文に対する補足内容をその「理由づけ」として言わば「後出し」的に as 文を使っているという見方である。先行文の使用目的を考えて、対象であるその表現内容の特徴に関して、言わばメタ的な解釈を与えることで、二つの事態を繋ぐきっかけをつくるとする捉え方ができる。この関連づけの明示を契機として、そのコメントが as 文の意味内容として具体的に叙述されると考える。この立場にたてば、推論というステップを使わない語用論的な立場からみた as 文の使い方として説明する必要がある。しかし、先行文を事実と認識して、もう一つの事態との関連性を見つけ出していく方向性は共通点として存在する。

5. as 後置型の特徴

5.1. 「判断文」としての as 後置型

次に、森田(2002)の判断文の定義を概観して as 後置型の構文の特徴を規定する。以下は森田(2002)の判断文の定義とその例文の一部である。

一方、「鍵かけた？」の問いに、「ええ、鍵はかけてあります」と答えれば、課題の場の文。つまり、外なる対象を主題として取り上げて、「鍵は…」と言い、それに対する答を内なる己の判断として「かけてあります。」と説明する(それゆえ、筆者はこれを判断文と呼ぶ)。(p. 63)

① 氷は冷たい。地球は丸い。(p. 93)

典型的な判断文(1)「地球は丸い」では、外の対象「地球」を主題として取り上げて、それに対する回答は、己の内なる主観ではなく、あくまで外から得た知識として示す。二つの外なる事項を結びつけるだけの判断である。

(p. 95)

ところが、その状況変化を、話者が把握した現在時点ではなく、過去に成立した事態として、その主体の上に起こった状況との認識で取り立てる叙述では、主体を題目とする判断文に変わる。(pp. 248-9)

この考え方に沿って、as 後置型を判断文として規定するには、次の三つの要素が必要である。①先行文は文形式の表現単位であり、現実の状況と照合することによる真偽値の付与。②as 文も文形式の表現単位であり、前提条件としての真偽値の付与。③「結果→原因」という論理的関係に則った妥当な推論の操作。以上の要素で as 後置型の構文を以下の様に規定できる。

表現主体は、二つの事態を各々事実として認識する。つまり真の真偽値が付与された命題と考え、論理的レベルでその関係化を判断する。具体的には、先行文が真の真偽値を持つ、つまり事実である根拠として、as 文も事実であることが必要であるということ的前提としている。先行文が事実であるためには、as 文の事実が必要な条件であるという読み込みをおこなって、「結果→原因」の妥当な推論のプロセスを操作する。また、推論のプロセス自体も結果の内容を認識したうえで判断を形成するための手段にもなっている。

5.2. 「判断文」と「場面」の情報

as 前置型と対照的に、as 後置型では、「場面の存在」を背景化した要素として捉えていると解釈できる。as 後置型は、二つの事態で叙述された命題間の関係を明示することに焦点があり、表現主体が直接的に「場面」に絡むという条件は、背景化していて、場面と事態との関係の全体像を次のように型式化して示す。

(16) 【事態】 + 【事態【場面】】

型式(16)で「【事態【場面】】」の表示は、発話の叙述で事態が表す場面に関与する認識が表現主体にとって直接的でなく、背景化して捉えられていることを示す。

6. 表形式による as 前置型と as 後置型の対照比較

最後の論点として、as 前置型と as 後置型との違いについて検討する。各々のモデルの構成要件を以下の表で対比する。

表 1. as 前置型と as 後置型の対照表

項目	as 前置型	as 後置型
1	表現主体の存在を含めた場面情報の知覚	表現主体は事実に関する論理的関係に着眼
2	[【事態】+【場面情報】]+【事態】]	【事態】+【事態【場面情報】】
3	後続する文の役割	先行文の役割
4	表現主体は二つの事態を「一緒に」見ている	表現主体は二つの事態を「一緒のこと」とみなす

項目1に関して、表現主体自身が叙述の場面にいることが as 前置型の状況設定では必須である。一方、as 後置型では、真の真偽値を持つ二つの事実の間にある論理的関係の存在に、表現主体は着目している。

項目2に関して、as 前置型の叙述は、叙述の場面に表現主体がいるという条件のみ可能であることは、言い方を変えれば「場面に限定された」叙述の特徴を備えているとみることができる。一方で、as 後置型では、二つの事態が表裏一体となって一つのこととみなせると考え、その認識を論理的関係の操作の在り方を通して示している。

項目3に関して、as 前置型では、後続する文は as 文が導入した場面の枠の中で展開していく別の事態を叙述している。一方、as 後置型では、先行文は、事実を述べるが故に真の真偽値をもつと解釈することが可能である。そして、真偽値を介して、後続する as 文との論理的関係を明示する操作として、所謂妥当な推論が行われることになる。この推論のプロセスに二つの事態の関係を示した判断文の存在を見出せる。

項目4に関して、所謂「同時性」の意味は、今まで検討してきた場面をどう捉えるか、という表現主体の叙述の場面に対する関り方という視点から捉えることができる。つまり、as 前置型の構文では、表現主体が二つの事態を「一緒にみている」見方として、as 後置型の構文では、表現主体が二つの事態を「一緒のこととみなす」見方にたつことで「同時性」の解釈を規定することが可能になる。

7. まとめと今後の課題

この考察の出発点は、接続詞 as を含む二種類の構文、つまり as 前置型と as 後置型の構文で表現される「同時性」の意味をどう説明するかであった。「時間の概念」で説明するのではなく、「場面の概念」で説明する可能性を検討してきた。表現主体が、叙述の場面で自身と場面との関りをどう認知しているかを中心に考えると、場面の捉え方が二通りあることを提案した。

次に、今まで考察してきた理論的枠組みを実証するためのデータの領域として、次の三点に触れて今後の検討課題としたい。一番目に、日本語との比較対象である。所謂「ながら」を含む構文で、英語と同じ捉え方の枠組みで文の前後の入れ替えが起こるかなどの問題を検討する必要がある。二番目に、as 前置型・as 後置型の出現頻度の割合である。具体的には、引用作品の Agatha Christie では約 65%が as 後置型であり、Jeffery Deaver では約 75%が as 後置型である。John le Carré では約 75%である。引用作品は推理小説の分野に限定しているが、今後、分野別、国別、作家別等の

カテゴリーに分けてコーパスを用いた調査が必要である。

最後に、理論的枠組みは、所謂ネイティブスピーカーの直観の裏付けを必要とする観点から、同様に、多層的な角度からの検討が必要なインフォーマント調査についてその一例をあげる。以下の用例に関して英国人のネイティブスピーカーに質問をした。

(17) Mark walked around her office as she read. (John Grisham. *The Client*. P.130)

質問項目は二つ、一つ目は as 前置型と as 後置型のそれぞれに対して前後の文を入れ替えた四通りのタイプの文に関する文法性、二つ目は as 前置型と as 後置型との顕著な相違点である。この場合四通りのタイプは全て文法的であると回答があった。但し、他の用例によっては交替が不可能な場合が散見されて、as 前置型、as 後置型の各々の場面に応じた条件を分析する必要がある。顕著な違いに関して、as 前置型では、焦点 (focus/prioritization) が主節の文にあり、as 文が表す事態の結果として、解釈される傾向があるというコメントである。一方 as 後置型は、焦点が前半の主節の文にくる傾向があるとコメントしている。この解釈の共通点は、何れも as 文より主節の文に焦点があることを示している。¹

注

¹ 北九州市立大学外国語学部教授、Dr. Adam Hailes への私信（私信：2024年11月6日とその回答：2024年11月10日）による。

参考文献

- 早瀬尚子（編）（2018）『言語の認知とコミュニケーション』開拓社，東京。
池上嘉彦・山梨正明（編）（2020）『認知言語学 II』ひつじ書房，東京。
三浦俊彦（2009）『論理学入門』NHK 出版，東京。
森田良行（2002）『日本語文法の発想』ひつじ書房，東京。
森田良行（2019）『時間をあらわす基礎日本語辞典』角川ソフィア文庫，東京。
野矢茂樹（2016）『『ウィトゲンシュタイン論理哲学論考』を読む』
筑摩学芸文庫，東京。
坂原茂（1985）『日常言語の推論』東大出版会，東京。

引用作品

- Christie, Agatha (2011) *And Then There Were None*. HarperCollinsPublishers, UK.
Christie, Agatha (2014) *Death on the Nile*. HarperCollinsPublishers, New York.
Deaver, Jeffery (2009) *The Broken Window*. Pocket Star Books, New York.
Deaver, Jeffery (2019) *The Coffin Dancer*. Simon & Schuster Paperbacks, New York.
Grisham, John (2021) *The Pelican Brief*. Penguin Books, New York.
Grisham, John (2022) *The Client*. Penguin Books, UK.
le Carré, John (2020) *Smiley's People*. Penguin Books, UK.

The Simile Expression (*as*) ADJ *as* NP as a Construction: A Case of Constructionalization*

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Keywords : equative construction, the simile, constructionalization, construction grammar

1. Introduction

As ADJ *as* expressions, as in (1), are often used to express that the subject referent is “at least equal to” (Huddleston and Pullum (2002:1100)) the referent of the noun phrase after the second *as* (hereafter NP₂) in the degree of the quality denoted by an adjective (e.g., Bolinger (1972:28)). The form-meaning correspondence is called the equative construction (cf. Rett (2015)). Thus, in (1), John is at least equal to Bill with regard to age. *As* ADJ *as* expressions can carry another meaning, as shown in (2).

- (1) John is as old as Bill. (Ando (2005:568), with modifications)
(2) [. . .] the child was as light as a feather [. . .] (COCA 2003 FIC)

Example (2) indicates that the child was very light by comparing them with a feather. This use, the simile, indicates that the subject referent has a quality designated by the adjective emphasizing its degree by comparing the quality of the subject referent with that of the NP₂ referent (Moon (2008)).¹ Kay (2013:37-39) states that *as* ADJ *as* expressions that are interpreted as the simile should not be seen as specific instances of a construction, but as a “pattern of coining” because they are not productive. Given Kay’s claim, the simile may be considered constructs that instantiate the equative construction. However, differences between the equative construction and the simile have been reported (e.g., Otsuka and Nakajima (1982:1114), Ando (2005:568)).

The following question is addressed in this study: Do the simile as in (2) instantiate the equative construction? This study claims that a different construction, which subsumes simile expressions as in (2), exists. It is also argued that some instances of the equative construction were constructionalized as the simile construction, existing independently of the equative construction. Furthermore, it is emphasized that the abstract simile construction, (*as*) ADJ *as* NP, exists as well as substantive simile constructions (e.g., *easy as pie*, *light as feather*, *black as coal*).

This paper is organized as follows. Section 2 overviews Kay (2013) and presents the differences between the equative construction and the simile. Section 3 provides a brief introduction to the concepts of constructionalization and constructional change (Traugott and Trousdale (2013)); these concepts are then applied to (*as*) *white as snow* to demonstrate the development of the simile construction. Section 4

concludes this paper.

2. Previous Studies

This section provides an overview of Kay (2013) and the differences between the equative construction and the simile. Before reviewing Kay's work, we see what is meant by "constructions" in this study. A construction refers to a pairing of form and meaning and "the basic unit of grammar" (Traugott and Trousdale (2013:3)). In addition, following Goldberg (2006:5), we consider any linguistic pattern to be a construction "as long as some aspect of its form or function is not strictly predictable from its component parts or from other constructions recognized to exist." We also adopt the following part of Goldberg's definition of constructions: "[P]atterns are stored as constructions even if they are fully predictable as long as they occur with sufficient frequency" (Goldberg (2006:5)).

It should be noted that Kay's (2013) definition of constructions differs from the one in this study, as Kay takes only patterns with high productivity as constructions. For example, English speakers can produce and understand the expression *red ball* using knowledge of the meanings of each word, *red* and *ball*, as well as a pattern that allows adjectives to modify nouns. Speakers do not have to memorize the expression *red ball* as a whole. In this case, the pattern that allows adjectives to modify nouns should be seen as a construction (Kay (2013:40)). Conversely, Kay states that, if speakers only know the meanings of *easy* and *pie*, as well as many other expressions in the form of *A as NP* (e.g., *happy as a lark*, *dark as night*), they do not understand that *easy as pie* means "very easy," and they have to memorize the expression *easy as pie* as it is. Kay argues that the pattern *A as NP* with the meaning of "very A" is not a construction, but a "pattern of coining," because it is not productive (Kay (2013:37-39)).

As Kay (2013) observes, just with the knowledge of the *A as NP* pattern and the adjectives and noun phrases used therein, one cannot productively create new expressions. Consider the following examples:

- (3) a. What a healthy baby, strong as a horse!
b. What a healthy baby, heavy as a truck!

(Kay (2013:38))

The phrase *strong as a horse* in (3a) denotes that a baby is very strong. However, the phrase *heavy as a truck* in (3b) is unusual—though comprehensible (Kay (2013:38)). Thus, just because *heavy* and *a truck* are respectively substituted for the A slot and the NP slot does not make the expression meaningful. Kay notes that new expressions can occasionally be created by analogy, but they may only be used once. He states that the following example and its context are "self-conscious, literary usage" (Kay (2013:38)).

- (4) She selected Goyescas. The music was sure as a swing in high summer, to and fro, light as racing over a sunny lawn to the blessed shade under the trees. Up the garden path and a frisson of unease (Kay (2013:38), underline mine)

The phrases *sure as a swing in high summer* in (4) is used to describe the music via an impression designated by NP₂. It may be considered just a nonce expression.

Kay (2013) also observes that there are some differences even among expressions that instantiate *As NP* patterns. Some expressions can occur with adjectives in either literal or figurative meaning, while others can be used with adjectives in both meanings (Kay (2013:39)).

- (5) a. hot as a firecracker, cold as ice
 b. hot as Hell, cold as Hell
 c. Our best shooter was cold as Hell tonight.

(Kay (2013:39))

The expression *hot as a firecracker* in (5a) conveys that someone's play is great in the context of sports. Similarly, *cold as ice* denotes someone's indifferent nature. The adjectives in these expressions are used in a figurative sense; they cannot be used to express dimensions denoted by the literal senses of the adjectives. For example, the expressions in (5b) may be used to describe the weather, and the adjectives designate their literal senses; that is, the degree of temperature. However, the phrase *cold as Hell* may also be used metaphorically, as in (5c), which expresses the shooter's poor play, although *hot as Hell* cannot describe a shooter playing well (Kay (2013:39)). In addition, as Kay (2013:39) shows, some examples of expressions that instantiate the *As NP* patterns can appear in the form of the comparative degree, as in (6a), but others cannot, as in (6b).

- (6) a. bigger than a house [big as a house]
 b. *happier than a lark [happy as a lark]

(Kay (2013:39), slightly modified))

If, as Kay (2013) claims, the simile were not a construction, each *as ADJ as* expression that is interpreted as the simile would be constructs of the equative construction. In fact, some expressions may be regarded as hyperbolic examples of the equative construction. Consider the following example:

- (7) What a healthy baby, strong as a horse! (=3a)

If speakers know the meanings of *strong* and *horse* and the equative construction, and if they exaggerate a baby's strength, they can understand sentence (7), although a baby's strength is not equal to a horse's strength in real world. Furthermore, as shown above, Kay states that some expressions can occur in the form of the comparative degree; thus, the simile is associated with comparisons.

However, previous studies have indicated that there are some differences between the equative construction and the simile. According to Ando (2005:568) and Rett (2015:40), adjectives in the simile always indicate qualities denoted by their lexical meanings, whereas those in the equative construction do not have to signify qualities. Observe the following examples:

- (8) John is as old as Bill. (=1)
 (9) [. . .] the child was as light as a feather [. . .] (=2)

In (8), the adjective *old* does not necessarily indicate oldness, but indicates age: John and Bill may be 4 years old or 80 years old. Note that, if we use an adjective that signifies the lower end (e.g., *young*) in (8), it must denote qualities; that is, John and Bill must be young. In other words, adjectives in the equative construction can denote scales. By contrast, in (9), *light* does not signify weight, but lightness; that is, both the child and a feather must be very light. Even if adjectives that denote the upper end (e.g., *heavy*) occur in the simile, they also indicate qualities, and not the scale.

Otsuka and Nakajima (1982:1114) and Hashimoto (2003:37) remark that a verb phrase can occur after NP₂ in the equative construction but not in the simile, as shown in (10a, b).

- (10) a. My brother is as tall as John is. [the equative construction]
b. *My brother is as tall as a giraffe is. [the simile]

(Hashimoto (2003:37), slightly modified)

While *is* can follow the NP₂ *John* in (10a), it cannot occur after the NP₂ *a giraffe* in (10b). They also denote that the first *as* is obligatory in the equative construction, as in (11a), whereas it is not in the simile as in (11b).

- (11) a. *John is tall as my brother. [the equative construction]
b. The idea is (as) sound as the axioms of Euclid. [the simile]

(Otsuka and Nakajima (1982:1114))

Given that there are differences between the equative construction and the simile, as observed in this section, *as* ADJ *as* expressions as the simile should be considered a construction. The next section shows the development of the equative construction into the simile construction adopting the idea of constructionalization (Traugott and Trousdale (2013)) and argues the existence of the simile construction.

3. From the Equative Construction to the Simile Construction

It can be hypothesized that the development of the simile construction causes differences between the equative construction and the simile, as shown in the previous section. To examine this, this study applies Traugott and Trousdale's (2013) concept of constructionalization; Traugott and Trousdale discuss language change from a perspective of construction grammar, and propose "constructionalization" and "constructional change" (Traugott and Trousdale (2013:22, 26)). Constructionalization is defined as generating new form-meaning pairings (i.e., new constructions); that is, changes of both form and function. Constructionalization is differentiated from constructional change in that the latter only involves changes in either form or meaning of a construction: Constructional change does not create new constructions. Constructional change brings about a mismatch between form and meaning encouraging constructionalization; constructionalization also promotes further constructional changes. This series of processes occurs recursively (Traugott and Trousdale (2013:22, 26-28)).

Based on the usage-based model, Traugott and Trousdale (2013:2, 21, 196) regard changes as

“changes in usage” and presume that changes occur in context. To illustrate this, consider the following example of *a lot of*:

- (12) said he, I understand you sell Lambs at London; I wish I had known it, I would have brought a Lot of Lambs for you to have sold for me. He told me he liv'd at Aston-Cliston; I said that was a pretty Way; but he said . . . The Butcher could take but few at a Time, and he wanted to sell them all together. (1746 Trial of John Crips, t17460702-25 [OBP]) (as cited in (Traugott and Trousdale (2013:210), underlines mine)

Traugott and Trousdale (2013:23) note that *a lot of*, used originally as a binominal partitive indicating “a part of,” had changed into a quantifier. In the development, *a lot of* in (12) could be regarded as “each unit” or “numerous;” that is, the butcher could obtain each lamb singly (*few at a Time*), but he wanted to sell a group of lambs (*all together*). Here, the pragmatic inference from the partitive reading to the quantifier reading becomes foregrounded. After examples such as (12), *a lot of* came to be used solely as a quantifier (Traugott and Trousdale (2013:210)).

3.1. Diachronic Data

Before seeing the development of the simile construction, we observe diachronic data of the equative construction and the simile. As shown in (13), Ono and Nakao (1980:349) denote that examples of the equative construction had already been attested by the ninth century (i.e., Old English (OE)). Using *Early English Books Online Corpus* (EEBO), Takagi (2023) states that examples of the simile had appeared by the seventeenth century, although her investigation is limited to specific instances, as shown in (14) and (15):

- (13) Ða wæron fulneah tu swa lange swa Ða oðru
“they were almost twice as long as the others”
(Chron A 90,15 (897))(as cited in Ono and Nakao (1980:349))
- (14) [. . .] wherefore, the weightiest parcell of that which you lay in for the popes patrimonie, is as light as a feather: the next, is somewhat lighter [:] (EEBO 1584 *The summe of the conference betwene Iohn Rainoldes and Iohn Hart*) (as cited in Takagi (2023), underline mine)
- (15) [:] yet the remaining mass, which amounted to a good part of the mixture, was not onely opacous, but as black as coal, is some places looking just like polished jet; which is [. . .] (EEBO 1666 *The origine of formes and qualities, (according to the corpuscular philosophy) illustrated by considerations and experiments*) (as cited in Takagi (2023), underline mine)

The expression *as light as a feather* in (14) denotes that the weightiest pack is very light, while (15) indicates that the mixture has a high degree of blackness. Of the simile examples, (*as*) *white as snow* is the earliest attested (Takagi (2023)).

Takagi (2023) identifies the earliest attestation of (*as*) *white as snow* in EEBO as 1480. Based on an investigation of *The Oxford English Dictionary* (OED), Takemori (2022) argues that the expression

came into existence earlier, namely during the OE period, as shown in (16) and (17).²

- (16) Hys reaf wæron swa hwite swa snaw [Latin *alba sicut nix*].
 His cloak be PAST PL as white as snow
 “His cloak were as white as snow.”(OED, OE, *West Saxon Gospels: Matthew* (Corpus Christi Cambridge MS.) xvii. 2, underline and translation mine)
- (17) Do þine hand on þinne bosum; þa he hi dide on his bosum, þa
 Do your hand on your ACC SG M. bosum; then he NOM do PAST SG on his bosum, then
 brohte he hi forð hreof[le], swa hwit swa snaw [L. *leprosam instar nivis*].
 bringan Past SG he M.3PL ACC forth leprosy, as white as snow.
 “Put your hand on your bosom, then he put on his bosom, then brought them forth leprosy, as
 white as snow.” (OED, OE, *Old English Hexateuch: Exodus* (Claudius MS.) iv. 6 underline
 and translation mine)

Example (16) indicates his cloak’s high degree of purity, but not its whiteness. The expression (*as*) *white as snow* is listed under the entry for *white* in OED as follows: “In similitive and comparative phrases, sometimes hyperbolic, and frequently with connotations of purity, esp.” (OED *white*, phrases., 1). However, (17) describes their skin as being white because they have leprosy. The existence of examples such as (17) may suggest that examples of the simile were attested in OE. However, these examples may have been sporadically used as nonce expressions. Thus, the simile was not considered to be entrenched at that time. Therefore, EEBO is used in this study to investigate the development of the simile in detail.

3.2. The Development of the Simile Construction: The Case of (*as*) *White as Snow*

This subsection examines the development of the equative construction into the simile construction with special reference to (*as*) *white as snow*, attested as the earliest simile in EEBO. According to Takagi (2023), the first attestation of this expression in EEBO cited in (18), was in 1480.

- (18) [. . .] & said that ther shold come a goot out of Carre that shold haue hornes of sil &;
 [. . .] and said that there should come a goat out of Carre that should have horns of silver and
 a berde as white as snowe [/&;]
 a beard as white as snow [. . .]
 “[. . .]and said that there should come a goat out of Carre that should have horns of silver and
 a beard as white as snow.” (EEBO 1480 *In the yere of thyncarnacion of our lord Ih[esu] crist
 M.CCCC.lxxx. and in the xx. yere of the regne of kyng Edward the fourthe, atte requeste of
 dyuerce gentilmen I haue endeauourd me to enprinte the cronicles of England*) (as cited in
 Takagi (2023), underline and translation mine)

Example (18) compares the goat’s beard and snow, two white things, and expresses that they are equal with regard to whiteness. That is, it can be considered an example of the equative construction. After this example, the following example was recorded in 1529:

- (19) [:] Chastite is likened to bisse / whiche is a kynd of lynen clothe as white as snowe /
 Chastity is likened to byssus which is a kind of linen cloth as white as snow [. . .]
 “Chastity is likened to byssus which is a kind of linen cloth as white as snow [. . .]”
 (EEBO 1529, *The assaute and co[n]quest of heuen*) (as cited in Takagi (2023), underline and translation mine)

In (19), the linen cloth, which is white, is compared with snow. While this sentence seems to indicate that their degrees of whiteness are equal, it can also be interpreted as describing the linen cloth as being very white. Accordingly, this example can be regarded as an example of the equative construction or the simile. In the phrase *as white as snow* in the context of (19), the pragmatic inference from the reading of the equative construction to that of the simile appears to be salient (Takagi (2023)).

Some examples only with the simile interpretation came to be used before and after example (19).

- (20) [...] on the whiche tre satte briddis thicker than the bowes & were as white as snowe
 on the which tree sat birds thicker than the bows and were as white as snow.
 “...on which tree birds sat which were thicker than the bows and as white as snow.”
 (EEBO 1486 [*Liber festivalis*], underline and translation mine)
- (21) than shall you put this quicke siluer, so purged, with the sublimat, in mixing and styrrynge it
 Then shall you put this quick silver, so purged, with the sublimate, in mixing and stirring it
 wel with one hand, & so it wil become white as snowe :
 well with one hand and so it will become white as snow.
 “Then you shall put this quicksilver, so purged, with the sublimate, in mixing and stirring it
 well with one hand and so it will become white as snow” (EEBO 1558 *The secretes of the
 reuerende Maister Alexis of Piemount Containyng excellent remedies against diuers diseases,
 woundes, and other accidents, with the manner to make distillations, parfumes, confitures,
 diynges, colours, fusions and meltynges*, underline and translation mine)

In (20), the expression is used to describe the color of birds, which is generally not necessarily white, and conveys that the color of the birds has a high degree of whiteness. Thus, it does not convey that the color of the birds is equal to snow with regard to whiteness; rather, it emphasizes the extreme whiteness of the birds’ color by referring to snow, which typifies white things. In (21), quicksilver is not usually white; this example indicates that quicksilver becomes very white by mixing and stirring it. Hence, a constructional change can be observed; that is, only a change in meaning appears to have occurred. Although the simile meaning was acquired, the form remained the same as the equative construction.

The first *as* came to be omissible almost in parallel with this semantic change, as shown in (22).

- (22) / and ther ben other wymmen rowh also lyke vnto the men / but they ben moche bestyall and
 And there be other women rough also like unto the men but they be much bestial and
whyte as snowe

white as snow

“And there are other women rough also like the men but they are much bestial and white as snow.” (EEBO 1481, *Hier begynneth the book called the myrrour of the worlde ...*, underline and translation mine)

Constructionalization has clearly occurred at this stage: The meaning and form have changed from the equative construction to the simile.³ The substantive simile construction *white as snow* thus has entrenched in the sixteenth century through the process described in this subsection.

3.3. Additional Evidence

In this subsection, I provide two pieces of evidence to support my claim. According to Svartengren (1918:463), *any* often occurred before the NP₂ in Middle English and Early Modern English (e.g., *as still as any stone*). Based on a dictionary definition of *any* used in affirmative sentences, Yagi and Inoue (2013:255-256) argue that a noun phrase preceded by *any* in the *as . . . as any* expression signifies the entire members, and not a specific member, of a category. Therefore, with *any* preceding NP₂, speakers express the comparison between something and all the members in the category designated by NP₂. Some examples of the equative construction were thus interpreted compositionally as the simile at that time. This suggests that many substantive simile constructions were not entrenched in the sixteenth and seventeenth centuries, although *white as snow* was established at that time, as observed in Section 3.2 (cf. Takagi (2023)). Hence, the abstract simile construction in the form of (*as*) ADJ *as* NP was not considered to be entrenched at the same time.

As Jackendoff and Audring (2020:235) note, some examples of the simile can be interpreted literally (e.g., *black as coal*) while others cannot, as in (23).

- (23) clean as a whistle, cool as a moose, fit as a fiddle, loose as a goose, neat as a pin, easy as pie,
pleased as punch, right as rain, ugly as sin (Jackendoff and Audring (2020:235))

For example, *black as coal* can be easily interpreted as “very black,” because a thing is compared with coal, which is inherently black. By contrast, *right as rain*, which means “perfectly right,” cannot be interpreted in such a straightforward manner: One cannot easily associate rain with rightness. Takagi (2023) surveys *The Corpus of Historical American English* (COHA) and OED, and finds that many of the examples in (23) were not attested until after the 1800s. This leads to the conclusion that many substantive simile constructions were established in the eighteenth century, and that the simile construction (*as*) ADJ *as* NP was also entrenched at the same time. In sum, the abstract simile construction established by constructionalization in the eighteenth century licenses examples whose interpretations are not literal (e.g., *right as rain*, *easy as pie*) (cf. Takagi (2023)).⁴

4. Conclusion

This study has argued the constructional status of *as* ADJ *as* expressions as the simile. It was claimed that some constructs of the equative construction underwent constructionalization to the simile

construction, and that the simile construction was established in approximately the eighteenth century, although the examination of further examples of the simile other than *white as snow* is necessary. This study also suggested that the simile is a construction, abstracted from substantive simile constructions. It is the schematic simile construction that licenses examples that cannot be interpreted literally. However, as Kay (2013) states, the simile is not productive. This suggests that the simile construction should be seen as a mere generalization with very little productivity resulting from the abstraction of several substantive constructions. Moreover, the notion of “construction” in Kay’s (2013) sense cannot account for substantive simile constructions and the fact that the simile construction behaves differently from the equative construction as observed in Section 2. Thus, in line with Goldberg (2006), not only highly abstract and productive patterns but also frequently used patterns should count as constructions.

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NOTES

¹ A comment from the audience was that the meaning of the simile can be understood even if the propositional content is false. The distinction between what the simile expresses and the truth value of the propositions is left for future research.

² The following abbreviations are used in the glosses in this study: PL=plural, ACC=accusative, SG=singular, M=masculine, NOM=nominative, 3=the third person.

³ I only found one example that could be taken as an example of the equative construction or the simile construction. Further investigation is needed to support the claim.

⁴ One may wonder how the NP₂ is brought into the simile construction with non-literal interpretations (e.g., *right as rain*), even though the NP denotes a concept that is essentially irrelevant to the quality expressed by the adjective. A similar question was raised by the audience. Masaru Kanetani (pers. comm.) suggested that certain phonological similarities (e.g., rhymes, alliterations) between the adjective and NP₂ could be relevant to explain some, if not all, of the examples in (23): *fit as a fiddle*, *loose as a goose*, *right as rain*. However, a more detailed analysis is required to confirm whether it is really relevant, and I leave this possibility for future research.

REFERENCES

- Ando, Sadao (2005) *Gendai Eibumpo Kogi* (Lectures on Modern English Grammar), Kaitakusha, Tokyo.
- Bolinger, Dwight (1972) *Degree Words*, Mouton, The Hague, Paris.
- Goldberg, Adele E. (2006) *Constructions at Work: The Nature of Generalization in Language*, Oxford University Press, Oxford.
- Hashimoto, Kunihiko (2003) “Simili to Kanrensei kara Mita Dentatsukino (Similes and the Communicative Functions Based on Relevance),” *Ninchikagakukenkyu* 2, 36-58.
- Huddleston, Rodney and Geoffrey K. Pullum (2002) *The Cambridge Grammar of the English Language*, Cambridge University Press, Cambridge.

- Jackendoff, Ray and Audring, Jenny (2020) *The Texture of the Lexicon: Relational Morphology and the Parallel Architecture*, Oxford University Press, Oxford.
- Kay, Paul (2013) “The limits of (construction) grammar,” *The Oxford Handbook of Construction Grammar*, ed. by Thomas Hoffmann, and Graeme Trousdale, 32-48, Oxford University Press, Oxford.
- Moon, Rosamund (2008) “Conventionalized as-similes in English: A problem case,” *International Journal of Corpus Linguistics*, 13(1), 3-37.
- Ono, Shigeru and Toshio Nakao (1980) *Eigoshi I* (Eigogakutaikei Dai 8 kan) (History of English I (Outline of English Linguistics)) ed. by Akira Ota, Taishukan, Tokyo.
- Otsuka, Takanobu and Fumio Nakajima (1982) *Shineigogakujiten* (The Kenkyusha Dictionary of English Linguistics and Philology), Kenkyusha, Tokyo.
- Rett, Jessica (2015) *The Semantics of Evaluativity*, Oxford University Press, Oxford.
- Svartengren, Torsten H. (1918) *Intensifying Similes in English: Inaugural Dissertation*, Aktiebolaget Skanska Centraltryckeriet, Lund.
- Takagi, Rio (2023) *A Constructional Approach as ADJ as Constructions*, unpublished master’s thesis, University of Tsukuba, Ibaraki.
- Takemori, Arisa (2022) “Shikisaigo *white* wo Fukumu Kyoichokuyuhyogen no Bunseki: *white as snow/ a sheet/ marble* no Hikaku (An Analysis of Intensifying Similes with a Color Term *white*: Comparison of *white as snow* and *white as a sheet* and *white as a marble*),” *Gengobunkakyodokenkyuproject* 2021, 43-53.
- Traugott, Elizabeth C. and Graeme Trousdale (2013) *Constructionalization and Constructional Changes*, Oxford University Press, Oxford.
- Yagi, Katsumasa, and Ai Inoue (2013) *Eigoteikeihyogenkenkyu: Rekishi, Hoho, Jissen* (A Study of Phraseology in English: Its History, Method and Case Studies), Kaitakusha, Tokyo.

CORPORA

- Davies, Mark (2008-) *The Corpus of Contemporary American English* (COCA), Available online at <https://www.english-corpora.org/coca/>.
- Davies, Mark (2010) *The Corpus of Historical American English* (COHA), Available online at <https://www.english-corpora.org/coha/>.
- Davies, Mark (2017) *Early English Books Online Corpus* (EEBO), Available online at <https://www.english-corpora.org/eebo/>.

DICTIONARIES

- Oxford English Dictionary Online* (OED), Oxford University Press, Available at <http://www.oed.com/>.

日本語と英語における証拠性「推量」の使用の揺れについて*

(How the Inferential Evidentiality is Expressed in Japanese and English)

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キーワード：証拠性、日英対照研究、認知言語学、物語論

1. はじめに

英語と日本語の小説の対訳において、日本語の証拠性モダリティ（らしい、そうだ、ようだ、みたい）の推量用法の意味がその対応する英語表現では訳出されない場合がある。¹

(1) 「晴美は目隠しをされた状態」

"Do you think you can hold it?" They were asking Harumi.

(*The Miracles of the Namiya General Store*)

「我慢できますか」晴美への質問らしい。

『ナミヤ雑貨店の奇跡』

本稿では、対訳のある日本語と英語の小説の実例を基に、同じ状況を異なる言語で表現しようとした時に、証拠性の「推量」の意味の明示化に揺れが生じることを示し、その要因に語り手と作中人物の同化の度合いという事態把握の差異が関与していることを指摘する。

2. 証拠性 (Evidentiality) について

本章では、日本語と英語の証拠性に関する先行研究を概観する。日本語と英語における証拠性の使用実態を調査することは、言語類型論の観点からみても、日本語と英語の対照分析においても学術的な意義のあることといえる。Aikhenvald(2004)に代表される言語類型論の研究では、これまでに様々な言語に証拠性を表す標識や方法があることが指摘されてきたが、人間言語に普遍の文法要素や言語的カテゴリーやそれらの意味の一般化を探求する傾向があるため、言語間で証拠性の使用傾向に差異があることに関してはあまり論じられていない。日本語と英語の対照分析という観点からみると、これまで内的状態表現における一人称制限、伝聞の明示化、他者の意志を表す場合の話法の選択が証拠性に関わる日本語と英語の差異として挙げられるが、本稿で指摘する「推量」の揺れに関してはいまだ論じられていない。

このような背景の下、本稿では小説の対訳をデータとして、同じ状況を異なる言語で表現した場合、証拠性「推量」の意味の明示化に使用の揺れがあることを指摘し、その要因について考察する。

2. 1. 日本語と英語の証拠性

証拠性とは発話する命題がどのような「情報源 (source of information)」に基づいているかを表す言語的カテゴリーである (cf. Aikhenvald 2004:3)。情報源の種類に応じて、証拠性の意味は以下のように分類される。本稿で扱う「推量 (Inference)」は視覚や感覚を基に推論を働かせて得られた情報を表すカテゴリーである。

(2) 証拠性の意味分類

- I. VISUAL: covers information acquired through seeing
- II. NON-VISUAL: covers information acquired through hearing, and is typically extended to smell and taste, and sometimes also to touch.
- III. INFERENCE: based on visible or tangible evidence, or result.
- IV. ASSUMPTION: based on evidence other than visible results: this may include logical reasoning, assumption, or simply general knowledge.
- V. HEARSAY: for reported information with no reference to those it was reported by.
- VI. QUATATIVE: for reported information with an overt reference to the quoted source.

(Aikhenvald 2004: 64)

証拠性の意味をどのように表示するかは言語によって異なる (cf. Aikhenvald 2004: ch3)。英語は証拠性を表す文法要素を持たず、語彙的要素で補うパターンの言語に属する。以下、副詞句 *allegedly* が伝聞を表し、動詞 *seem* は推量パラメタを表している。

- (3) a. The author is *allegedly* a member of a comedy troupe and presumably was trying to be witty.
- b. It *seems* to be a good movie.

(Cornillie 2009: 46)

一方、日本語は証拠性に関わる文法的な標識として、証拠性モダリティ「そうだ／らしい／ようだ／みたい」があるが、必ずしも義務的に表示する必要はないパターンの言語に属する。それぞれの証拠性モダリティの用法をまとめると以下ようになるが、証拠性の用法とされるのは「推量」と「伝聞」である (cf. 日本語記述文法研究会 2003: 163-178)。

(4) 証拠性モダリティに関わる用法

推量：証拠に基づく推定を表す

例) パソコンの電源が入らない。壊れてしまった {らしい／ようだ}。

※ 観察：観察したことそのものを表す（「ようだ」の意味）²

例) [部屋の窓から外を見て] まだ雨はやんでいないようだ。

伝聞：情報伝達に際して、その情報が他者から取り入れたものであることを表す

例) 知人の話では、あの店は経営者が変わった {そうだ／らしい／ようだ／みたいだ}。³

婉曲：遠回しな表現

例) どうも、あなたのおっしやっていることは、私には理解できないようです。

比喩：何かにととえていることを表す

例) このステレオは音質がいい。まるで目の前で演奏している {ようだ/みたいだ}。

性質・予想：対象が備えている性質やその兆候を表す (「(し) そうだ」の意味)

例) a. あ、雨が降り出しそうだ。 b. 鈴木さんはジーンズが似合いそうだ。

表 1：日本語の証拠性モダリティの用法

	推量	伝聞	婉曲	比喩	性質・予想
そうだ	×	(する) そうだ	×	×	(し) そうだ
らしい	○	○	×	×	×
ようだ	○	△	○	○	×
みたい	○	△	○	○	×

日本語も英語も証拠性の「推量」を表す標識や手段を有するが、「推量」の意味の明示化には差異が生じる。本稿では、言語類型論で示された証拠性のパラメタがどのように使用されているのかを小説の対訳データを基に調査し、同一の状況を描写する場合でも証拠性の使用に揺れがあることを指摘する。

2. 2. 日本語と英語の比較分析：証拠性の揺れについて

証拠性に関する日本語と英語の対照研究として3つの先行研究を概観する。まず、神尾(2002)は「なわ張り理論」の観点から日本語と英語では伝聞の使用に関して、以下のように、日本語では伝聞は必然的に間接形(証拠性モダリティや引用形式)となるのに対し、英語は情報の信頼度によって間接形を用いるかどうかが決まるといふ差異があると述べている。

- (5) 日本語では、他者から言葉によって得た情報は、それが信頼し得るか否かとは別に伝聞形で表すので、必然的に間接形となる。これに対して、英語では、他者から言葉によって得た情報は、それが信頼し得るとみなされた場合には、直接形で表現される。無論、それが単なる噂に過ぎないとみなされた場合には、I hear、They say、などの間接形が用いられ、また慎重な話し手ほど、間接形を用いる傾向がある。

(神尾 2002: 117-118)

次に、Aoki(1986)、池上(2004)では内的状態表現の一人称制約に証拠性に関わることを述べている。日本語には、感覚や気持、感情を表す内的状態表現の人称制約があるため、自己の内的状態表現は無標の形で表されるが、二人称や三人称主語の場合は無標の形では容認されにくくなる。そのため、他者の内的状態を表す場合はその根拠となる兆候から判断したことを表す証拠性や「がる」を付ける必要があるのだが、英語にはそのような制約はない。

- (6) a. {私/??あなた/??彼(女)}は{嬉しい/悲しい}。

b. {I am / You are / S/he is} happy/sad.

- (7) 彼(女)は嬉し{そうだ/ (い) らしい/ (い) みたいだ/がっている}。

最後に、本多（2005）は、以下に示すように、他者の意志を表す場合、日本語では、話し手が他者の立場になって発話するため、直接話法に近い引用形式をとるのに対して、英語では主語の意志を直接指示対象とする動詞を主文とする述語を用いることから、日本語では、他者の意思を言及するときは他者に共感し、仮想的に他者になったうえで引用することを示す「共感的な構文」を好むのに対して、英語では他者の感情や意図は直接見えるものとして表現される「透過的な構文」を好むという差異を指摘している。

(8) a. トムがあんと話したいって

b. Tom wants to talk to you.

(本多 2005:166)

以上、日本語と英語の証拠性に関する対照研究をまとめると以下のようになる。伝聞や他者の意思や内的状態を表現する際には、日本語では証拠性や直接引用表現を必要とし、英語では無標となることが指摘されているが、(1)に示したような証拠性「推量」の意味の有標化に揺れが生じる現象は扱われていない。次章では、対訳のある日本語と英語の小説の実例を基に、証拠性「推量」の意味の明示化に揺れが生じることを示す。

表 2：証拠性に関わる日本語と英語の対照研究

	日本語	英語
① 神尾（2002）	伝聞は有標化されることが多い	伝聞を無標化する場合がある
② Aoki (1986) 池上 (2004)	1 人称制約がある	1 人称制約がない
③ 本多（2005）	共感的な構文	透過的な構文

3. 小説における日本語と英語の証拠性の使用実態調査

日本語と英語の対訳のある小説（日本語原作 5 作品、英語原作 5 作品）から証拠性モダリティ「らしい／そうだ／ようだ／みたい」を抽出し、それらの箇所に対応する英語の対訳を抽出した。⁴ 述部での証拠性モダリティの働きに着目するため、抽出する対象を終止形に限定した。⁵ また、特定の書き手の好みに偏らないよう、原著者と翻訳者が異なる作品を選んだ。

表 3：日本語の証拠性に対応する英語表現

		原作											合計		
		英語						日本語							
		ようだ	みたい	らしい	そうだ	計	ようだ	みたい	らしい	そうだ	計				
比喩	as系	47	14	4	12	77	9%	11	4	3	2	20	3%	97	17%
	like系	23	42	7	8	80	10%	37	32	7	6	82	12%	162	
述部	述部	47	15	11	27	100	46%	24	10	8	10	52	31%	152	39%
	述部 + to不定詞	56	11	22	5	94		17	6	6	3	32		126	
	述部 + that節	48	21	68	42	179		32	23	41	28	124		303	
副詞相当句		18	0	55	7	80	10%	20	4	31	9	64	10%	144	10%
無標		45	24	35	28	132	16%	88	38	90	33	249	37%	381	26%
法助動詞		7	1	15	11	34	4%	6	2	12	18	38	6%	72	5%
その他		0	0	12	28	40	5%	0	0	2	4	6	1%	46	3%
合計		291	128	229	168	816	100%	235	119	200	113	667	100%	1483	100%
		36%	16%	28%	21%	100%	35%	18%	30%	17%	100%				

表3から、日本語の証拠性モダリティが英語の対訳において無標で表されるパターンが全体の26%あり、特に日本語から英語への翻訳において多いことがわかる(37%)。

次に、日本語の証拠性モダリティが表す意味がどのように英語で翻訳されるのか詳細に調査するため、日本語の証拠性モダリティに対応する英語表現のパターンとして多かった、証拠性の意味を「述部」で表すパターン(表4)、「副詞相当句」で表すパターン(表5)、「無標」で表すパターン(表6)を取り上げ、それぞれのパターンにおいて証拠性モダリティがどのような用法で使用されていたのかを調査した。

表4：日本語の証拠性モダリティに対応する英語表現において述部で証拠性の意味を表すパターン

述部	原作										総計							
	英語					日本語					ようだ	みたい	らしい	そうだ	合計			
	ようだ	みたい	らしい	そうだ	合計	ようだ	みたい	らしい	そうだ	合計								
推量	49	26	44	0	119	32%	30	17	10	0	57	27%	79	43	54	0	176	30%
内的状態	76	14	19	19	128	34%	33	10	8	11	62	30%	109	24	27	30	190	33%
伝聞	5	2	39	26	72	19%	2	8	37	21	68	33%	7	10	76	47	140	24%
婉曲	2	0	0	0	2	1%	1	1	0	0	2	1%	3	1	0	0	4	1%
比喩	19	5	0	0	24	6%	7	3	0	0	10	5%	26	8	0	0	34	6%
性質・予想	0	0	0	29	29	8%	0	0	0	9	9	4%	0	0	0	38	38	7%
合計	151	47	102	74	374	100%	73	39	55	41	208	100%	224	86	157	115	582	100%
	40%	13%	27%	20%	100%		35%	19%	26%	20%	100%		38%	15%	27%	20%	100%	

表5：日本語の証拠性モダリティに対応する英語表現において副詞相当句で証拠性の意味を表すパターン

副詞相当句	原作										総計							
	英語					日本語					ようだ	みたい	らしい	そうだ	合計			
	ようだ	みたい	らしい	そうだ	合計	ようだ	みたい	らしい	そうだ	合計								
推量	12	0	27	0	39	49%	13	3	9	0	25	39%	25	3	36	0	64	44%
内的状態	5	0	8	0	13	16%	5	0	2	1	8	13%	10	0	10	1	21	15%
伝聞	1	0	20	4	25	31%	1	1	20	4	26	41%	2	1	40	8	51	35%
比喩	0	0	0	0	0	0%	1	0	0	0	1	2%	1	0	0	0	1	1%
性質・予想	0	0	0	3	3	4%	0	0	0	4	4	6%	0	0	0	7	7	5%
合計	18	0	55	7	80	100%	20	4	31	9	64	100%	38	4	86	16	144	100%
	23%	0%	69%	9%	100%		31%	6%	48%	14%	100%		26%	3%	60%	11%	100%	

表6：日本語の証拠性モダリティを無標で表すパターン

無標	原作										総計							
	英語					日本語					ようだ	みたい	らしい	そうだ	合計			
	ようだ	みたい	らしい	そうだ	合計	ようだ	みたい	らしい	そうだ	合計								
推量	15	6	16	0	37	28%	48	10	8	0	66	27%	63	16	24	0	103	27%
内的状態	10	8	9	5	32	24%	15	2	5	4	26	10%	25	10	14	9	58	15%
伝聞	0	3	10	14	27	20%	4	13	77	16	110	44%	4	16	87	30	137	36%
婉曲	1	3	0	0	4	3%	2	5	0	0	7	3%	3	8	0	0	11	3%
比喩	19	4	0	0	23	17%	19	8	0	0	27	11%	38	12	0	0	50	13%
性質・予想	0	0	0	9	9	7%	0	0	0	13	13	5%	0	0	0	22	22	6%
合計	45	24	35	28	132	100%	88	38	90	33	249	100%	133	62	125	61	381	100%
	34%	18%	27%	21%	100%		35%	15%	36%	13%	100%		35%	16%	33%	16%	100%	

まず、表4の日本語の証拠性モダリティが英語では「述部」で訳出されるパターンでは、内的状態表現(33%)、推量(30%)、伝聞(24%)の順で用法の割合が多い。「副詞相当句」、「無標」のパターンと比較すると、内的状態表現の翻訳として用いられる割合が多いことがわかる。次に、表5の「副詞相当句」で訳出されるパターンをみると、推量(44%)、伝聞(35%)、内的状態表現(15%)の順で用法の割合が多く、「述部」、「無標」のパターンと比べると、「らしい」の翻訳として用いられる割合が多いことがわかる。そして、表6

の「無標」で表されるパターンでは、「伝聞」(36%)、「推量」(27%)、「内的状態表現」(15%)の順に多いという結果になった。ここで重要なことは、先行研究で指摘されていた内的状態表現や伝聞だけでなく、「推量」の用法の明示化に差異が生じているということである。

最後に、日本語の証拠性モダリティが推量を表し、その対応する英語表現では無標となるパターンがどのような場合に生じるのかを調査するため、出現位置別(地の文 vs 会話文)に集計したのが表7である。日本語の証拠性モダリティの推量用法が英語の対応表現で無標となる場合、地の文における「ようだ」と「らしい」の推量用法が多いため、小説の地の文において有標化の差が顕著であることがわかる。

表7：日本語の証拠性モダリティを無標で表す場合のパターン(推量の出現位置別)

無標	原作										総計						
	英語					日本語											
	ようだ	みたい	らしい	そうだ	合計	ようだ	みたい	らしい	そうだ	合計	ようだ	みたい	らしい	そうだ	合計		
推量	地の文	11	0	13	0	24	45	4	8	0	57	56	4	21	0	81	79%
	会話文	4	6	3	0	13	3	6	0	0	9	7	12	3	0	22	21%
	計	15	6	16	0	37	48	10	8	0	66	63	16	24	0	103	100%
		41%	16%	43%	0%	100%	73%	15%	12%	0%	100%	61%	16%	23%	0%	100%	

4. 証拠性の揺れと事態把握

調査の結果、小説の地の文において日本語の証拠性モダリティの「推量」の意味が英語の対応表現において無標になる場合があることがわかった。本章では、地の文における証拠性の「推量」に明示化の揺れが生じる要因について認知言語学における「事態把握」と「物語論」の観点から考察する。

4. 1. 事態把握と物語論

池上(2004)は言語表現の選択に<事態把握>という認知的な営みが関与していることを指摘し、日本語は事態内で臨場的・体験的な「主観的把握」を好む言語であるのに対して、英語は事態外の傍観者の視点からの「客観的把握」を好む言語としている。その一例として、以下の対訳において、日本語では電車内にいる作中人物の視点から見える情景を描く構図となっているのに対して、英語訳では電車外に視点を移し、語り手の視点から客観的に物語の一場面としての情景を描写している。

- (9) a. 国境の長いトンネルを抜けると雪国であった。 (川端康成『雪国』)
 b. The train came out of the long tunnel into the snow country.
 (汽車ハ長イトンネルカラ出テ雪国ヘ入ッテキタ) (E. Seidensticker 訳)
 (池上 2011: 55)

物語論では、このような語りにおける視点の取り方の違いを「焦点化」と呼び、語り手と作中人物の情報量の違いによって、以下の3つの分類があるとしている。事態把握との関係で重要なのは内的焦点化と外的焦点化の違いである。内的焦点化は、語り手と作中人物に同化するため、語り手と作中人物の情報量は等しくなり、作中人物が見えるものや感じることを描写する構図であるのに対して、語り手の方の情報量が少なくなる外的焦点化では、語り

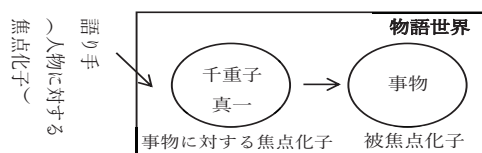
手は作中人物と同化しないため、作中人物の感覚や思考はわからず、監視カメラのように客観的に物語の展開や情景を語る構図となる。

表 8 : ジュネット(1985)による焦点化の種類

焦点化ゼロ	語り手 > 作中人物	語り手ほどの作中人物よりも多くのことを語る
内的焦点化	語り手 = 作中人物	語り手は作中人物がわかることのみ語る
外的焦点化	語り手 < 作中人物	語り手は作中人物がわかることよりも少なく語る

以下の例の 1 文目「千重子と真一は岸を巡って、小暗い木下路にはいった」は語り手が作中人物（千重子と真一）の行動を語る外的焦点化の構図であるが、2 文目「若葉の匂いと、しめった土の匂いがした」は作中人物（千重子と真一）に同化する形で彼らの知覚経験が語られる内的焦点化の構図となる。

- (10) 千重子と真一は岸を巡って、小暗い木下路にはいった。若葉の匂いと、しめった土の匂いがした。その細い木下路は短かった。前の池よりも広い池の庭が、明るくひらけた。岸への紅しだれの桜の花が、水にもうつって目を明るくする。外人の観光客たちも、桜を写真に取っていた。
(川端康成『古都』)



(橋本 2014:195)

図 1 : 外的焦点化と内的焦点化

認知言語学における事態把握と物語論における焦点化を考慮すると、日本語と英語の語りには以下のような傾向があると仮定することができる。

(11) 事態把握と物語論の接点

日本語： 主観的事態把握が好まれるのであれば、語り手は作中人物に同化する度合いが強く、場面臨場的な内的焦点化が好まれる。

英語： 客観的事態把握が好まれるのであれば、語り手は作中人物との同化の度合いが弱く、俯瞰的な外的焦点化が好まれる。

4. 2. 物語を語る際の事態把握の差異

小説の地の文において、日本語の証拠性モダリティの「推量」の意味が英語の対応表現で無標となる場合には、(12) に示す「ようだ」にみられる観察のみを表す用法（原作英語 8 例（地：8 例）／原作日本語 18 例（地：17 例／会話：1 例））と (13) に示す登場人物がある状況を知覚から推論を行ったことを表す用法（原作英語 29 例（地：16 例／会話：13 例）／原作日本語 48 例（地：40 例／会話：8 例））がみられた。(12) の例では、故郷の街並みを歩いている作中人物が通りがかったうどん屋の様子を描写する場面、(13) は犬を取り囲んでいじめている中学生を作中人物が木陰から見ている場面である。

(12) [故郷の町を歩いている場面]

On the other side, down on the corner, I saw an *udon* shop and recognized the name. This was the *udon* shop my classmate's family ran. I peered inside. It was lunchtime, and the place was packed.
(*Breast and Eggs*)

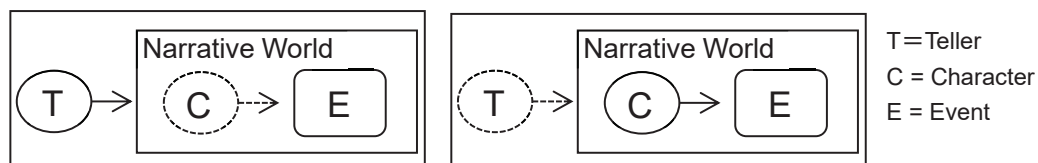
むこうに渡った角のところに、うどん屋の看板がみえた。昔とおなじ名前で営業していて、ここは同級生の家がやっているうどん屋だった。ちらりとなかを覗いてみると、昼時のせいか大勢の客で賑わっているようだった。 『夏物語』

(13) [犬を取り囲んでいる中学生たちを木陰から見ている場面]

'Hurry up and put 'em on,' one of the students said. They were sticking on the defibrillator pads.
(*Bullet Train*)

「おい、早く貼れよ」中学生の誰かが言う。医療器具のパッドを付けているところらしい。 『マリアビートル』

どちらの用法においても、作中人物の知覚体験を語る場面である。これらの場面において、日本語では証拠性モダリティを明示化することで、作中人物の知覚や知覚からの推論を表しているため、語り手 (T) は作中人物 (C) の知り得ることのみを語る内的焦点化の構図で語っていることがわかる。一方で、対応する英語では、作中人物との同化の度合いは低く、作中人物の思考や知覚を通じた描写ではなく、作中人物含めた物語の一場面を客観的に語る外的焦点化の構図となっている。



英語：外的焦点化

日本語：内的焦点化

図2：小説の地の文における事態把握の差異

5. まとめ

本稿では、日本語の証拠性モダリティが英語の対応する表現における「述部」や「副詞相当句」で意味が訳出されるべきところで、証拠性の意味が全く訳出されない場合があることを示し、その要因には語り手と作中人物の同化の度合いという事態把握の差異が関与していることを主張した。最後に、日本語における小説の地の文において証拠性モダリティが生み出す効果として、作中人物の視点から見た臨場的な語りがあると思われる。以下の例では、作中人物の体験(目隠し状態で視覚情報を遮られている)を反映した臨場感を表しているが、今回の調査結果をふまえると、そのような臨場感が英語では訳出しにくいといえるだろう。

(14) (=1)) [晴美は目隠しをされた状態]

"Do you think you can hold it?" They were asking Harumi.

(*The Miracles of the Namiya General Store*)

「我慢できますか」晴美への質問らしい。

『ナミヤ雑貨店の奇跡』

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注

- ¹ 高島（2020）では証拠性「らしい」に対応する英語表現を調査したが、本稿では「らしい」に限定せず、証拠性モダリティ「らしい／そうだ／ようだ／みたい」を調査した。
- ² 日本語記述文法研究会（2003）では、「ようだ」の意味を話し手が観察によってその事態をとらえていることを表すと定義しており、観察のみを表す用法と観察からの推量を表す用法があるとしているが、どちらの用法も事態に対する話し手の認識的なとらえ方を表す認識のモダリティに関わる用法とされているため、本稿では広義に解釈し観察を「推量」の一部として扱った。
- ³ 「ようだ」と「みたいだ」は、会話では伝聞として使われる場合がある（例：さっきニュースで見たんですが、大阪で事故があった {ようです／みたいです}。）。
- ⁴ それぞれの対応関係の例に関しては別表を参照。
- ⁵ その他、「(し) そうだ」がアスペクトとして解釈された例（3 2 例）、接尾辞らしいが文末で使われた例（1 4 例）があった。

参考文献

- Aikhenvald, Alexandra. Y (2004) *Evidentiality*. Oxford University Press, Oxford.
- Aoki, Haruo (1986) 'Evidentials in Japanese' *Evidentiality: The Linguistic Coding of Epistemology*, ed by, Wallace Chafe and Johanna Nichols, 223-238. Ablex, Norwood.
- Cornillie, Bert (2009) 'Evidentiality and epistemic modality. On the close relationship between two different categories.' *Functions of Language* 16 (1), 44-62.
- Genette, Gérard. (1972) *Discours du recite*. Editions du Seuil, Paris. (ジュネット, ジェラルール. 花輪光/和泉涼一訳『物語のディスクール：方法論の試み』水声社, 東京, 1985.)
- 橋本陽介 (2014) 『ナラトロジー入門—プロップからジュネットまでの物語論』水声社, 東京.
- 本多啓 (2005) 『アフォーダンスの認知意味論 生態心理学から見た文法現象』 東京大学出版会, 東京.
- 池上嘉彦 (2004) 「言語における<主観性>と<主観性>の言語的指標(2)」『認知言語学論考』, No.4. ひつじ書房, 東京.
- 池上嘉彦 (2011) 「日本語と主観性・主体性」『ひつじ意味論講座 5 主観性と主体性』澤田治美 (編) ひつじ書房, 東京.
- 神尾昭雄 (2002) 『続・情報のなわ張り理論』大修館書店, 東京.
- 日本語記述文法研究会 (編) (2003) 『現代日本語文法 4 モダリティ』くろしお出版, 東京.
- 高島彬 (2020) 「小説における日本語と英語の証拠性について」『函館英文学』 vol.59, 69-84.

引用元

- 東野圭吾 (2012) 『ナミヤ雑貨店の奇蹟』角川書店, 東京. (Higashino, Keigo. Sam Bett (trans) *The Miracles of the Namiya General Store*. Yen On, New York, 2019.)
- 伊坂幸太郎 (2013) 『マリアビートル』 東京：角川書店. (Isaka, Kotaro. Sam Malissa (trans) *Bullet Train*. Harvill Secker, London, 2021.)
- 川上未映子 (2019) 『夏物語』 東京：文藝春秋. (Kawakami, Mieko. Sam Bett and David Boyd

- (trans) *Breasts and Eggs*. Europa Editions, New York, 2020.)
- 湊かなえ (2008) 『告白』 東京：双葉文庫. (Minato, Kanae. Stephen Snyder (trans) *Confessions*. Mulholland Books, New York, 2014.)
- 村上春樹 (1982) 『羊をめぐる冒険』 東京：講談社. (Murakami, Haruki. Birnbaum, Alfred (trans) *A Wild Sheep Chase*. Vintage Books, London, 2000.)
- Brown, Dan (2017) *Origin*. New York: Knopf Doubleday Publishing Group. (ブラウン, ダン. 越前敏弥 (訳) 『オリジン』 角川文庫, 東京, 2018.)
- Garber, Stephanie (2017) *Caraval*. New York: Flatiron Books. (ガーバー, ステファニー. 西本かおる (訳) 『カラヴァル』 キノブックス, 東京, 2017.)
- Hawkins, Paula (2015) *The Girl On The Train*. Black Swan. (ホーキンス, パウラ. 池田真紀子 (訳) 『ガール・オン・ザ・トレイン』 講談社, 東京, 2015.)
- Kirn, Walter (2001) *Up in the Air*. London: John Murray. (カーン, ウォルター. 江口泰子 (訳) 『マイレージ、マイライフ』 小学館, 東京, 2010.)
- Moyes, JoJo (2012) *Me Before You*. New York: Penguin Book. (モイーズ, ジョジョ. 最所篤子 (訳) 『ミー・ビフォア・ユー 君と選んだ明日』 集英社文庫, 東京, 2015.)

別表1：日本語の証拠性に対応する英語表現			
比喩		例	対応する英語表現
as系	The Shinkansen is known for being a smooth ride, but the swaying can be intense in the gangway; he has to focus on keeping steady, and he's distracted by the incessant racket of the tracks. It's as if the train is trying to prevent him from connecting with Maria, his only ally. 'Either way, I decided that staying on the train gave me a better chance to get the bag back.'	新幹線の揺れは穏やかとはいえ、それでもデッキに立っていると体のバランスが崩れやすく、振動が絶え間なく続き、うるさかった。七尾の集中力を拡散し、唯一の味方ともいえる真莉亜との会話を妨害しようとするかのようだ。「とにかく俺は、新幹線に乗ったままのほうが、トランクを見つける可能性は高いと思ったんだ」	as if, (feel/look/see/seem/sound) as if as though, (feel/seem/look) as though,
like系	I wish I hadn't called. To have my hopes raised and dashed again, it's like cold steel twisting in my gut.	電話などするんじゃないかった。期待をふくらませた分、失望も大きかった。冷たい鋼鉄の棒をお腹にねじこまれたかのような感覚。	like, (feel/look/seem/sound) like, resemble, similar to
述部			
述部	Tom looked mildly surprised. He said, 'We'll miss you,' but that's a lie, too.	トムは少し驚いたようだった。「さみしくなるな」でも、それだって嘘だ。	appear, feel, hear, mention, see, seem, sense, sound, look
述部 + to不定詞	When dinner was over, Katsuro retired to his room. Sprawled out on his bed, he heard the raucous sound of children's voices through the windows. He sat up and looked outside to see the kids playing with sparklers. They didn't seem to mind the cold in the slightest.	食事が終わると、克郎は部屋に引き揚げた。ベッドで横になっていると、窓の外から賑やかな声が聞こえてくる。身体を起こし、見下ろした。子供たちが花火をしていた。寒さなど気にならないらしい。	appear to, be supposed to, seem to
述部 + that節	While I was desperately trying to come up with a way to die, my parents finalized their divorce. I was ten years old. My father had at last realized that my mother was abusing me. It seemed that one of the other shop owners had told him. My mother put up no defense, saying she would move out as soon as the divorce came through.	死に方を必死で考えているあいだに、両親の離婚が成立した。自分は十歳。父親が虐待に気付いたのだ。商店街の誰かが、告げ口したらしい。母親は何の言い訳もせず、手続きが終わり次第、家を出て行くことを決めた。	admit that, agree that, appear that, assume that, assure that, be (clear/sure/feel/certain/convinced/obvious) that, believe that, claim that, detect that, discover that, find out that, (get/get the sense) that, guess that, hear that, imagine that, insist that, know that, learn that, mean that, read that, realize that, receive - that, report that, say that, see that, seem that, sense that, suggest that, suspect that, swear that, talk that, tell - that, theorize that, think that, turn out that
副詞相当句			
副詞相当句	This was unbelievable. After so many years, she was not expecting to see that name today. And what was this about a "One-Night Special"? The site was apparently being managed by someone in his family, but beyond saying the event was being held to coincide with the old mans memorial service, it gave no other details.	信じがたい話だった。まさかこの時代になって、その店名を目にするとは思わなかった。一夜限りの復活とはどういうことなのか。サイトを運営しているのは店主の子孫らしいが、三十三回忌の催しと書いているだけで、詳しいことは説明してくれていない。	allegedly, apparently, clearly, certainly, definitely, obviously, perhaps, probably, seemingly, somehow, surely, supposedly, undoubtedly by all accounts, judging (from/by)-, according to-, from the letter, from the few words I was able to make out, from the (sound/look) of it, from what (he saw/ gather/she heard/she says)-
無標			
無標	A door clicked somewhere outside, and brisk footsteps echoed beyond the high walls. Someone had entered the gallery, coming through the nearby door that Langdon had seen. The footsteps approached the spiral and then began circling around Langdon, growing louder with every turn. Someone was entering the coil.	外側のどこかでドアのあく音がして、きびきびした足音が高い壁越しに響いた。さっき近くに見えたドアから、だれかが展示室にはいつてきたらしい。足音が渦に近づいてきて、ラングドンの周囲をまわりはじめ、その音は一周ごとに大きくなった。だれかが渦のなかを進んでいる。	
法助動詞			
Modality	Maria says nothing for a moment. She must be worried. 'They captured you?'	真莉亜が一瞬、黙った。心配になったようだ。「捕まったか?」	can, could, have to, may, maybe, might, must, will, would

副詞的働きをする **first thing in the morning** に代表される連鎖の特徴について*
(Exploring Adverbial Nominals: The Case of ‘First Thing in the Morning’)

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キーワード：空の前置詞、NP 補部、前置詞の具現化、補助部選択とパラメーター化

1. はじめに

英語では、(1)に示すように、**first thing in the morning** や **last thing at night** が文末、文頭に生じる。一見すると、括弧で示した連鎖は **bare NP adverb** のようにも見える。本稿の目的は、(1)における **first thing in the morning**、**last thing at night** の統語的・意味的特徴を明らかにし、この連鎖が **PP** であることを明らかにすることにある。また、この連鎖に類似した連鎖についてもその特徴について明らかにする。

- (1) a. I'll call you [**first thing in the morning**].
- b. [**First thing in the morning**], I'll call you.
- c. I check my emails [**last thing at night**].
- d. [**Last thing at night**], I check my emails.
- e. Do not e-mail **first thing in the morning and last thing at night**.

2. 統語的特徴

2 節では、問題の連鎖の統語的特徴を観察する。まず、(1)に示すように、問題の連鎖は、一つのまとまりとして文頭、又は文末の位置に生じる。この場合、**first thing in the morning** の前に、**the** や **my** をつけることはできない。また、(2)が示すように、**it**-分裂文の焦点の位置に生起し、この場合も **the** や **my** を伴うことはできない。(1)(2)の事実は、問題の連鎖が構成素をなすが、**DP** ではないことを示している。

- (2) It is **first thing in the morning** that I will call you.

ここで注意すべきことは、(3)のように、**first thing** と **in the morning** を切り離し **first thing** のみを前置することが可能な点である。

- (3) **First thing**, I'll call you **in the morning**.

しかしながら、(3)は、次の点で(1a)とは意味が異なる。(3)が可能となる文脈は、(4)に示すように、話し手が一日のうちに行う予定のリストが念頭にある場合である。(1a)の場合、話者の中に自分がすべき事柄のリストが存在しているわけではない。したがって、(3)は、(1a)とは異なるタイプの文ということになる。

(4) Here is what I do to keep healthy. First thing, I like to go for a jog in the morning, and second, always eat vegetables for lunch. Finally, I meditate for 15 minutes.

次に、問題の連鎖が副詞語句との語順交替が可能であることを見る。この場合、問題の連鎖と副詞語句の両方が VP を修飾する必要がある。

(5) a. I read a book enthusiastically last thing at night.

b. I read a book last thing at night enthusiastically.

(6) a. I quietly read a book last thing at night.

b. I read a book last thing at night quietly.

c.*I read a book quietly last thing at night.

(5)の場合、*enthusiastically* と *last thing at night* は *read a book* を修飾する。換言すると、VP 全体を修飾している。他方、(6)における *quietly* は、読むという行為そのものを静かに行うという意味で動詞のみを修飾している。語順交替が可能になるのは、問題の連鎖と副詞語句の両方が VP を修飾する場合の(5)の場合であり、動詞のみを修飾する *quietly* と問題の連鎖は語順交替ができない。結果として、(6c)の語順は容認されないことになる。VP 全体を修飾するということは、問題の連鎖が VP 内要素であることを示している。(7)が示すように、VP 削除が可能であることから問題の連鎖は VP 内に生起していると考えられる。

(7) I will call her first thing in the morning, and John will, too.

(5) ~ (7)に示した事実は、Parsons (1990)の主張とも合致している。Parsons は、動詞の意味に基づいた出来事を修飾する副詞語句は VP 内に基底生成されていると主張している。

ここまでの議論から、問題の連鎖は構成素をなし、副詞的働きを見せる VP 内要素であることを確認した。次に、問題の連鎖は統語的には副詞とは異なり、PP であることを示す言語事実についてふれる。まず、問題の連鎖が PP と同じ振る舞いを示す例として(8)が挙げられる。

(8) a. He went straight to the police.

b. He stayed right to the end of the film. (Radford 2004: 50)

c. %To avoid the afternoon slump, I need to get my priorities in order straight first thing in the morning.

d.%I'll check my emails right first thing in the morning.

Radford (2004)によると、PP の前に *right* や *straight* を置くことが可能である。(8a)から明らか

なように、straight を PP の前に置くことが可能である。同様に、first thing in the morning の前にも straight を置くことができる。(8c)では、straight は VP を修飾するのではなく、first thing in the morning を修飾し、行為が行われるタイミング、朝一番ということを強調している。また、(8d)からは、問題の連鎖の前にも right を置くことが可能であることがわかる。問題の連鎖は、PP に似た振る舞いを見せることがわかる。しかしながら、(8c)(8d)において straight や right をつけるのは意味的に余剰的(redundant)になると判断する母語話者もいることには注意が必要である。

さらに、問題の連鎖が PP としての振る舞いを見せる事実として他の PP との語順交替を挙げることができる。PP は、(9)から明らかなように、他の PP との語順交替が可能である。同様に、問題の連鎖と PP の語順交代も可能である。(9)では、on the table と next to the lump、(10)では、first thing in the morning と without fail の語順交替が可能であることを示している。これらの事実は、first thing in the morning が PP であることを示している。

- (9) a. She paced the book [on the table] [next to the lump].
b. She placed the book [next to the lump] [on the table].
(10) a. I will call her [first thing in the morning] [without fail].
b. I will call her [without fail][first thing in the morning].

次に、問題の連鎖は副詞的な振る舞いを見せるが、副詞類ではなく PP であることを示す事実にもふれる。

- (11) a. It was with great sadness that he announced the resignation of the chairman.
b.*It was very sadly that he announced the resignation of the chairman. (Radford 2004: 77)
(12)=(2)) It is first thing in the morning that I will call you.

(11a)は、It-分裂文の焦点位置に PP が生起できることを示し、(11b)は副詞が焦点位置に生起できないことを示している。(12)から明らかなように、問題の連鎖は焦点位置に生起し、PP との類似性が観察される。(11)の事実に加えて、問題の連鎖が PP に近いことを示す別の事実として(13)を挙げることができる。

- (13) a. I like to go for a walk first thing in the morning or after dinner to help clear my mind.
b. I check my e-mails first thing in the morning, then at lunch, and in the evening.
c. I always check my e-mails last thing at night and first thing in the morning.

(13)からわかるように、問題の連鎖と他の PP は等位接続が可能であり、PP と並列することも可能である。これまでの研究から等位接続できる要素は、通例、同じ範疇であると分析されており、このことから問題の連鎖は PP を形成していると考えられる。

3. 類似構文

ここでは、前節で取り上げた連鎖と類似した統語的振る舞いを見せる連鎖を含む文について

考える。¹

- (14) a. The plane returned to the airport two hours into the flight.
b. Two hours into the flight, the plane returned to the airport.
- (15) a. He stopped the game [five minutes into the game] [during the period of betting].
b. He stopped the game [during the period of betting] [five minutes into the game].
- (16) It was 45 minutes into the show that there was a spotlight on the man.

(14)に示すように、time NP に into-句が後続する連鎖は、文頭、又は文末のいずれかの位置に生じ、time NP の前には定冠詞 the を用いることができないという特徴を持つ。また、(15)は他の前置詞句との語順交代が可能であることを示し、(16)は time NP に into-句が後続する連鎖が it-分裂文の焦点位置に生じるということを示している。これらの事実は、2 節で取り上げた first thing in the morning と共通した特徴である。また、first thing in the morning と time NP-into-句は、等位接続できることを(17)が示している。

- (17) a. First thing in the morning and just five minutes into medication, I felt a sense of peace.
b. I realized, first thing in the morning and again ten minutes into the meeting, that I had forgotten my notes.

さらに、first thing in the morning と time NP-into-句は、主語位置に生じ、X is when の形式を取れる。この特徴は、PP 主語に見られる特徴であることから、問題の連鎖が PP の特徴をもつことがわかる。

- (18) a. First thing in the morning is when I am at my most productive.
b. Ten minutes into the meeting is when we typically start brainstorming on our potential challenges.
c. After lunch is when I feel energized and ready to tackle afternoon tasks.

最後に、問題の time NP は、(19)に示すように、距離を表す NP に置き換えることが可能であることを示す。

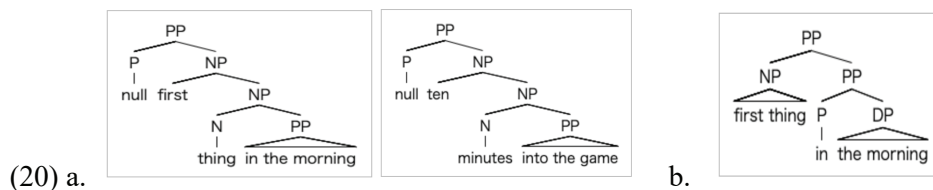
- (19) Three hundred miles into the heart of the jungle we decided to proceed.

これまで first thing in the morning とこれに類する連鎖、time NP into-句の連鎖が副詞的な振る舞いを見せつつも PP と共通する振る舞いをするを指摘した。

4. 空の P の補助部としての連鎖

2 節と 3 節で観察した連鎖は、PP と共通の振る舞いを見せることから、全体としては PP を構成していると考えられる。ここでは、null P を仮定し、その補部は NP と仮定する。副詞的な働きをする NP が PP であることは、Emonds (1976, 1987)、McCawley (1988)、Caponigro and

Pearl (2009)の分析にも見られる。PP の内部構造に関しては、(20a)もしくは(20b)の構造が考えられるが、(20b)の構造は妥当ではないことを示し、(20a)の構造を持つことを示す。



先ず、(20b)を想定できないことを示す事実として、(21)を挙げることができる。

(21) Be ready tomorrow. We leave first thing. (COCA)

(21)が示すように、*first thing* は単独で文末に生じることができる。また、(22)(23)から明らかかなように、問題の連鎖は、*such as* や前置詞 *from* の後に後続することが可能である。これらの事実は、*first thing in the morning* は、本来は NP であると考えられ、(17b)の構造では、この事実を捉えることはできない。

(22) Schedule time to respond to emails, *such as first thing in the morning*,
(<https://researchguides.library.wisc.edu/c.php?g=1294285&p=9504920>)

(23) a. I can schedule them *for first thing in the morning*. (COCA)

b. She's a fan of soaking them all night, or at least *from first thing in the morning until late afternoon*. (COCA)

(20b)の構造は PP との共通の振る舞いを説明できるが、(24)の事実も問題になる。問題の連鎖の前に前置詞が具現化される場合があることを示したのが(24)であり、この事実も(20b)の構造とは合わない。

(24) a. I will say the president will not be available until first thing in the morning...
(<https://www.nytimes.com/2004/05/27/us/kissinger-tapes-describe-crises-war-and-stark-photos-of-abuse.html>)

b. After 3 hours into the attack the Israelis withdrew... (COCA)

c. The first conversation they were on, within five minutes into the conversation, they're discussing guns. (COCA)

ここで(20a)の構造が妥当であることを示す別の事実に触れることにする。(20a)では *first thing in the morning* は、null P の補部を占める NP である。NP であれば、別の NP の前に生じ、形容詞としての振る舞いが可能であることを予測する。この予測が正しいことを示すのが、(25)の事実である。

(25) My immediate, first thing in the morning response to myself was,...

(<https://news.dasa.ncsu.edu/im-not-sure-if-youre-princeton-material/>)

これまで見てきた事実から *first thing in the morning* 類は、PP としての振る舞いと NP としての振る舞いを見せることが明らかになった。この事実をもとに文頭、あるいは文末に生じる *first thing in the morning* は、null P に内包された構造を持つと仮定する。また、null P は具現化された P とは異なり、DP ではなく NP しか認可できないと仮定する。この分析では、前節で見た統語的事実、問題の連鎖が構成素をなすが *the* を伴わない事実、PP に類似した振る舞いを見せる事実、他の PP や副詞語句と語順交代が可能である事実の説明を与えることができる。

(20a)の構造において、null P は full DP が取れないと仮定しているが、この仮定を支持する言語事実についてふれていきたい。

(26) a. Mary gave it the teacher.

b. It was given the teacher.

c.*Mary gave the book the teacher.

d.*His book was given the teacher.

Biggs (2015)によると、マンチェスター英語では、Theme の意味役割を担う下線部の要素は、冠詞を含む full DP は生起できないと主張している。Biggs (2015)は、容認される(26a)では null P が NP を認可していると主張している。他方、リバプール方言では(26c)(26d)は容認されると主張している。ここでは、null P が DP をとるか NP をとるかはパラメーター化されるが、基本的には null P は NP を認可するものとする。null P による NP の認可については、西原(1999)、Hornstein (2001)の分析にも見られる。西原(1999)、Hornstein (2001)において、動詞 *promise* に NP、さらに不定詞が後続する場合、*promise* に後続する NP は null P の補部を占めると分析している。この場合も(26)と同様に、通例、full DP が生じることは容認されない。(27a)を容認する話者でも(27b)は容認しないという事実が存在する。

(27) a.%I promised him to go there.

b.*I promised the man to go there.

しかしながら、COHA を検索すると、(28a)のような例が存在する。また、(28b)のように、不定詞節の前に *never* が生じると、*promise* に NP が後続する連鎖を含む文を容認する話者が出てくる。(26)でも見たように、方言差も存在することから、null P が DP をとるか NP をとるかはパラメーター化されているとみなすことにする。ここでは、(28a)(28b)の用例の頻度は高くないことから、null P は基本的には NP を認可するものとみなすことにする。

(28) a. My great-grandfather, fifty years ago, promised the king to obey him.... (COHA)

b. I want you to promise me never to do such drawings again. (COCA)

これまでの議論から null P に認可される後続要素は、基本的には full DP ではなく NP である

ことが確認できたと思われる。これまでの議論に関連してさらに考察を加えないといけない問題は、もともと null P ではなく、P の具現化に関して選択が与えられている場合である。具現化できる前置詞 P が具現化しない選択をした場合、null P の場合とは異なり、full DP が副詞的要素として文末、あるいは文頭に生起する。具現化するかしないかの選択は、PF 規則であると仮定する。P の具現化が選択的である場合を (29)~(31)が示している。

- (29) a. Pinkerton would work through the entire night.
 b. The way Grandma tells it, she was so tired, she slept through the whole night.
 c. I've wanted to meet her for my whole entire life.
- (30) a. I slept the whole night.
 b. You have been working the entire night trying to get to this girl,... (COCA)
 c. I've wanted to meet her my whole entire life.
- (31) a. The entire night I lay in bed and was dreaming of you.
 b. The whole night I sat cross-legged on the floor in front of him,... (COCA)

(29)~(31)の例は、元々、null P ではなく前置詞の具現化に選択が与えられている場合である。この場合、full DP が生起することが可能である。また、(30c)における所有格要素は、Abney (1987)の仮定を採用すると、DP の指定辞の位置を占めることになる。この事実からも、null P ではなく P が具現可能な場合は、full DP が生起可能であることがわかる。

P の具現化が可能な場合、その P が具現化しない場合でも full DP が副詞的要素として可能になるという分析は、関係詞を含む(32)や距離時間を表す(33)などの用例にも当てはまる。これらの例は、(29)~(31)と並行的に捉えることが可能になる。¹

- (32) a. The crowd erupted at the (very) moment the winning goal was score.
 b. The crowd erupted the (very) moment the winning goal was score.
- (33) a. He walked for a mile / a few minutes.
 b. He walked a mile / a few minutes.

(20a)の構造とこれまでの議論をまとめると、(34)になる。

- (34) a. first thing in the morning、及び time NP into the NP の連鎖は、null P に内包された NP である。
 b. null P は、基本的には補部位置に NP のみを認可する。ただし、方言によっては、NP、DP の認可はパラメーター化されている。
 c. 具現化するか、しないかの選択ができる P は、補部位置に DP を認可できる。ただし、意味的には、[+durative]の意味素性を持つ DP に限られる。

これまでの議論では、(34c)の[+durative] という意味素性にふれていない。しかしながら、この意味素性は(35)に見られる容認性の差異を説明するのに必要である。

- (35) a. I worked through the whole night.
 b. I worked the whole / entire night.
 c. I worked that night.
 d. *I worked the night.

(35d)が容認されないのは、[+durative]という意味素性を欠いていることに起因すると考えられる。(35d)以外は、whole、entire、that がそれぞれ[+durative]のみを有している。

最後に、(20a)の内部構造と(34)を仮定したとしてもさらなる考察が必要になる事実が存在することにふれておきたい。(36)では、Tuesday、today の前に前置詞 P が具現化されていない。ここでは、Tuesday と today の前には null-on が存在し、PP を構成していると考えられる。実際、(37)が示すように、具現化された on が生じることにも可能である。

- (36) I will call her first thing Tuesday / today.
 (37) a. I will call her first thing on Tuesday.
 b. I will organize my schedule, first thing later on today.

さらに、first thing や time NP に後続する P は、これまでに見た in, into, on に加えて様々な前置詞が生起可能であることを確認しておきたい。(38)が示すように、after, before など問題の連鎖の中に生じることが可能である。

- (38) a. First thing after the wake-up time and before taking my morning shower, I meditate for ten minutes to set a calm and positive tone for the day.
 b. The sky began to lighten minutes before sunrise.
 c. The room burst into applause moments after the announcement.

5. First thing in the morning の意味的特徴

この節では、first thing in the morning は、二つの意味を持つことを確認する。まず、first thing in the morning は、起床後の一番早い一時点で行う活動を表すことができる。一時点での解釈を強める表現として、(39)の下線部の表現を付加できる。

- (39) a. I'll call her bright and early / promptly first thing in the morning (just after the break of the day).
 b. First thing in the morning is when I am at my most productive.

他方、first thing in the morning は、起床後に行う連続的な活動の最初の活動を表すこともできる。問題の連鎖は、一つの活動を指すだけでなく、一定の幅を持つ時間内において一つのまとまりとして意識される活動を指すこともできることになる。

- (40) a. I'll call her and then grab a cup of coffee first thing in the morning.
 b. I'll text her first thing in the morning right after I start work.

6. まとめ

この論考では、文頭、もしくは文末に生じる二つの連鎖を含む副詞的要素を取り上げ、これらの統語的・意味的特徴を明らかにするとともに、それらの連鎖が null P に内包された PP であることを明らかにした。また、もともと null P か、それとも具現化に関して選択が与えられている P かによって、補部に生じる要素が NP か DP のどちらかになることを併せて明らかにした。ただし、null P が認可する後続要素に関しては、方言差を指摘し、認可する要素が NP、DP のいずれかにパラメーター化されている可能性があることを指摘した。さらに、P の具現化に関して選択が与えられている場合は、full DP が認可されることも明らかにした。

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注

¹Rothstein (1995)は、文末に生起する(i)の名詞句は空の P の補部位置を占めるという分析をしている。

(i) I met a friend every time I went to the bakery.

参考文献

- Abney, Steven, Paul (1987) *The English Noun Phrases in Its Sentential Aspect*, Doctoral Dissertation, MIT.
- Biggs, Alison (2015) “New Case for A-Movement in Northwest British English,” *Proceedings of the 32nd West Coast Conference on Formal Linguistics*, ed. by Ulrike Steindl et. Al., 218-227, Somerville, MA.
- Caponigro Ivano and Lisa Pearl (2009) “The Nominal Nature of *Where, When, and. How*: Evidence from Free Relatives,” *Linguistic Inquiry* 40, Issue 1, 155-164.
- Emonds, Joseph (1976) *A Transformational Approach to English Syntax: Root, Structure-preserving, and Local Transformations*, Academic Press, New York.
- Emonds, Joseph (1987) “The Invisible Category Principle,” *Linguistic Inquiry* 18, 613-32.
- Hornstein, Norbert (2001) *Move! A Minimalist Theory of Construal*, Blackwell, Oxford.
- McCawley, James (1988) “Adverbial NPs: Bare or Clad in See-through Garb?” *Language* 64, Number 3, 583-590.
- 西原俊明 (1999) 「Promise 構文に関わる諸問題-コントロールとその他の特徴」, 『英語青年』 9月号, 374-337.
- Parsons, Terence (1990) *Events in the Semantics of English*, MIT Press, Cambridge, MA.
- Radford, Andrew (2004) *English Syntax: An Introduction*, Cambridge University Press, London.
- Rothstein, Susan (1995) “Adverbial Qualification over Events,” *Natural Language Semantics* 3, 1-31.

コーパス

Corpus of Contemporary American English (COCA)

Corpus of Historical American English (COHA)

Adjunct Ellipsis in English*

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1. Introduction

This study aims to elucidate the nature of null adjuncts in English and propose a syntactic-pragmatic analysis of the distribution of such adjuncts with no phonetic realization. It has been widely assumed that adjuncts cannot be elided independently. Instead, they have been regarded as a result of other elliptic constructions that include verbal domains, such as VP-ellipsis. Goldberg (2005) observes that manner adverbials can optionally be elided via VP-ellipsis in English, as in (1), in which the adverb-inclusive reading is, in fact, the primary interpretation.

- (1) a. Alan had chopped up the garlic carefully. Heather had e_{VP} as well.
(^{ok} Heather had chopped up the garlic *carefully* as well.)
b. Hiro imitated shellfish with great accuracy. Leila did e_{VP} too.
(^{ok} Leila did imitate shellfish *with great accuracy* too.) (Goldberg 2005:90)

The relevant reading with the adjunct included in the ellipsis site suddenly disappears unless the whole VP undergoes ellipsis, as illustrated in (2). The only possible interpretation is a reading that excludes the adverb. This observation indicates that adverbials cannot be elided independently in English.

- (2) a. *Alan had chopped up the garlic carefully. Heather had chopped up the garlic e_{Adverb} as well.
Intended: Heather had chopped up the garlic *carefully* as well.
b. *Hiro imitated shellfish with great accuracy. Leila imitated shellfish e_{Adverb} too.
Intended: Leila did imitate shellfish *with great accuracy* too.

Under such circumstances, we will demonstrate that adjuncts are indeed elidable on their own based on novel observations on the adjunct ellipsis phenomena. It will be shown that null adjuncts have syntactic structures just like null arguments and that the apparent difficulty or impossibility of adjunct ellipsis is due to pragmatic or extra-syntactic constraints regarding discourse and information structure. As long as the observations and discussions in this paper are valid, it provides both empirical and conceptual arguments for the *Adjunct Ellipsis* analysis (Oku 2016; Kobayashi 2020; Tanabe and

Kobayashi 2024a), in which adjuncts independently undergo ellipsis, just like arguments do in the Argument Ellipsis analysis (Oku 1998, among others). The rest of this paper is organized as follows. Section 2 observes null adjuncts in English and shows that adjuncts are independently elidable in this language. We further expand the scope of our observations to Japanese data to reinforce our claim. In Section 3, we propose a syntactic-pragmatic analysis of null adjuncts, which accounts for the difficulty in obtaining adjunct-inclusive reading reported in the previous literature. Section 4 concludes the paper.

2. On the Elidability of Adjuncts

The distribution of null adjuncts is more restricted than null arguments. Traditionally, adjuncts have been considered unelidable on their own in the literature (Oku 1998). However, recent findings have challenged this assumption on an empirical basis (Oku 2016; Kobayashi 2020; Tanabe and Kobayashi 2024a). Against this background, this study attempts to show that it is possible to independently elide adjuncts in English as long as the data is strictly controlled. In this section, we introduce some discussions from previous literature and several novel pieces of evidence for the elidability of adjuncts, with special references to English and Japanese.

2.1. Ellipsis of Adjuncts in English

Among the few previous studies discussing null adjuncts in English is Collins (2015), which introduces the phenomenon of what he calls *adjunct deletion*. In (3), an adjunct *at his Bar Mitzvah* is missing but interpreted within the second conjunct. Collins (2015) points to the fact that the sloppy identity reading, where *his* in the second conjunct can be bound by the subject *Bill* in the second conjunct, is available in addition to the strict identity reading in (3). This observation speaks to the adjunct deletion.

(3) Michael wanted to sing at his Bar Mitzvah, while Bill wanted to dance.¹

- a. SLOPPY: Michael_i wanted to sing at his_i Bar Mitzvah, and Bill_j wanted to dance at his_j Bar Mitzvah.
- b. STRICT: Michael_i wanted to sing at his_i Bar Mitzvah, and Bill_j wanted to dance at his_i Bar Mitzvah.

While we fully agree with the argument that some adjuncts can undergo ellipsis in English, we point out an empirical problem with the above observation by Collins (2015). In (3), the adjunct-inclusive reading (i.e., *Bill wanted to dance at his Bar Mitzvah*) entails the adjunct-exclusive reading (i.e., *Bill wanted to dance*); hence, they do not contradict each other. As a result, it is impossible to truth-conditionally distinguish one from the other (cf. Landau 2020). To solve this analytical problem, we provide a novel observation in (4), in which the antecedent sentence is positive, and the elliptical sentence is negative in polarity.

- (4) A: John notices the children when they dance, but Mary doesn't notice.
B: She notices them when they scream, just not when they dance.

inclusive reading in (4A), as illustrated in (9) below.

(9) John notices the children when they dance, but Mary doesn't notice ~~when they dance~~. (= (4A))

By observing and controlling English data in a careful manner, we can empirically confirm that adjuncts can be elided by themselves without the analytical problem regarding head-stranding ellipsis.

Now that we know Adjunct Ellipsis is real, we demonstrate that null adjuncts indeed have their own syntactic structure; that is, the adjunct-inclusive interpretation is not necessarily derived via *Pragmatic Enrichment* (Landau 2023), which states the meaning of adjuncts is just pragmatically enriched in discourse without any syntactic structure. The data in (10) and (11) are cases in point. The continuation in (10B) naturally follows (10A), which indicates that the adjunct-inclusive reading is available. In addition, the pronominal *his* in *when his teammates dance* is bound by the antecedent *Ryusei* from outside of the adjunct in the second conjunct in (10A). The binding relation lends credence to the claim that the null adjuncts are syntactically present in the structure.

(10) Among the captains of the teams in the men's basketball league in Japan,

A: Kenta_i notices his_i teammates when they dance, but Ryusei_j doesn't notice [~~when his_j teammates dance~~].

B: He_j notices his_j teammates when they scream, just not when they dance.

We further demonstrate that even bound variable readings are possible with null adjuncts, as illustrated in (11). The fact that the follow-up in (11B) is compatible with (11A) evidences the availability of adjunct-inclusive reading. Moreover, the possessive pronominal in the adjunct phrase is bound by a quantificational antecedent, *everyone else* outside the adjunct in the second conjunct, which is interpreted not as one single referent but as entities encompassed by the quantified antecedent. Since bound variable anaphora requires syntactic dependency of c-command, the data in (11) directly shows that the null adjuncts have their structure in syntax.

(11) Among the captains of the teams in the men's basketball league in Japan,

A: Kenta_i notices his_i teammates when they dance, but everyone else_j doesn't notice [~~when his_j teammates dance~~].

B: Ryusei_k notices his_k teammates when they scream, Leo_l notices his_l teammates when they sing, and Zack_m notices his_m teammates when they jump, just not when they dance.

These observations serve as counterevidence to non-syntactic analyses of null adjuncts, such as *Pragmatic Enrichment* (Landau 2023), stating that the meaning of adjuncts is recovered solely from the preceding discourse without any syntactic structure. As long as the current observations and discussions are valid, adjuncts are not only elidable in English but also have their own syntactic structure within the ellipsis site, precisely the same as null arguments in the case of Argument Ellipsis. In the following subsection, we present some novel data on null adjuncts in Japanese for comparison. Then, we further

demonstrate that adjuncts are syntactically elidable and that the alleged difficulty (or even impossibility) of obtaining adjunct-inclusive reading is due to extra-syntactic reasons; that is, discursal factors, such as contexts and Questions Under Discussion (QUD) (Kobayashi et al. 2024; Tanabe and Kobayashi 2024b).

2.2. Ellipsis of Adjuncts in Japanese

In this subsection, we observe the distribution of null adjuncts in Japanese from a comparative perspective. Funakoshi (2016: 119) shows that adjuncts can be interpreted in elliptic sites in Japanese, contrary to Oku (1998). Specifically, he claims that the manner adverbial *teineini* ‘carefully’ is interpreted within the second conjunct in (12a), which is easily confirmed by the compatibility of the continuation in (12b).

- (12) a. Bill-wa teineini kuruma-o arat-ta kedo
 Bill-Top carefully car-Acc wash-Past but
 John-wa *e* araw-anakat-ta.
 John-Top wash-Neg-Past
 ‘Bill washed the car carefully, but John didn’t wash (the car carefully).’
- b. Bill-ga arat-ta ato-no kuruma-wa kitanakat-ta.
 Bill-Nom wash-Past after-Gen car-Top dirty-Past
 ‘The car that Bill had washed was dirty.’ (Funakoshi 2016: 119)

Furthermore, even cases exist where adjunct-inclusive reading is preferred to the corresponding adjunct-exclusive interpretation (cf. Kobayashi to appear). In (13), the temporal or durational adverbial *shigototyuuini* ‘while working’ is missing in the second conjunct. The prominent reading is *Hanako does not drink coffee while working*, rather than *Hanako does not drink coffee at all*, which is confirmed by the fact that the continuation in (13b) is fully compatible with (13a).³

- (13) a. Taro-wa shigototyuuini koohii-o nom-u kedo
 Taro-Top while.working coffee-Acc drink-Pres but
 Hanako-wa *e* nom-ana-i.
 Hanako-Top drink-Neg-Pres
 ‘Taro drinks coffee while working, but Hanako does not drink (coffee while working).’
- b. Hanako-mo koohii-o nom-u kedo
 Hanako-also coffee-Acc drink-Pres but
 shigototyuuini-wa nom-ana-i.
 while.working-Top drink-Neg-Pres
 ‘Hanako also drinks coffee but doesn’t drink it while working.’

Along with Kobayashi et al. (2024) and Tanabe and Kobayashi (2024b), we suggest that QUD is at work in highlighting the adjunct-inclusive reading in (13); that is, the most natural QUD for (13)

inevitably includes the adverbial meaning, as illustrated in (14a).⁴ The other possible QUD is in (14b), which has no adverb contained in it. The point is that (13a) only provides a congruent answer to the QUD in (14a) but crucially not to the one in (14b). Whether Taro and Hanako drink coffee is under discussion in (14b); hence, simply giving information about whether or not they drink coffee while working is not an appropriate answer.⁵ We claim that the adjunct-inclusive reading is prominent in the case of (13a) because only the specific QUD containing the adjunct in (14a) suffices as a question to form a congruent question-answer pair. This lends credence to our proposal that adjuncts are syntactically elidable and that the putative difficulty in obtaining adjunct-inclusive interpretation is solely due to extra-syntactic factors, such as contexts and QUDs (Kobayashi et al. 2024; Tanabe and Kobayashi 2024b).

(14) Possible QUDs underlying (13):

- | | | | | | |
|----|--|------------|---------------|--------------|--------------|
| a. | Taro-to | Hanako-wa | shigototyuni | koohii-o | nom-u-no? |
| | Tato-Conj | Hanako-Top | while.working | coffee-Acc | drink-Pres-Q |
| | ‘Do Taro and Hanako drink coffee while working?’ | | | | |
| b. | Taro-to | Hanako-wa | koohii-o | nom-u-no? | |
| | Tato-Conj | Hanako-Top | coffee-Acc | drink-Pres-Q | |
| | ‘Do Taro and Hanako drink coffee?’ | | | | |

In Japanese, null adjuncts can be derived either by head-stranding ellipsis with syntactic head movement as its prerequisite (Funakoshi 2016; Sato and Hayashi 2018; Sato and Maeda 2021) or via Adjunct Ellipsis, in which adjuncts are independently elided (Oku 2016; Kobayashi 2020; Tanabe and Kobayashi 2024a). Although Oku (1998) and Tanaka (2023), among many others, have assumed that adjuncts are not elidable in Japanese, we have demonstrated that this assumption is not empirically tenable. Adjuncts are indeed elidable, which is evidenced by adjunct-inclusive reading being available in both English and Japanese, thanks to strict control of discursal factors. Moreover, our novel observations of binding and bound variable anaphora within null adjuncts in English point to the fact that the adjuncts in question do have their structure in syntax; hence, the adjunct ellipsis phenomena require syntactic analysis, rather than being explained away solely by extra-syntactic processes. In what follows, we present a syntactic-pragmatic analysis of such null adjuncts, with special references to English and Japanese.

3. Analysis

Now that we know that adjuncts are elidable, we further attempt to take our discussion a step forward: The observations so far, both in English and Japanese, collectively suggest that no syntactic constraints prevent adjuncts from undergoing ellipsis in a principled way. We claim that the alleged difficulty (or even impossibility) of adjunct-inclusive reading reported in the previous literature is due to extra-syntactic reasons (i.e., discursal factors such as contexts and QUDs).

It is hard to obtain the adjunct-inclusive interpretation when the adjunct is the sole target of ellipsis if there is any other possible constituent (Funakoshi 2014, 2016). A minimal pair in (15) confirms this.

While the adjunct-inclusive reading is available when the adjunct *teineini* ‘carefully’ and the object *kuruma-o* ‘car-Acc’ are elided, the relevant interpretation is suddenly missing when the object remains overt. Based on similar observations, Funakoshi (2016) proposes a descriptive generalization regarding null adjuncts in Japanese, as in (16).

(15) Bill-wa	teineini	kuruma-o	arat-ta	kedo
Bill-Top	carefully	car-Acc	wash-Past	but
John-wa	{ <i>e</i> / *kuruma-o }		araw-anakat-ta.	
John-Top	car-Acc		wash-Neg-Past	

Intended: ‘Bill washed the car carefully, but John didn’t wash the car carefully.’

- (16) Generalization: In Japanese, an adjunct can be null only if the clause-mate object (or other VP-internal element), if any, is also null. (Funakoshi 2016: 117)

We claim that the generalization in (16) is not syntactic, contrary to Funakoshi (2016), but rather pragmatic in nature. Following Oku (2016) and Tanabe and Kobayashi (2024a), we argue that the generalization is naturally derived from a broader discourse constraint: *Ban against Partial Discourse Deletion* (Kuno 1982).

- (17) Ban against Partial Discourse Deletion (Kuno 1982: 84–85):

If discourse deletion of recoverable constituents is to apply, apply it across the board to nonfocus constituents. Nonfocus constituents left behind by partial discourse deletion will be reinterpreted, if possible, as representing contrastive foci.

This pragmatic restriction is universal and states that ellipsis must apply to all constituents that are recoverable, and hence, it dictates that the contrast in (15) should also be observed in English. This prediction is indeed borne out. In (18), the object *them* or *the children* is pronounced, and the adjunct-inclusive reading is unavailable, as empirically indicated by the incompatibility of (18A) and (18B).

- (18) A: John notices the children when they dance, but Mary doesn’t notice {them/the children}.

B: #She notices them when they scream, just not when they dance.

So far, we have argued that syntax does not systematically rule out adjuncts from being elided. The variable difficulty in interpreting adjuncts in the elliptic sites is due to non-syntactic, discursal factors, such as contexts, QUDs, and question-answer congruence. Last but not least, we suggest that this argument also gains conceptual support. In the case of Argument Ellipsis, there has been extensive debate regarding its distribution since Oku (1988), both within and across languages. Notably, Saito (2007) proposes a comparative syntax of Argument Ellipsis, in which LF-copying, a prerequisite of Argument Ellipsis, is allowed only when the copied constituent does not enter ϕ -agreement in syntax. For instance, Argument Ellipsis is unavailable in English because the presence of the predicate-argument agreement blocks LF-copying, while arguments can be elided relatively freely in Japanese, a

language without such agreement (Fukui 1988; Kobayashi 2022, among many others). Applying Saito's (2007) comparative analysis of null arguments to the distribution of null adjuncts would predict that adjuncts can be elided freely in principle cross-linguistically because adjuncts do not enter ϕ -agreement.

This state of affairs can completely change how we view null adjuncts. Syntactic studies of elliptic phenomena have shown that constituents of various categories, such as NP/DP, VP, TP, and CP, can be elided, albeit with some cross-linguistic differences (Saito 2017). Then, it is even more likely that the assumption that only adjuncts cannot be elided is difficult to maintain unless a principled explanation is given. If the observations and discussions in this paper are on the right track, the difficulty of eliding adjuncts is not due to syntactic principles but rather to pragmatic constraints, which cover not only null adjuncts but also elliptic phenomena in general. In particular, the observations from English (Section 2.1) and Japanese (Section 2.2) are naturally explained in terms of non-syntactic constraints, such as (17), proposed in an independent context by previous research. Based on the discussions so far, it is safe to conclude that syntax does not systematically prevent adjuncts from being elided, which is substantiated both empirically and conceptually.

4. Conclusion

In this paper, we have argued that adjuncts are elidable by themselves based on the English data. The observations made in Section 2 collectively militate against the pragmatic view, which presumes that the adjunct meaning is obtained solely via pragmatic processes in the discourse without any structure in syntax. Instead, we have demonstrated that null adjuncts have syntactic structure, evidenced by syntactic dependencies, such as bound variable anaphora, within the missing adjuncts. Furthermore, we have shown that the alleged difficulty of adjunct-inclusive reading is not due to syntactic restrictions but purely because of pragmatic factors, such as discourse, contexts, and QUDs.

The discussions and analysis of this paper are expected to have repercussions not only for null adjuncts in English and Japanese but also for cross-linguistic elliptic phenomena in general. Specifically, while Argument Ellipsis is not available in English, it is now clear that ellipsis of adjuncts in English follows the same pragmatic constraints as in Japanese. The observations in (4), (9), and (13) reinforce the claim that adjuncts can independently undergo ellipsis, which leads us to conclude that Adjunct Ellipsis (Oku 2016; Kobayashi 2020; Tanabe and Kobayashi 2024a) is necessary in languages like English, Japanese, and, possibly, in human languages in general.

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NOTES

¹ Bar Mitzvah is the religious ceremony when a Jewish boy turns 13, marking his transition into adulthood. We thank an anonymous reviewer for kindly providing this information.

² As an anonymous reviewer has pointed out, in (2), the adjunct-exclusive reading entails the adjunct-

inclusive interpretation. However, this is not a problem here because the latter does not entail the former, which makes it possible to empirically distinguish between the two different interpretations, unlike the case in (3).

³ An anonymous reviewer has pointed out that the adjunct-inclusive interpretation is more prominent to obtain when the non-past form *-(r)u* is used than when the past-tense form *-ta* is used. However, we claim this is not necessarily the case, as exemplified in (i), a minimal pair of (13a). Of note here is that the adjunct-inclusive reading remains as prominent as in (13a) with the non-past tense counterpart. This state of affairs indicates that discursual factors outside of syntax play significant roles in determining the availability of the adjunct-inclusive interpretation. We thank the reviewer for bringing the data to our attention.

- (i) Kinoo Taro-wa shigototyuuni koohii-o non-da kedo
 yesterday Taro-Top while.working coffee-Acc drink-Pres but
 Hanako-wa *e* nom-anakat-ta.
 Hanako-Top drink-Neg-Past
 ‘Yesterday, Taro had coffee while working, but Hanako didn’t have *e*.’

⁴ We leave the relevant QUDs in the form of linguistic expressions, refraining from formal illustrations, as this does not affect the discussion in this paper.

⁵ This is because *not drinking coffee while working* does not entail *not drinking coffee at all*.

REFERENCES

- Collins, Chris (2015) “Adjunct Deletion,” ms., NYU. <<https://ling.auf.net/lingbuzz/002540>>
- Fukui, Naoki (1988) “Deriving the Differences between English and Japanese: A Case Study in Parametric Syntax,” *English Linguistics* 5, 249–270.
- Funakoshi, Kenshi (2016) “Verb-Stranding Verb Phrase Ellipsis in Japanese,” *Journal of East Asian Linguistics* 25, 113–142.
- Goldberg, Lotus Madelyn (2005) *Verb-Stranding VP Ellipsis: A Cross-Linguistic Study*, Doctoral dissertation, McGill University.
- Kobayashi, Ryoichiro (2020) “A Case against the Verb-Stranding VP-Ellipsis Analysis in Japanese,” *Proceedings of the 22nd Seoul International Conference on Generative Grammar*, ed. by Tae Sik Kim and Sae-Youn Cho, 298–304. Korean Generative Grammar Circle, Seoul.
- Kobayashi, Ryoichiro (2022) *Functional Parametrization Hypothesis in the Minimalist Program — Case Studies from the Perspective of Comparative Syntax of Japanese and English —*, Kaitakusha, Tokyo.
- Kobayashi, Ryoichiro (to appear) “Replicability of Adjunct-Inclusive Interpretation: Implications for Adjunct Ellipsis in Japanese,” *Proceedings of the 60th Chicago Linguistic Society*, ed. by Jeffery Davis, Taela Dudley, Peter Gado, Gabriel Gilbert, Chunan Li and Yin Wang, 1–10, Chicago Linguistic Society, Chicago, IL.
- Kobayashi, Ryoichiro, Tomoya Tanabe and Yosuke Sato (2024) “Focusing on the Diagnostic Validity of the Adjunct Test in Japanese Ellipsis: Where Prosody Meets Information Structure,”

- Proceedings of the 25th Seoul International Conference on Generative Grammar*, ed. by Tae Sik Kim, 60–73. Korean Generative Grammar Circle, Seoul.
- Kuno, Susumu (1982) “Principles of Discourse Deletion – Case Studies from English, Russian and Japanese,” *Journal of Semantics* 1, 61–93.
- Landau, Idan (2020) “Constraining Head-Stranding Ellipsis,” *Linguistic Inquiry* 51, 281–318.
- Landau, Idan (2023) “More Doubts on V-Stranding VP-Ellipsis: Reply to Simpson,” *Syntax* 26, 449–470.
- Oku, Satoshi (1998) *A Theory of Selection and Reconstruction in the Minimalist Program*, Doctoral dissertation, University of Connecticut, Storrs.
- Oku, Satoshi (2016) “A Note on Ellipsis-Resistant Constituents,” *Nanzan Linguistics* 11, 57–70.
- Saito, Mamoru (2007) “Notes on East Asian Argument Ellipsis,” *Language Research* 43, 203–227.
- Saito, Mamoru (2017) “Ellipsis,” *Handbook of Japanese Syntax*, ed. by Masayoshi Shibatani, Shigeru Miyagawa and Hisashi Noda, 701–750, Mouton de Gruyter, Berlin.
- Sato, Yosuke and Shintaro Hayashi (2018) “String-Vacuous Head Movement in Japanese: New Evidence from Verb-Echo Answers,” *Syntax* 21, 72–90.
- Sato, Yosuke and Masako Maeda (2021) “Syntactic Head Movement in Japanese: Evidence from Verb-Echo Answers and Negative Scope Reversal,” *Linguistic Inquiry* 52, 359–376.
- Tanabe, Tomoya and Ryoichiro Kobayashi (2024a) “Arguments against Head-Stranding Ellipsis in Japanese: A Reply to Funakoshi (2016),” *Syntax* 1–23.
- Tanabe, Tomoya and Ryoichiro Kobayashi (2024b) “Verb-Echo Answers in Japanese do not Call for Syntactic Head Movement: Arguments for a Pragmatic Account,” *Studia Linguistica* 1–37.
- Tanaka, Hidekazu (2023) “Against Verb-Stranding VP-Ellipsis in Japanese: Reply to Funakoshi (2016),” *Journal of East Asian Linguistics* 32, 1–28.

解釈可能性に基づく転送領域の決定と移動の制約*

(Determination of Transfer Domains Based on Interpretability and Constraints on Movement)

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キーワード：フェイズ理論、転送、基準凍結、凍結効果、SMT

1. 導入

(1a, b)の対比に示されるように、移動した句の内部要素に移動操作を適用することは不可能であり、これは凍結効果(Freezing Effect)として知られている。(cf. Ross (1967), Culicover and Wexler (1977), Takahashi (1994))

- (1) a. Who_i do you think that he will talk [to t_i]?
b. * Who_i do you think that [to t_i] he will talk t_j? (cf. Müller (2010: 23))

また、(2a, b)が示すように、「基準位置」、すなわち、一致する疑問の Q, Top などの素性をもつ主要部の指定部位置に移動した要素はさらなる移動を適用されることができず、これは基準凍結(Criterial Freezing)と称される。

- (2) a. Bill wonders [which book C_Q [she read]]
b. * Which book C_Q does Bill wonder [t' C_Q [she read t]]? (cf. Rizzi (2006: 11))

本稿では、これらの2タイプの凍結がどのように導かれるのかについて考察する。分析の概要は(3)の通りである。

- (3) a. フェイズは解釈可能性を基準として決定される。
b. 凍結効果と基準凍結は、フェイズ不可侵条件(Phase Impenetrability Condition: PIC)によって説明される。

Chomsky (2000)によるフェイズに関する主な仮定は(4)にまとめられる。

- (4) Chomsky (2000)
a. The head of a phase is “inert” after the phase is completed, triggering no further operations. (Chomsky (2000: 107))

合できないという制限が生じ、その結果、移動した要素の内部からの移動は許されないという制限が課せられると主張される。

以上の先行研究は、PICにより移動にかかるいくつかの制約を説明できるという点で望ましいといえるが、(8)に示す2つの問題点がある。

- (8) a. フェイズ末端への移動を制限するために必要とされる追加の仮定はどのように導かれるのか。
- b. (9)の適格な解釈はどのように説明されるのか。

1つ目に、2つの先行研究におけるPICを除く追加の仮定がどのように導かれるのかが明らかでなく、規定に留まってしまうという点がある。2つ目に、(9)に例示する量化詞の作用域解釈に関する事実が凍結効果の反例となることが挙げられる。

- (9) Everybody in some Italian city met John. (* every > some, some > every)
(cf. May (1977: 62))

May (1977)において、この例のように別の量化詞句(QNP)を含むQNPが主語になる例では、表層と反対の作用域関係をとることが観察されている。(9)では、someがeveryよりも広い作用域をとる解釈、すなわち「あるイタリアの街に関して、その街では全員がジョンに会った」という解釈となる。ここでの議論は、Cecchetto (2004)による、量化詞繰り上げ(Quantifier Raising: QR)は統語操作であり、統語的な制約を受けるという主張を前提とする。したがって、(9)が反例になるという問題点は、この前提を破棄することによっても解決することができるが、本稿においては、統語派生と意味の対応について統一的説明を与えるため、暫定的にこの前提を採用した上で議論を進めることとする。

次節では、凍結効果に対するフェイズ理論に基づく新たな観点からの説明を提示し、この説明が基準凍結にも適用できることを示す。

3. 分析

3.1. フェイズの決定

はじめに、Chomsky (2000)の定義とは対照的な、解釈可能性に基づくフェイズの定義に関する先行研究を概観する。まず、Grano and Lasnik (2018)は(10)に示す定義を採用する。CPはフェイズとして機能する句の候補であるとするものの、フェイズ主要部の補部の主要部が値未付与素性をもつ場合、そのCPはフェイズとならないと主張する。

- (10) Grano and Lasnik (2018: 31, 45)
 - a. CPはフェイズである。
 - b. フェイズ主要部(C)の補部の主要部(I)が値未付与素性をもつ場合、そのフェイズ性はキャンセルされる。

また、Narita (2011)は、(11)に示す解釈可能性を基準とする定義を採用している。

(11) Narita (2011: 53, 訳は著者による)

統語体 Σ は、その内部が収束している (i.e., 値未付与素性を含まない)場合、そしてその場合に限り、フェイズとなりうる。

そして、Narita はフェイズを命題性の観点から CP, v*P と定義することの問題点として(12)を挙げ、(11)の仮定が従来の範疇に基づくフェイズの定義を導くと主張する。

(12) 従来のフェイズの定義の問題点 (Narita (2011: 48ff), Hinzen (2006)):

「命題性」という条件が不適切である。

- a. CP がフェイズであり、TP がフェイズではないことを説明できない。
- b. v*P がフェイズであり、vP がフェイズでないことを説明できない。
- c. PP (Abels (2001)), DP (Matushansky (2003), Svenonius (2004), Hiraiwa (2005)) がフェイズであることを説明できない。

1 つ目に、CP と TP が両者とも命題的であるにもかかわらずフェイズ性に関して異なることが挙げられる。同様に、vP (非対格・受動の vP)と v*P のフェイズ性に関する違いを説明するには不十分であると指摘している。さらに、Chomsky (2000)においてはフェイズとされていない PP, DP 等がフェイズである可能性が多く、先行研究により提案されてきたが、これについても説明を与えることが不可能である。一方、(11)の定義の下では、フェイズである可能性がある CP, v*P, PP, DP と非フェイズとされる TP, vP は内部に解釈不可能素性をもつかどうかという点において区別され、これによりフェイズとなりうる範疇とそうでない範疇が存在すると論じられる。

3.2. 仮定

本節では、本稿が採用する仮定を提示する。上述の先行研究と同様に命題性以外の観点からフェイズを再定義し、PIC から 2 種の凍結の現象に説明を与えることを試みる。

先述の通り、Chomsky (2000)の(13a)の命題性によるフェイズの定義が現在も一般に仮定されているが、(13b)の収束性の観点からの定義づけにも、可能性の 1 つとして言及している。

(13) a. Phases are propositional.

b. Phases are convergent.

(Chomsky (2000: 107))

Chomsky (2000)によれば、(13b)の定義は(14)が提起する経験的な問題から排除される。

(14) Which article is there some hope [_α that John will read t_{wh}]

(Chomsky (2000: 107))

Merge-Over-Move の制約が課せられるならば、(14)の構造全体がフェイズとみなされ、*there* の併合が埋め込み節内において先に生じることが予測されてしまう。しかし、SMT の下でその制約が破棄されると、上記の点は(13b)の定義にとって問題とならないと考えられる。

したがって、本稿では(13b)の定義を採用する。(11)に述べた Narita (2011)の定義に基づき、

解釈が可能である構造は可能な限り早くインターフェイスに転送されると提案し、(15), (16)のようにフェイズの定義を再定式化する。

(15) 仮定 I: フェイズの定義

- a. すべての統語体は、その転送領域にあたる統語体が「解釈可能である」場合、そしてその場合に限りフェイズとなり、その段階で転送操作を適用される。
(based on Narita (2011))
- b. 統語体は、以下の場合解釈可能である。
 - i. 値未付与素性をもつ要素を含まない。
(based on Narita (2011))
 - ii. 演算子の解釈が(16)により保証されている。

(16) 仮定 II: 演算子(e.g., 疑問詞)の認可条件

vP 領域(命題領域)より上の投射(IP, CP)に移動し(cf. Rizzi (1997), Grimshaw (1993))、2つのコピーとして構造に生じる。

(15a)は(11)と同様である。転送の可否は収束可能性・解釈可能性により決定される、具体的には、すべての統語体について、その転送領域にあたる構造が収束している場合フェイズとなり、すぐさま転送を受けることが要求されるとする。(11)との相違は、収束性の条件に、演算子の解釈を保証するという条件(15b-ii)、およびそのための条件(16)を加えた点である。演算子が2つのコピーとして構造内に生じることを認可条件として提示したが、これは、転送後の意味解釈の段階において、下位のコピーが(17)に示す Trace Conversion (Fox (2002))の適用により適格な解釈を導くという手続きが取られるという仮定をふまえたものであり、したがって、解釈単位となる転送領域内において(15b-ii)/(16)の条件を満たすことが要求される。

(17) Trace Conversion (Fox (2002: 67))の適用

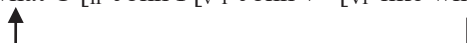
[who2 ... who1] → who [λx ... x ...]

この定義により、解釈が可能である構造はできる限り早くインターフェイスに転送されることが要求され、統語演算における作業領域の負担を軽減することに寄与する。かつ、統語はインターフェイスにおける解釈を提供するシステムとして最適な設計をもつという主張を踏まえると、SMTの下では妥当な分析であるといえる。

以上の仮定がどのように機能するかを示すため、通常の目的語 *wh* 疑問文の派生を考える。

(18) What does John like? (下線: 転送を妨げる要素 (cf. (15b-i, ii)))

- a. [_{v*P} John v* [_{VP} like what]]
- b. [_{CP(=C')} C [_{IP} John I [_{v*P} John v* [_{VP} like what]]]]
- c. [_{CP} what C [_{IP} John I [_{v*P} John v* [_{VP} like what]]]]



(18a)は v*P が派生した段階を示す。このとき、基底生成位置にある *wh* 句は C との素性一致

が完了しておらず、*wh* 素性の値が与えられていないため収束を妨げ、加えて1つのコピーしかないことにより、演算子としての解釈が保証されない。また、主語も I との一致により格素性の値が与えられていない。したがって、(18a)の構造はフェイズとならない。そのため、*wh* 句は *v*P* の末端に移動することなく、(18b)の構造になるまで元位置に留まり続ける。この段階では、*wh* 句が C との一致による値付与は受けているものの、移動が適用されておらず1つのコピーしか存在しないため、(18b)もフェイズとならない。したがって、(18c)のように *wh* 目的語が CP 指定部に移動することは PIC に違反せず、問題なく当該の文が派生される。重要なこととして、移動する要素は基本的に元位置に留まることにより、それを含む SO のフェイズ性を無効にするため、その後の移動が可能となるという点である。

3.3. 凍結効果と基準凍結

前節で提示した仮定より、移動の制約に説明が与えられることを示す。はじめに、凍結効果に抵触しない(1a)では、(18)と同様に *wh* 移動が問題なく適用される。簡略化した(19)に示すように、移動を適用される要素 *who* が移動直前の(19a)の段階で元位置に留まり続けている限り、それを含む構造はフェイズとならないため、(19b)に示す *wh* 移動は PIC によって妨げられることはない。

- (1) a. Who_i do you think that he will talk [to t_i]?
 b. * Who_i do you think that [to t_i] he will talk t_j? (cf. Müller (2010: 23))

- (19) a. [CP(=C') C [IP you I [v*P you v* [VP think [CP(Subordinate) that ... to who]]]]]
 b. [CP who C [IP you I [v*P you v* [VP think [CP(Subordinate) that ... to who]]]]]

一方、(20)に示す(1b)の派生においては、この語順を導出するための *wh* 移動が不可能である。(破線で囲まれた領域は転送により不可視になった領域を示す。)

- (20) a. [IP(Subordinate) he will [v*P he v*P [VP talk to who]]]
 b. [IP(Subordinate) to who [he will [v*P he v*P [VP talk to who]]]

 c. [CP(=C') C [IP you I [v*P you v* [VP think [CP(Subordinate) that [IP to who ... [VP who]]]]]]]
 d. [CP(=C') C [IP you I [v*P you v* [VP think [CP(Subordinate) that [IP to who ... [VP who]]]]]]]

(1a)と同様に、(20a)の IP とその内部のいかなる要素もフェイズとはならない。その後、*who* を含む *v*P* 内の PP が話題化によって移動し、(20b)の IP 構造が派生される。この段階で *who* の2つのコピーが構造に導入される。その後、派生が進み(20c)の主節の CP 構造が派生されると、*who* の *wh* 素性は主節の C により値を付与される。ここで、この構造はフェイズとなる条件を満たし、(20d)に示すように IP 転送を受けて不可視となる。したがって、*who* が主節の CP 指定部に移動することは PIC により禁じられる。重要な点をいいかえると、*wh* 句を含む要素はいったん移動を適用されると2つのコピーを生じ、C 主要部が併合し値付与が完了

すると直後に転送を受けるため、CP 指定部に移動することが不可能となる。

さらに、上記の分析により基準凍結にも説明を与えられる。関連する例を以下に再掲する。

- (2) a. Bill wonders [which book C_Q [she read]]
 b. * Which book C_Q does Bill wonder [t' C_Q [she read]]? (Rizzi (2006: 11))

不適格である(2b)の潜在的に可能である派生は、例えば(21)のようなものである。

- (21) a. [CP(Subordinate) C [IP she I [v*P she v [VP read which book]]]]
 b. [CP(Subordinate) which book C [IP she I [v*P she v [VP read which book]]]]
 c. [VP wonder [CP(Subordinate) which book C [IP she I [v*P she v [VP read which book]]]]]
-

(21a)の構造から、(21b)のように *which book* が CP 指定部に移動する。この *wh* 句は埋め込み節の C との一致による値付与が完了しており、かつ移動により 2 つのコピーとして構造に現れているため、主節動詞 *wonder* が併合して形成された(21c)の VP 構造はフェイズとなり、埋め込み節の CP 全体が転送を受ける。そのため、*which book* が主節へと移動することは不可能である。

また、主節の C と埋め込み節内 *wh* 句の一致が禁じられないと仮定した場合に可能となる(22)の派生においても、転送の問題が生じる。

- (22) a. [CP(Subordinate) C [IP she I [v*P she v [VP read which book]]]]
 b. [CP C [IP Bill I [v*P Bill v* [VP wonder [CP(Subordinate) C [IP she I [v*P she v [VP read which book]]]]]]]
 c. [CP which book C [IP Bill I [v*P Bill v* [VP wonder [CP(Subordinate) C [IP she I [v*P she v [VP read which book]]]]]]]

この派生において、*which book* が元位置に留まり続ける限り、(22a)に示す埋め込み節の CP も、(22b)に示す主節の CP もフェイズとならず、(22c)のように主節の CP 指定部に移動することが可能である。この段階で、既に *wh* 句の *wh* 素性の値が付与されており、移動により既に *wh* 句の 2 つのコピーが構造に導入されるため、演算子解釈に問題は生じない。しかし、この場合動詞 *wonder* の選択素性が満たされない。したがって、構造に値未付与素性が残る場合と同様の点でインターフェイスにおける解釈に問題が生じることにより、主節 VP 以下の構造は転送されないため、結果的にこの派生は破綻する。

4. 帰結

1 つ目の帰結は、2 節で提示した(9)における逆スコープ解釈について、統一的な説明を与えられるという点である。

(9) Everybody in some Italian city met John. (* every > some, some > every)

(cf. May (1977: 62))

ここで、QNP は *wh* 句と同様に移動により 2 つのコピーとして構造に現れる必要があるが、その上位のコピーの生起位置に関して、(23)のように *wh* 句より強い制限が課せられると仮定する。

(23) QNP は IP 付加位置、IP 指定部位置、vP 付加位置のいずれかに移動しなければならない。(cf. Aoun and Li (1993: 88))

具体的には、(9)は以下のように派生される。

- (24) a. [_{v*P} [_{QNP} everybody in some Italian city] v* [_{VP} meet John]]
b. [_{IP} [_{QNP} everybody in some Italian city]_i I [_{v*P} t_i v* [_{VP} meet John]]]
c. [_{IP} [some Italian city]_j [_{IP} [_{QNP} everybody in t_j]_i I [_{v*P} t_i v* [_{VP} meet John]]]

(24a)の v*P 構造が派生されたのち、主語 QNP が通常の主語移動と同様に IP 指定部に移動し、(24b)の IP 構造が派生される。主語 QNP 全体の主要部を担う *every* は、IP 指定部位置に移動することにより 2 つのコピーとして生じるため、演算子としての解釈が保証される。しかし、主語内部の *some Italian city* は 2 つのコピーとして現れてはいるものの、上位のコピーは IP 指定部・付加部または vP 付加部に位置していないため、それを含む構造はフェイズとならない。したがって、(24c)のように問題なく主語 QNP から抜き出され IP に付加することが可能である。

理論的帰結の 1 つとして、転送を逃れるためのフェイズ末端への移動はないという本稿の想定が、(25)の完全解釈の原理を遵守するという点で望ましいということが挙げられる。

(25) 完全解釈の原理(Full Interpretation) (cf. Chomsky (1995))

解釈にとって余剰的な要素が表示に存在してはならない。

解釈に関与しない表示上の要素が存在しえないことに加え、フェイズ末端への移動を駆動する素性として広く仮定される末端素性(edge feature)が不要になるため、本稿の想定は SMT の観点から好ましいといえる。

しかし、これが正しいとすると、例えば(26)に示す連続循環移動の証拠となるようなデータは経験的な問題となりうる。

- (26) a. [Which of the papers that he_i gave Mary_j] did every student_i _ ask her_j to read _ carefully.
b. * [Which of the papers that he_i gave Mary_j] did she_j _ ask every student_i to revise _ ?
(Fox (1998: 157))

(26a)では、下線に示す v^*P の末端位置を經由して *wh* 句が移動しており再構築が可能であるとすると、*wh* 句内部の *he* は主語の *every student* に束縛される点、また *Mary* が代名詞 *her* に束縛されないという点において、束縛関係の構築に問題を生じない。一方で、(26b)ではそのような適格な再構築位置がないために容認されないと説明される。検討の余地は残すものの、この点については、解釈に寄与する場合は移動が可能であると説明する。

また、Chomsky (2021)によれば特有の範疇をフェイズと認めることは Language Specific Condition すなわち言語固有の要因に関わる。一方、インターフェイスでの解釈可能性のみに基づく定義は、言語固有の特性以外からフェイズを決定することを可能にする。

しかし、限りなく長距離の移動が原理的には制限されないということは併合における長距離の探査を要することを意味し、本稿の分析にとって問題となりうる。ここでは、Goto and Ishii (2024)による提案(27)を採用することによって、この問題が解決される可能性を示唆する。

(27) Minimal Search-free Hypothesis (cf. Goto and Ishii (2024: 125))

併合における探査は、最小探査(cf. Chomsky (2021))によって制限されない。

最小探査は、SMT の達成が試みられる中で提唱された、探査経路を最小にすることを要求する制約を伴う探査プロセスである。自由併合の枠組み(Chomsky (2008))のもと、併合操作は特定の要素に適用されるわけではないという想定から、(27)の仮説の下では、併合は PIC, Binarity に従う限り自由に適用される。この提案に従えば、長距離の探査は少なくとも言語の中核システムにおいては禁じられていないことになり、本稿の想定は問題とならないと考える。そして、長距離の探査が排除されるのは、転送領域が広がるが故の解釈への負担という要因が関わっている可能性を示唆しておく (Chomsky (2013: 41)も参照のこと)。

5. 結語

本稿では、2 種類の移動の制約、すなわち凍結効果と基準凍結は PIC から導かれると提案した。また、PIC に関連して、解釈可能性に基づいて転送領域を決定する定義を採用し、転送領域となる統語体が解釈に問題を生じない場合はすぐに転送を適用されると提案した。そして、これらの一連の仮定が、望ましい経験的、理論的帰結を導くことを示した。

* 本稿は、2024 年 11 月に行われた日本英語学会第 42 回大会における研究発表の内容に修正を加えたものである。発表、本稿の執筆にあたり、田中智之先生、および名古屋大学英語学談話会の先生方より有益なコメントをいただいた。また、発表の際にいただいた質問やコメントは本稿の執筆において大変な助けとなった。この場をお借りしお礼申し上げます。なお、本稿の一切の誤り、不備は著者の責任である。

参考文献

- Abels, Klaus (2001) *Successive Cyclicity, Anti-Locality, and Adposition Stranding*, Doctoral dissertation, University of Connecticut.
- Aoun, Joseph E. and Yen-Huy Audrey Li (1993) *Syntax of Scope*, MIT Press, Cambridge, MA.
- Bošković, Željko (2018) "On Movement out of Moved Elements, Labels, and Phases," *Linguistic*

- Inquiry* 49, 247-282.
- Cecchetto, Carlo (2004) "Explaining the Locality Conditions of QR: Consequences for the Theory of Phases," *Natural Language Semantics* 12, 345-397.
- Chomsky, Noam (1995) *The Minimalist Program*, MIT Press, Cambridge, MA.
- Chomsky, Noam (2000) "Minimalist Inquiries: The Framework," *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89-155, MIT Press, Cambridge, MA.
- Chomsky, Noam (2008) "On Phases," *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 291-231, MIT Press, Cambridge, MA.
- Chomsky, Noam (2013) "Problems of Projection," *Lingua* 130, 33-49.
- Chomsky, Noam (2021) "Minimalism: Where Are We Now, and Where Can we Hope to Go," *Gengo Kenkyu (Journal of the Linguistic Society of Japan)*, 160, 1-41.
- Culicover, Peter, and Kenneth Wexler (1977) "Some Syntactic Implications of a Theory of Language Learnability," *Formal Syntax*, ed. by Peter Culicover, Thomas Wasow, and Adrian Akmajian, 7-60, Academic Press, New York.
- Fox, Danny (1998) *Economy and Semantic Interpretation*, Doctoral dissertation, MIT.
- Fox, Danny (2002) "Antecedent-Constrained Deletion and the Copy Theory of Movement," *Linguistic Inquiry* 33, 63-96.
- Goto, Nobu and Toru Ishii (2024) "Seeking an Optimal Design of Search and Merge: Its Consequences and Challenges," *The Linguistic Review* 41, 119-152.
- Grano, Thomas and Howard Lasnik (2018) "How to Neutralize a Finite Clause Boundary: Phase Theory and the Grammar of Bound Pronouns," *Linguistic Inquiry* 49, 465-499.
- Grimshaw, Jane B. (1993) *Minimal Projection Heads and Optimality*, Rutgers University, New Brunswick, NJ.
- Hinzen, Wolfram (2006) *Mind Design and Minimal Syntax*, Oxford University Press, Oxford.
- Hiraiwa, Ken (2005) *Dimensions of Symmetry in Syntax: Agreement and Clausal Architecture*, Doctoral dissertation, MIT.
- Matushansky, Ora (2003) "DPs and Phase Theory," *Handout Presented at UiLOTS*, January 30, 2003.
- May, Robert (1977) *The Grammar of Quantification*, Doctoral dissertation, MIT.
- Müller, Gereon (2010) "On Deriving CED Effects from the PIC," *Linguistic Inquiry* 41, 35-82.
- Narita, Hiroki (2011) *Phasing in Full Interpretation*, Doctoral dissertation, Harvard University.
- Rizzi, Luigi (1997) *Parameter and Functional Heads*, Oxford University Press, Oxford.
- Rizzi, Luigi (2006) "On the Form of Chains: Criterial Positions and ECP Effects," *Wh-Movement: Moving on*, ed. by Lisa L. -S. Cheng and Norbert Corver, 97-133, MIT Press, Cambridge, MA.
- Ross, John R. (1967) *Constraints on Variables in Syntax*, Doctoral dissertation, MIT.
- Svenonius, Peter (2004) "On the Edge," *Peripheries: Syntactic Edges and Their Effects*, ed. by David Adger, Cécile de Cat, and George Tsulas, 261-287, Kluwer Academic Publishers, Dordrecht.
- Takahashi, Daiko (1994) *Minimality of Movement*, Doctoral dissertation, University of Connecticut.

The Historical Development of the Noun-*after*-Noun Expression*

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Keywords : idiomatization, Noun-*after*-Noun expression, semantic abstraction, structural change, tripartite parallel architecture

1. Introduction

This paper is concerned with the historical development of the Noun-*after*-Noun expression (the N-*after*-N, henceforth) as exemplified in (1).¹

- (1) a. For four long years she has been training hard *day after day* with just one goal in mind.
(Collins Wordbanks Online / 505)
- b. *Car after car* went by without stopping. (Matsuyama (2005: 170))

As illustrated in (1), the N-*after*-N has two kinds of use: the adverbial use and the nominal use. In addition, nouns occurring in the expression should be countable nouns in a bare singular form, as shown in (2).

- (2) * water after water, * a day after (a) day, * books after books
(adapted from Jackendoff (2008: 9))

Although several previous studies discuss the properties of the N-*after*-N in Present-day English, little attention has been paid to the diachronic change of the expression. Therefore, the aim of this paper is to clarify whether these properties were also found in the N-*after*-N in early English through a corpus-based investigation and to provide an account for the historical development of the expression.

The organization of this paper is as follows. Section 2 overviews the observation on the N-*after*-N by Matsuyama (2005), who makes a similar attempt to this paper. Section 3 shows the results of my investigation and points out problems with Matsuyama's discussion. Section 4 proposes an analysis of the historical development of the N-*after*-N. Section 5 offers concluding remarks.

2. An Influential Previous Study: Matsuyama (2005)

Matsuyama (2005) attempts to clarify when the N-*after*-N was established on the basis of the data from OED, which is summarized in Table 1.

Table 1: The First Instance of the N-*after*-N in OED (cf. Matsuyama (2005:178))

Century	12th	13th	14th	15th	16th	17th	18th	19th
Token	1	0	0	0	1	3	1	9

Based on Table 1, Matsuyama concludes that the N-*after*-N was established in the 17th century. This result leads him to conduct a further investigation of the expression in the 17th century and later. He uses his original corpora and shows the data summarized in Table 2.

Table 2: The Tokens of the N-*after*-N (cf. Matsuyama (2005: 179))

	17th	18th	19th	20th
Adverbial Use	9	4	18	17
Nominal Use	5	7	7	15
Total	14	11	25	32

Considering the data shown in Table 2, Matsuyama argues that the adverbial use was established in the 17th century while the nominal use was established in the 20th century. Moreover, Table 2 shows that the frequency of the N-*after*-N decreased in the 18th century, but increased in the 19th century. Although Matsuyama sketches out the historical development of the N-*after*-N summarized in (3), he does not investigate the expression before the 17th century quantitatively. Then, the following section provides the results of my corpus-based investigation which covers all the historical periods of English.

- (3)
 - a. The adverbial use was established in the 17th century.
 - b. The frequency decreased in the 18th century.
 - c. The frequency increased in the 19th century.
 - d. The nominal use was established in the 20th century.

3. A Corpus-based Investigation

First of all, in order to clarify the developmental path of the N-*after*-N, this paper makes an investigation on the basis of the following corpora: YCOE, PPCME2, PPCEME and PPCMBE2. The result is shown in Table 3.

Table 3: The Tokens of the N-*after*-N in YCOE, PPCME2, PPCEME and PPCMBE2

	EOE	LOE	M1	M2	M3	M4
Adverbial Use	0	0	1	0	1	0
Nominal Use	0	0	2	0	1	0
Ambiguous	0	0	0	0	1	0
Total	0	0	3	0	3	0
	EMod1	EMod2	EMod3	LMod1	LMod2	LMod3
Adverbial Use	0	4	1	0	8	14
Nominal Use	0	0	0	1	8	14
Ambiguous	0	0	0	0	1	0

Total	0	4	1	1	17	28
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EOE (-950), LOE (950-1150), M1 (1150-1250), M2 (1250-1350), M3 (1350-1420), M4 (1420-1500), EMod1 (1500-1570), EMod2 (1570-1640), EMod3 (1640-1710), LMod1 (1710-1780), LMod2 (1780-1850), LMod3 (1850-1920)

Unfortunately, there are very few instances from M4 to LMod1 (i.e. from the 15th century to the 18th century). Given Matsuyama's (2005) observation overviewed in Section 2, such a gap in the relevant periods is highly implausible. Therefore, this paper makes a further investigation of the *N-after-N* after the 15th century on the basis of EEBOV3 and COHA. The result is shown in Table 4, followed by some examples.

Table 4: The Tokens of the *N-after-N* in EEBOV3 (1400s-1700s) and COHA (1800s)

	1400s	1500s	1600s	1700s	1800s
Adverbial Use	0	38	1416	24	2844
Nominal Use	1	102	928	18	2085
Ambiguous	2	10	148	2	156
Total	3	150	2492	44	5085

(4) The 1400s (Nominal Use)

... but yf they wold drynke Than cam *bolle after bolle* and ...
 but if they would drink then came *bowll after bowll* and
 "... but if they would drink then *bowll after bowll* is brought and ...” (EEBOV3 / A03319)

(5) The 1500s (Nominal Use)

... when our seruant shal haue dispatched *labour after labour*, ...
 when our servant shall have dispatched *labor after labor*
 "... when our servant shall have dispatched *labor after labor*, ...” (EEBOV3 / A04901)

(6) The 1600s (Adverbial Use)

... that others shall *Summer after Summer* arise from the same root. (EEBOV3 / A26921)

(7) The 1700s (Adverbial Use)

Visible Churches have died *Generation after Generation*. (EEBOV3 / A48445)

(8) The 1800s (Nominal Use)

Arrow after arrow had been discharged at the inhuman assailant, but ... (COHA)

According to Table 4, the *N-after-N* is observed from the 1400s to the 1800s (i.e. from the 15th century to the 19th century). It also indicates that both the adverbial use and the nominal use are observed productively enough to consider that they emerged in the 1500s (i.e. the 16th century). In addition, the frequency of the *N-after-N* per 1,000,000 words has consistently increased since the 16th century, with a dramatic increase in the 17th century and the 19th century, as shown in Table 5.

Table 5: The Frequency of the *N-after-N* per 1,000,000 Words in EEBOV3 and COHA

1500s	1600s	1700s	1800s
-------	-------	-------	-------

0.84	2.50	2.53	39.34
------	------	------	-------

Turning to the properties of nouns occurring in the N-*after*-N, they could involve determiners and could be uncountable or plural from the 16th century to the 17th century, as illustrated in (9).²

- (9) a. And here the judgement is given upon a default after a default, whereas ...
 (EEBOV3 / A61918, underlines are mine)
- b. ... & washe the cuppe agayne & agayne, with nettles, with salte, with ashes *water after water*, ...
 (EEBOV3 / A14612)
- c. By their succeeding one another, ...: as for example, *men after men*, *beastes after beastes*, *corne after corne*: ...
 (EEBOV3 / A09819)

It should be noted that the N-*after*-N with plural nouns as in (9c) is found even in the 19th century, as shown in (10).

- (10) Why were *ages after ages* suffered to pass away, and ... (COHA)

However, the percentage of the N-*after*-N with plural nouns decreased to less than 2.0 percent of the total in the 18th century, as shown in Table 6 and Table 7.

Table 6: The Percentage of the N-*after*-N with Plural Nouns in EEBOV3

	1500s		1600s		1700s	
Plural Form Nouns	9	6.0%	73	2.9%	0	0%
Total	150	100%	2492	100%	44	100%

Table 7: The Percentage of the N-*after*-N with Plural Nouns in COHA

	1820-1829		1830-1839		1840-1849	
Plural Form Nouns	5	1.6%	5	1.1%	1	0.02%
Total	313	100%	460	100%	540	100%

Assuming the criterion developed by Walkden (2013) that a certain pattern is ungrammatical if its percentage is less than 2.0 percent, it will be concluded that the N-*after*-N could no longer take plural nouns after the 18th century. Hence, the lexical properties of the N-*after*-N in Present-day English reviewed in section 1 are judged to have been established in the 18th century.

In summary, the above corpus-based investigation has shown that the N-*after*-N emerged in the 16th century and was established in the 18th century. In addition, it has also been clarified that its frequency increased especially in the 17th century and the 19th century. As is obvious, these observations differ from those of Matsuyama (2005). The following section proposes a theoretical account for the historical development of the N-*after*-N revealed by my investigation.

4. Analysis

On the basis of the data summarized in Table 8 and Table 9, this paper concludes that the increase in the frequency of the N-*after*-N is due to the increase in the adverbial use, especially with temporal class nouns.

4.3. The Establishment of the N-*after*-N in the 18th Century

Finally, this section deals with the establishment of the N-*after*-N in the 18th century. In addition, this paper suggests that it correlates with the increase in the frequency in the 19th century. Specifically, it is proposed that the completion of semantic abstraction and idiomatization made the N-*after*-N an idiomatic expression in the 18th century. As a result of the establishment of the N-*after*-N, the original meaning SEQUENCE disappeared and the expression became frequent in the 19th century. The proposal is summarized in (13).

(13) - The 15th Century	The N- <i>after</i> -N: SEQUENCE ↓ Semantic Abstraction of <i>after</i>
The 16-17th Century	The N- <i>after</i> -N: SEQUENCE and SUCCESSION ↓ Completion of Semantic Abstraction + Idiomatization
The 18th Century -	The N- <i>after</i> -N: SUCCESSION

According to Akiyama (2004, 2014), idiomatization typically involves the omission of determiners and the fixing of lexical items. This accounts for the historical change of the N-*after*-N shown in Section 3, that is, nouns occurring in the expression became restricted to countable nouns in a bare singular form in the 18th century. Given this, it would be conjectured that idiomatization also had an effect on the internal structure of the N-*after*-N, a topic discussed in the remainder of this section.

4.3.1. The Internal Structure of the N-*after*-N in the 18th Century and Later

This paper adapts Matsuyama's (2004) analysis of the internal structure of the N-*after*-N in Present-day English. He observes that the N-*after*-N in Present-day English is semantically close to a bare plural but is syntactically singular, as shown in (14) and (15).

- (14) a. ROSALIND had been disappointed in *man after man* as individuals, but she had great faith in man as a sex. (F. S. Fitzgerald, *This Side of Paradise*, 18: Matsuyama (2004: 64))
 b. But I tried *window after window* on the terrace without result. The heavy green sunshutters were down over each, and when I broke the hinges of one there was a long bar within to hold it firm. (J. Buchan, *Mr. Standfast*, 235: Matsuyama (2004: 64))
- (15) a. His head was whirring and *picture after picture* was forming and blurring and melting before his eyes ...
 b. *Study after study* reveals the dangers of lightly trafficked streets near home for young children. (Matsuyama (2004: 62), underlines are mine)

In order to give a principled account for this mismatch, Matsuyama proposes an analysis based on the

This final subsection discusses the internal structure of the N-*after*-N from the 16th century to the 17th century. This paper proposes that the semantic and syntactic structures are as in (19).

(19) a. Semantic Structure

SEQUENCE: [X [X]]_a [Place AFTER_Y [X]]_b]_c

SUCCESSION: [X [X]]_a AND [X]_b]_c X =[EVENT] or [THING], Y = Spatial, Temp

b. Syntactic Structure: [_α DP_a [PP P-*after* DP_b]]_c → α = DP / PP

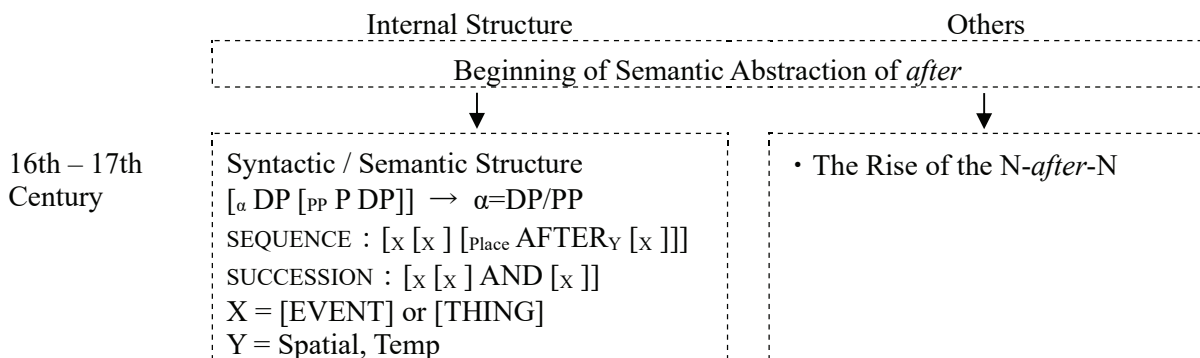
In (19a), the two semantic structures corresponding to the original and idiomatic meanings are assumed because the N-*after*-N from the 16th century to the 17th century expressed both SEQUENCE and SUCCESSION. Moreover, X is not restricted by [±b] or [±i] and hence nouns can be uncountable or plural in the period. They can also take determiners because the syntactic structure in (19b) involves DP. The transition of the internal structure from (19) to (18) captures the historical change of the N-*after*-N (i.e. the restriction to singular countable nouns and the loss of determiners).

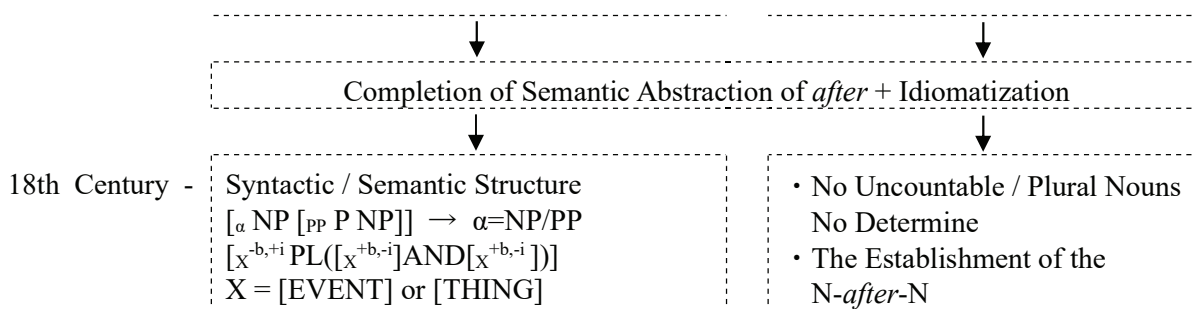
5. Concluding Remarks

This paper has dealt with the historical development of the N-*after*-N. First, a corpus-based investigation was made in order to verify the validity of the observation of Matsuyama (2005). As a result, it was clarified that the N-*after*-N emerged in the 16th century and its frequency increased especially in the 17th century and the 19th century. In addition, it was concluded that the properties of the N-*after*-N observed in Present-day English were acquired in the 18th century, leading to the establishment of the N-*after*-N.

Then, a theoretical account for these historical changes was provided. Specifically, the preposition *after* underwent semantic abstraction, as a result of which the N-*after*-N emerged with the idiomatic meaning SUCCESSION in the 16th century. Subsequently, the adverbial use became frequent along with the increase of the occurrence of the temporal class nouns in the 17th century. As a consequence, the overall frequency of the N-*after*-N increased in the period. Eventually, the N-*after*-N underwent idiomatization in addition to the completion of semantic abstraction, and therefore the N-*after*-N was established in the 18th century. Due to its establishment, the frequency increased in the 19th century. The historical development proposed in this paper is summarized in Figure 2.

Figure 2: The Historical Development of the N-*after*-N





* This is the revised version of the paper presented at the 42nd Conference of the English Linguistic Society of Japan. I am greatly indebted to Tomoyuki Tanaka for the progress of this study. I am also grateful to the audience at the conference and all the members of Department of English Linguistics, Nagoya University for their valuable comments and suggestions. All remaining errors and inadequacies are my own.

NOTES

¹ In this paper, the *N-after-N* is italicized.

² Matsuyama (2005) also points out that examples with determiners or plural nouns were found in the 17th century, as shown in (i) and (ii), respectively.

(i) Antichirst then shall be brought to ruin gradually; that is, by degrees: *A part after a part*; here a fenced city, and there a high tower, even until she is made to lie even with the ground.

(Bunyan (1692): Matsuyama (2005: 181))

(ii) ... God doth not only once or twice, but until these transgressors become old; his patience is thus extended, *years after years*, that we might learn of him to do well.

(Bunyan (1684): Matsuyama (2005: 188))

³ Matsuyama (2005) proposes that the semantic bleaching of *after* is a possible factor of the increase in the frequency of the *N-after-N* in the 19th century (in his observation).

⁴ The NP status of nouns in the *N-after-N* is supported by the fact that they can be modified by adjectives, as exemplified in (i). Based on the proposal in Bernstein (2001), this paper assumes that adjectives modifying nouns are located in Spec, NP.

(i) day after lousy day

(Jackendoff (2008: 9), underline is mine)

REFERENCES

- Akimoto, Minoji (2004) "Bunpouka (Grammaticalization)," *Corpus ni Motozuku Gengo Kenkyu: Bunpouka wo Chusin ni* (Linguistic Studies Based on Corpora), ed. by Minoji Akimoto, Kozue Ogata, Mitsuki Endo, Yasuhiro Kondo and Elizabeth C. Traugott, 1-38, Hitsuji Shobo, Tokyo.
- Akimoto, Minoji (2014) *Zouho Bunpouka to Idiomuka* (Grammaticalization and Idiomatization, Enlarged Edition), Hitsuji Shobo, Tokyo.
- Bernstein, Judy B. (2001) "The DP Hypothesis: Identifying Clausal Properties in the Nominal Domain," *The Handbook of Contemporary Syntactic Theory*, ed. by Mark Baltin and Chris Collins, 536-561, Blackwell Publishers, Oxford.
- Chomsky, Noam (2013) "Problems of Projection," *Lingua* 130, 33-49.

- Chomsky, Noam (2015) "Problems of Projection: Extensions," *Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti*, ed. by Elisa Di Domenico, Cornelia Hamann and Simona Matteini, 3-16, John Benjamins, Amsterdam.
- Hopper, Paul J. and Elizabeth C. Traugott (1993) *Grammaticalization*, Cambridge University Press, Cambridge, MA.
- Jackendoff, Ray (1997) *The Architecture of the Language Faculty*, MIT Press, Cambridge, MA.
- Jackendoff, Ray (2008) "Construction after Construction and Its Theoretical Challenges," *Language* 84, 8-28.
- Matsuyama, Tetsuya (2004) "The N after N Construction: A Constructional Idiom," *English Linguistics* 21, 55-84.
- Matsuyama, Tetsuya (2005) "NPN Koubun no Tsujiteki Kyojiteki Kousatsu (Diachronic and Synchronic Considerations on NPN Constructions)," *Bunpouka: Aratana Tenkai* (Grammaticalization: A New Development) ed. by Minoji Akimoto and Michio Hosaka, 169-191, Eichosya, Tokyo.
- Mizuguchi, Manabu (2019) "Ambiguous Labeling and Full Interpretation," *Studia Linguistica* 73, 563-603.
- Walkden, George (2013) "Null Argument in Old English," *Language Variation and Change* 25, 155-178.

CORPORA

- Collins WordBanks Online*. Available at <https://wordbanks.harpercollins.co.uk/>.
- Davies, Mark (2010-) *The Copus of Historical American English* (COHA): 400 million words, 1810-2009. Available online at <https://www.english-corpora.org/coha/>.
- Early English Books Online V3* (EEBOV3). Available online at <https://cqpweb.lancs.ac.uk/eebov3/>.
- Kroch, Anthony, Beatrice Santorini and Lauren Delfs (2004) *The Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME), University of Pennsylvania, Philadelphia.
- Kroch, Anthony, Beatrice Santorini and Ariel Diertani (2016) *The Penn Parsed Corpus of Modern British English*, Second Edition (PPCMBE2), University of Pennsylvania, Philadelphia.
- Kroch, Anthony and Ann Taylor (2000) *The Penn-Helsinki Parsed Corpus of Middle English*, Second Edition (PPCME2), University of Pennsylvania, Philadelphia.
- Taylor, Ann, Anthony Warner, Susan Pintzuk and Frank Beths (2003) *The York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE), University of York, York.

DICTIONARY

- The Oxford English Dictionary*, 2nd ed. on CD-ROM (OED), Oxford University Press.

不変化詞 *off* を伴う句動詞構文の意味と汎用性*
(The Meanings and Versatility of V + *off* Phrasal Verbs)

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1. はじめに

不変化詞 *off* を伴う句動詞構文は、目的語の事物からの影響を「回避」することを示し、生起文脈に応じて、「軽視（一蹴）」、「節制」、「除去」といった様々な意味に解釈される。また近年では、*round off a victory* や *reel off wins* といった「(円滑な) 勝利」を意味する新規的な表現も広く使用されるようになってきている。本稿は、コーパスを用いた実証研究により、主要部の動詞のみでは通常使用できない、不変化詞 *off* を伴う句動詞構文の意味と汎用性の仕組みについて考察する。なお、本研究で示すデータは 2024 年 2 月 29 日から 3 月 28 日の間に、NOW Corpus の英語圏 (US, GB, AU, NZ, CA, IE) から抽出されたデータに基づく。

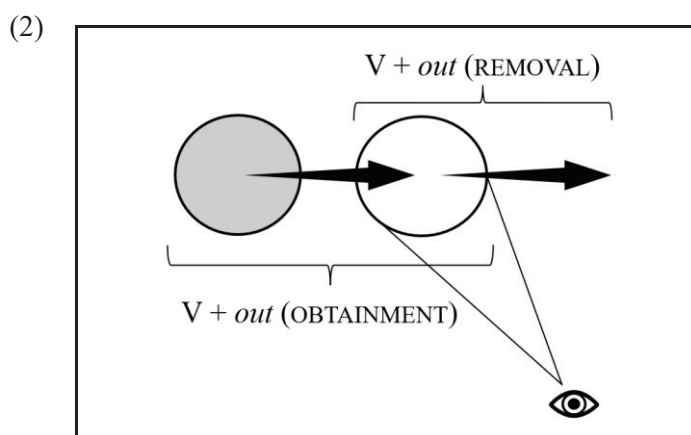
2. *Off* を伴って生じる句動詞の様々な意味

Lindner (1982) によると、句動詞に多義性が生じるのは、人の意識や視界といった認知領域 (LANDMARK) に事物・事象 (TRAJECTOR) が入り込む、あるいはその認知領域からそれが見えなくなる、いずれの場合でも同じ不変化詞が用いられるためである。たとえば、未知の *solution* が話し手の意識の中にあられる (1a)、あるいは、すでに認識されている *wrinkle* が視界から見えなくなる事象でも (1b)、主要部の動詞が表す行為によって生じる経路 (PATH) をいずれも不変化詞 *out* が示すため、「発見」および「除去」の解釈が生じる。

(1) a. I **figured out** a solution to the problem.

b. He **ironed out** the wrinkle in his shirt. (Lindner 1982: 308-311)

(2) は、V + *out* のイメージスキーマであり、「除去」および「獲得」の解釈がどのように生じるかを示す。TRAJECTOR は、(1a) における *solution*、(1b) における *wrinkle* にあたり、灰色の円で表される。この TRAJECTOR が視点 [VANTAGE POINT] からの投射される LANDMARK の中へと入りこむ事象が「獲得」、LANDMARK から見えなくなる事象が「除去」と解釈される。



ただ、不変化詞 *off* を伴う句動詞構文では、主要部の動詞が表す行為によって示される経路の解釈に困難が伴う。たとえば、*V + off* 句動詞構文は「除去 (3a)」、「軽視 (一蹴) (3b)」、「(円滑な) 勝利の獲得 (3c)」など様々な意味を表すが、眠る、肩をすくめる、そして (曲線を描くように) 動き回る、といった行為が、どのようにアルコールの除去や批判の回避、あるいは勝利の獲得へとつながるのか、不変化詞 *off* によって表わされる経路がはっきりとしない。

- (3) a. ...he needed a rest to **{sleep off/ *sleep} the alcohol...** (IE 2014/ NOW Corpus)
 b. Trump **{shrugged off/ *shrug} the idea** that supporters tried to discredit her and push her out, saying: “I really don't know her...” (US 2019/ NOW Corpus)
 c. Messi **{rounded off/ *round} the victory** when he pounced on a deflected pass before lifting the ball over Ospina. (NZ 2016/ NOW Corpus)

本稿では、意味的なつながりが認められる他の句動詞構文と比較することにより、(3a-c) のような *off* を伴う句動詞構文特有の意味と汎用性の仕組みについて検討する。¹

3. *Off* を伴う句動詞構文の意味と汎用性

Off を伴う句動詞構文は、目的語の事物に対する非直接的な手段を表す動詞をしばしば主要部に伴い、その影響を「回避」することを意味する。たとえば、摂取したアルコールや蓄積したストレスなどの影響を軽減する「除去」(3a)、周囲の言動や非難を取り合わない「軽視 (一蹴)」(3b)、*cigarettes* や *alcohol* といった欲求を遠ざける「節制」(4)、などの意味は、「回避」の意味から派生していると考えられる。

- (4) ...he has **sworn off cigarettes** since his ordeal,... (NZ 2018/ NOW Corpus)

3.1. *V + out* 句動詞表現との対照的な意味関係

Iron (アイロンをかける) (1b) や *strip, wipe* など、*V + out* 句動詞構文の主要部が、しばしば物理的な除去 (特に清掃) 行為を示す動詞を伴うのに対し (岩宮 2024: 150)、*off* を伴う句動詞は *sleep, shrug, swear* など、いずれも事物に直接的な影響を与えない動作を表す動詞が用いられている。それぞれの句動詞構文は、実際の言語使用の用途に合わせて、意味を分担し

ながら発達していると考えられ、たとえば、(5a) の *strip out* によるアルコールの「除去」が物理的な「除去」を示す一方、(3a) の *sleep off* による「除去」は、時間をおいてアルコールが抜けるのを待つという、非直接的な手段による「除去」を表す。また、(5b) の *wipe out the idea* が、直接的な武力弾圧による *idea* の「除去」を示すのに対し、(3b) の *shrug off* を用いた表現では、話を逸し、適当にあしらうことで批判を受け流す。

(5) a. Non-alcoholic beer is made by brewing a beer as normal and then heating it to **strip out the alcohol**. (NZ 2020/ NOW Corpus)

b. ...President Vladimir Putin of trying to “**wipe out the idea** of even being a Ukrainian.” (US 2022/ NOW Corpus)

一方で、(3c) の *round off (the) victory*、(6) の *reel off wins* のような表現は、*clean up*, *dry out*, *close down* など、他の不変化詞を伴い「遂行 (COMPLETION)」を表す句動詞よりも (Collins Cobuild Phrasal Verbs Dictionary 2020: 507-525)、「円滑な」行為遂行を意味する。

(6) Frances Tiafoe appreciates the support from his famous friends now that he has reached tennis’s highest ranks and **reels off wins** with ease. (US 2023/ NOW Corpus)

たとえば、(3c) の *round off (the) victory* は目前にある勝利を確実に (円滑に) 「拭いとる」ことを意味するが、この意味は (7a) の家屋や家具の「(*edge* や *corner*) を (削りとることで) 滑らかに仕上げる」といった用例から派生したものと考えられる (ここでの *edge* はテントポールの角)。一方で、*reel off* は、紡績機を使用して「(*skein* や *yarn*) を紡ぎ出す」という意味であったが、20 世紀初頭には、映画などでフィルムリールを回転させ「(とめどなく滑らかに) 音声を紡ぎ出す」という意味でも用いられるようになる (7b)。

(7) a. If you prefer to have them square, **round off the edges**, or they will be badly bruised upon handling. (1877/ COHA)

b. A hand moved across in front of it would give a purring sound, and a glimpse out of a window in daylight would sound like a cinematograph **reeling off a film**. (1909/ COHA)

支障なく勝利を「確実なものにする」ことを意味する (3c) や (6) のような V + *off* 句動詞表現は、*scratch out*, *carve out*, *gut out* など、労力を伴う「勝利の獲得」を意味する V + *out* 句動詞表現とは意味が異なる。そのため、(8) の文脈で *reel off* を *scratch out* に置き換えた表現は容認されない。

(8) ...he has reached tennis's highest ranks and {**reels off/ ?? scratches out**} wins with ease. ([6] の一部編集)

3.2. *Off* を伴う句動詞構文の意味記述と生産性

目的語の事物に対し、直接的な影響を与えない動作動詞を主要部に伴い、様々な意味を派生させる V + *off* 句動詞構文の意味と形式は、Goldberg (1995, 2006) の構文文法の枠組みに従い、(9a-b) のように表すことができる（それぞれの表現で高い頻度であられる目的語とその用例数を [10] に記す）。

(9) [NP₁ V *off* NP₂/ NP₁ V NP₂ *off*]

↔ a. [X₁ evades Y₂ smoothly by indirect actions represented by V-ing]

[DOWNPLAYING] [NP₁: AGENT/ NP₂: PATIENT (*criticism, allegation, threat...* etc.)]

[REFRAINMENT (REMOVAL)] [NP₁: AGENT/NP₂: PATIENT (*ideas, indulgences, stress...* etc.)]

↔ b. [X₁ secures Y₂ smoothly by finishing actions represented by V-ing]

[SECURING] [NP₁: AGENT/ NP₂: PATIENT (*wins, victories, titles...* etc.)]

(10) [DOWNPLAYING] (=9a)

	X= <i>criticism</i>	X= <i>idea</i>
<i>brush off</i> X	656 (3)/ *3	187 (4)
<i>shrug off</i> X	448 (7)	124/ *2
<i>laugh off</i> X	87	251 (10)/ *1
<i>wave off</i> X	33	49 (1)

[REFRAINMENT (REMOVAL)] (=9a)

	X= <i>alcohol/ booze</i>	X= <i>stress</i>
<i>swear off</i> X	121	—
<i>sleep off</i> X	26 (6)	2 (1)
<i>wean off</i> X	4	—
<i>detox off</i> X	2	—
<i>shrug off</i> X	1	14
<i>laugh off</i> X	—	6
<i>walk off</i> X	1	5
<i>brush off</i> X	—	4
<i>dance off</i> X	—	2
<i>ride off</i> X	—	1

[SECURING] (=9b)

	X= <i>win/ victory</i>
<i>reel off</i> X	475
<i>round off</i> X	187
<i>polish off</i> X	49

(10) において丸括弧で記された値は目的語が主要部の動詞と不変化詞によって挟まれている表現の用例数(たとえば *shrug the idea off* など)であり、* が付加された値は *off, out, from, aside* などの不変化詞を伴わずに生じている用例数である (NOW Corpus を使用し、<[V] [X]>, <[V] * [X]>, <[V] off [X]>, <[V] off* [X]> [V=主要部の動詞/ X=特定の名詞] の4通りの検索方法で、不変化詞を伴わなければ通常容認されない V + off の用例を収集することによって作成)。

(9a, b) の表現は、共通する形式と動詞の共起により異なる意味を派生させる多義リンク型の構文であるが (坪井・早瀬 2019: 133)、(10) が示すように汎用性が高く、かつ生産的である。なお、Capelle (2006: 20) によると、主要部の動詞と不変化詞で表される活動から連想されやすい事物・事象 (目的語) ほど、目的語の右側に不変化詞が置かれやすい。この捉え方に従えば、²(9a-b) のような句動詞特有の目的語が生じる表現では、動詞と不変化詞を組み合わせた意味から目的語の推測が困難なため、そのほとんどの用例で左側に不変化詞が置かれることになる (10)。

4. 対照的な意味をもつ2つの句動詞構文の発達

本節では、通時的コーパスのデータを用いて、(9a-b) の句動詞構文の意味がどのように発達し、現代に至ったかを検討する。より具体的には、4.1.では威嚇や防備といった抑止力による「回避」を表す V + off 表現、ならびに「自然消滅」を表す自動詞タイプの V + off 表現の意味が、それぞれ (9a) の意味構造の形成に寄与したことを示す。一方で、4.2.では、「労力を伴う勝利」を意味する V + out 表現が異形構文として、*win* や *victory* などを目的語の項とする (9b) の構文の形成を動機付けたことを裏付ける。

4.1. 「回避」の意味の発達

(9a) に挙げられる表現は、*dismiss* を表した *laugh off* 以外は比較的新しく、1800年代半ばから1900年代後半にかけて *threat, alcohol, stress, drug* など様々な事物からの影響を「回避」する事象を表すため、構文に適合可能な自動詞を取捨選択しながら発達している。

ただ、(9a) の句動詞表現が用いられる以前にも、直接的な方法をあえてとらずに、行為対象の影響を逃れることを意味した V + off 表現が存在し、現代英語においても依然用いられていることには留意が必要である。たとえば、(11a) の *frighten off, scare off, warn off* は、物理的な力を行使する *fight off* や *beat off* といった句動詞と異なり、威嚇や警告といった心理的な抑止手段を用い、対象を遠ざけることを意味する。また、戦争や病気、飢饉など「(深刻な危機状態) に対して備える」ことを表す (11b) の *stave off* や *ward off, fend off* といった表現も、抑止力による回避を意味し、(9a) のプロトタイプの表現とみなすことができる。³

(11) a. To **frighten off the beast**, people also set off firecrackers and bang loud gongs,...

(CA 2016/ NOW Corpus)

b. She brought some fruit on the journey to **stave off hunger**.

(LDOCE)

いずれにしても、*scare off* や *fend off* といった句動詞は、17世紀半ばにはすでに用いられており、こうした既存の句動詞表現が *shrug* や *wave* といった、他者に何の影響も与えない動作を

表す自動詞を主要部に伴うことによって、(9a) の構文的意味が形成されたと考えられる。また、戦後物理的な攻撃は、多くの人々にとってもはや脅威とは想定されないものとなり、ことばによる攻撃が防ぐべき主な脅威として認識されるようになったことも、*shrug off* のような句動詞表現が広く使用されるようになる要因となった。すなわち、かつて盾や防壁で防いでいた物理的な攻撃は、現代ではあまり脅威ではなくなり、ときに相手の姿すら見えないことばによる攻撃こそが主な脅威となっている。そのため、真摯に取り合わずに受け流すことを意味する *shrug off* や *laugh off* は、ことばが氾濫する現代社会において最も有効な身の護り方を反映している表現であるといえる。ちなみに、(3a) の *sleep off alcohol* などの表現に生じる *alcohol* や *stress* などの「自然消滅」の意味は、(12) の *wear off*, *fizzle off*, *wane off* といった自動詞タイプの句動詞にもみられる。

(12) Once the alcohol **wears off**, your brain goes into overdrive, seeking more of the substance.

(US 2021/ NOW Corpus)

このような目的語をとらない自動詞タイプの句動詞表現も、(9a) の句動詞の意味の形成に少なからず寄与している。つまり、非直接的な「回避」を表す句動詞表現はそれぞれが独立して発達している意味ではなく、構文ネットワークにおける多様な *off* を伴う句動詞の意味を継承することで生じた構文的意味であることが示唆される。

4.2. 「円滑な勝利の獲得」の意味の発達

一方で、「円滑な勝利の獲得」を示す (9b) の意味は、*reel*, *round*, *polish* など生産活動の「仕上げ」としてなされる行為を表す他動詞を主要部とし、1980 年以降みられるより新しい表現である。これらの表現は *grind out*, *scratch out* など、「労力」を伴う勝利の獲得、という対照的な意味をもつ V + *out* 句動詞表現との親和性から、*win* や *victory* などの目的語を項として選択し、「勝利の獲得」を意味する表現として用いられるようになったと考えられる。

(13) に COHA, The TV Corpus, The Movies Corpus を用いた調査で、1980 年以降 *win* や *victory* を目的語にとるようになり、現在 NOW Corpus の英語圏のデータで 30 例以上の用例がみとめられる、勝利の「獲得」や「仕上げ」を意味する表現を列挙する。

(13)

OBTAINMENT (V + OUT)		OBTAINMENT		COMPLETION	
<i>grind out</i> X	1915 (18)/ *17	<i>sneak</i> X	320	<i>ice</i> X	651
<i>squeak out</i> X	441 (8)/ *33	<i>bag</i> X	309	<i>cement</i> X	459
<i>squeeze out</i> X	209 (27)/ *21	<i>nab</i> X	217	<i>bank</i> X	241
<i>gut out</i> X	196 (10)	<i>nick</i> X	171	<i>finish off</i> X	235 (3)
<i>dig out</i> X	168 (4)	<i>snare</i> X	88	<i>cap</i> X	221
<i>carve out</i> X	103 (3)/ *3	<i>manufacture</i> X	70	<i>solidify</i> X	181
<i>scratch out</i> X	96 (1)/ *5	<i>pocket</i> X	35	<i>finish</i> X	175
<i>round out</i> X	57			<i>nail</i> X	60

				<i>cinch X</i>	58
				<i>forge X</i>	49

(X= win/ victory)

この表によると、手段を選ばず事物を「掠め取る」ことを意味する (14a) の *sneak* や *nick*、素早く「懐に入れる」ことを意味する *pocket* や *bag*、(表面を覆う、あるいは地盤を固めるといった動作からのメタファー表現で) 物事を「確実に仕上げる」ことを示す (14b) の *ice*, *cement*, *bank*, *cap*, *solidify* など、様々な一般動詞で *win* や *victory* を目的語の項とする意味拡張が生じているが、V+*out* 句動詞表現は、一般動詞を主要部に伴う表現と比べても際立って生産的である。このような背景を考慮すると、ほぼ同時期に SPORT NEWS の使用域で用いられるようになった *round off* や *reel off* といった「円滑な勝利」を意味する句動詞表現は、「労力」を伴って勝利することを表す *grind out* や *scratch out* などの意味を補うように発達したと考えられる。

(14) a. And the Highlanders dully-obliged when they **sneaked the victory** at the death.

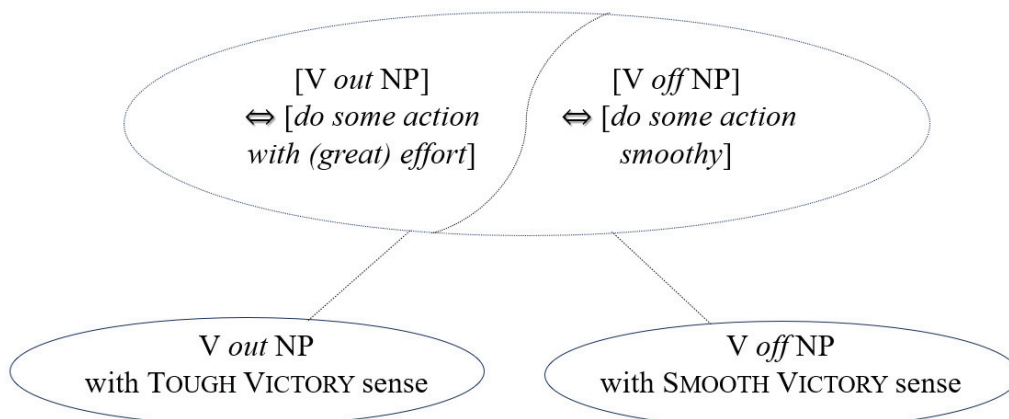
(AU 2017/ NOW Corpus)

b. Rookie Mike Miller **iced the victory** with two more free throws with 15 seconds to play.

(LDOCE)

Capelle (2006:24) は、形式の異なる 2 つの構文的意味に親和性が認められる場合、それらはより抽象的な上位スキーマを介して関連する意味を持つ異形構文 (ALLOSTRUCTIONS) であると指摘する。*Off* を伴う句動詞表現も、形式や意味、生起文脈といった点で、*out* を伴う句動詞表現と強い関連性を持つ異形構文と考えられ、構文ネットワークの中で対照的な表現を形成しやすい。(15) に、異形構文として *win* や *victory* が *off* を伴う句動詞の目的語としてあらわれるようになるメカニズムを示す。

(15)



3.1.で議論したように、*strip out the alcohol* と *sleep off the alcohol*, *wipe out the idea* と *shrug off the idea* など、V+*out* 句動詞と V+*off* 句動詞は「労力 (with great effort)」と「円滑 (smoothly)」

という対照的な意味で用いられやすい。この「労力」と「円滑」という2つの不変化詞の対照的な意味関係は、抽象的な上位スキーマとして確立されており、その枠組みを通じて、*grind out* や *scratch out* など V + *out* 句動詞が *win* や *victory* を目的語にとって広く用いられる場合、V + *off* 句動詞でも同様の目的語をとる新規的な表現が容認されやすくなる。⁴

なお、(15) の構文間の関係は双方向的であり、上位スキーマを通じて *off* を伴う句動詞から *out* を伴う句動詞表現が派生することもある。たとえば、(16) の *round out the victory* (力強く勝ち切る) における主要部の動詞 *round* は、本来繊細な手作業を表すものであり、*dig* や *grind* といった全身を使う力強い活動を示すものではない。しかし、この表現の意味形成において、対応する異形構文 (V + *off* 句動詞構文) で *round* が広く用いられていることが、V + *out* 句動詞構文においても、この動詞が主要部として適合される動機付けとなったと考えられる。

(16) The team's anchor, Wollongong's McKeon, then swam a powerful final leg to **round out the victory** and claim gold from the US and Canada. (AU 2022/ NOW Corpus)

5. 結語

本稿では、不変化詞 *off* を伴う句動詞が、他の句動詞表現と意味を分担しつつ、多様な意味を発展させてきた過程を、コーパスデータに基づく実証研究によって明らかにした。V + *out* 句動詞が労力を伴う「除去」の意味を持つのにに対し、V + *off* 句動詞は、非直接的な「除去」や「節制」、「軽視 (一蹴)」、つまり「回避」の意味を表す。また、*scare off* や *fend off* のような抑止力による「回避」の意味を持つ句動詞がプロトタイプとして機能し、これらの表現の発達を促したことが示唆された。一方で、*round off* や *reel off* のような句動詞は、*corner* や *edge*、*yarn* や *film* など具体的な目的語から、異形構文である V + *out* 句動詞構文との親和性により、*win* や *victory* といった抽象的な事象を行為対象にとるようになる。

これらの *off* を伴う句動詞表現の多様な意味をイメージスキーマの枠組みのみで記述することは、やはり困難であると考えられる。Lindner (1982) は *out*, *in*, *down*, *up* といった不変化詞を伴う句動詞の意味をイメージスキーマによって記述したが、*off* を伴う句動詞については、一様な経路を持たないため、むしろ「円滑な行為遂行」という相的 (ASPECTUAL) な構文的意味を持つ表現の集合体として捉える方が適切である。

たとえば、*shrug off* や *laugh off* の場合、周囲からの非難や脅威を受け流すイメージがある一方で、*walk off* や *sleep off* といった句動詞は、蓄積されたものが徐々に消滅するイメージを持つ。さらに、*round off* や *polish off* のような句動詞では、目の前の事物を磨き上げて仕上げていくイメージが連想されるが、*reel off* は回転する機器から次々と事物が織り出されるイメージが想起される。

つまり、*off* を伴う句動詞に生じる「一蹴」、「節制」、「除去」、「円滑な勝利の獲得」といった多様な意味は、*out* を伴う句動詞のような「見えなかったものがみえるようになる」、あるいは「みえていたものが見えなくなる」といったシンプルな意味構造を持たず、「円滑な行為遂行」という相的 (ASPECTUAL) なスキーマによってそれぞれの意味が結びついていると考えられるのである。

ちなみに、句動詞には空間的な意味が希薄で (つまり経路そのものが認識されない)、相的な意味しか持たないとされる表現も多い。たとえば、Jackendoff (2002) は、(17) の *coffeed out*

(コーヒーを飲み過ぎてうんざりしている)といった表現は、*worn out, burned out* といった句動詞の過去分詞の意味が構文として拡張することで生じたものであり、⁵ この *out* が「(行為の繰り返しによる)疲労している」という相対的な意味を表すことを指摘している(この構文では *coffee* や *beer* をいった名詞を適合しても、主要部は動詞の過去分詞形のように機能し表現として成立する)。⁶

(17) I'm (all) **coffeed out**.

(Jackendoff 2002: 85)

本稿では、構文文法のアプローチを用いて、主要部の動詞の意味特性、生起文脈、そして関連性が認められる様々な表現の生産性を考察し、V + *off* 句動詞構文の意味と汎用性の仕組みを記述した。今後は、より高次の構文スキーマ、特に CAUSED MOTION 構文など、前置詞の *off* を伴って生じる構文との関係性などについてもさらなる検討が求められる。

いずれにせよ、不変化詞 *off* を伴って生じる句動詞構文は、汎用性が高く、個々の構成要素から予測不可能な意味を持つ表現を数多く生み出すという点で (Goldberg 1995, 2006)、独自の構文であるといえるだろう。

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注

¹ 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、その動詞のみでは生じない目的語があらわれるのは句動詞構文の特徴の一つである (Jackendoff 2002: 84)。本稿では、主要部の動詞のみでは通常とることができない目的語を伴う句動詞表現の意味を「句動詞特有の意味」とみなす。

² Capelle (2006) の句動詞の語順についての一般化は概ね支持できるものの、意味制約の記述としてはやや曖昧で、反例とみられる事例も多い(つまり、この一般化の反例となりうる事例が何故生じるかについて説明していない)。Capelle (2006) の記述の不備をどのように補うかについては別稿にて論じるものとした。

³ ここで論じている句動詞の主要部、つまり *scare, warn, frighten* といった動詞はいずれも人や動物を目的語にとることができるため、句動詞特有の目的語をとる (9a) の表現とは異なる。また、*ward off* や *stave off* といった句動詞は現代英語では主要部の動詞が単体ではほとんど使われず、語彙化された句動詞として用いられる(たとえば、LDOCE には *ward, stave, fend* は単独の動詞としての項目がなく、いずれも *off* を伴う句動詞として扱われる)。

⁴ この異形構文という捉え方は、新規的な表現の派生を促す要因の一つに過ぎない。たとえば、*round off* や *reel off* が *victory* や *win* を目的語にとる用例を発達させた一方で、*dig out [truth]* や *sift out [truth]* に合わせて *truth* を目的語とする用法は広く用いられてはいない(*{reel/round} off [truth]* はそれぞれ 1 例のみ)。このような違いが生じた背景には、*round off* や *reel off* がもともと生産活動を表す句動詞として頻用されており (7)、*win* や *victory* を目的語とする意味変化が生じやすかったことも挙げられる。

⁵ Jackendoff (2002) は *coffeed out* のような表現を語彙化し、空間的意味が希薄となったイディオム構文とみなしている(句動詞表現の語彙化に関しては石崎 [2020] を参照)。一方で、

Lindner (1982) は、相的な意味という概念を用いず、(抽象的であっても) どの不変化詞にも空間的な意味が保たれているという立場をとる。このため、たとえば、*close up* のような句動詞も、完結という相的な意味ではなく、空間的な意味を基盤として解釈されると主張する。このような Lindner の解釈は Jackendoff や Cobuild Phrasal Verbs Dictionary (2020) といった近年の辞書の記述と著しく異なる。句動詞の大まかな意味を理解する上で、Lindner (1982) のイメージスキーマの枠組みはきわめて有効である一方で、語彙化、使用頻度、主要部の動詞の意味、項構造といった句動詞の意味に影響を与える様々な要素の分析がなされていないため、記述の厳密さには疑問が残る。Lindner (1982) の知見をどのように構文文法の枠組みに取り入れていくかは今後の研究課題としたい。

⁶ *Out* を伴って *beer* が過去分詞化する用例を以下に示す (e.g., *The casks continued later that night at the Murderer's Row caskival event at the Kettle Valley Station pub, at which point I was getting beered out...* [CA 2015/ NOW Corpus]).

参考文献

- Capelle, Bert (2006) "Particle placement and the case for "allostructions,"" *Constructions*, 1-28.
- Goldberg, Adele (1995) *Constructions: A Construction Grammar Approach to Argument Structure*, University of Chicago Press, Chicago.
- Goldberg, Adele (2006) *Constructions at Work*, Oxford University Press, Oxford.
- 石崎保明 (2020) 「'time' -away 構文」, 小川芳樹 (編), 小川芳樹・石崎保明・青木博史 (著) 『文法化・語彙化・構文化』 開拓社, 東京, 47-58.
- 岩宮努 (2024) 「不変化詞 *out* に伴って生じる「除去」および「獲得」を表す句動詞構文」 *JELS*, 148-157.
- Jackendoff, Ray (2002) "English Particle Constructions, the Lexicon, and the Autonomy of Syntax," *Verb-Particle Explorations*, ed. by Dehé, Nocole, Ray Jackendoff, Andrew McIntyre and Silke Urban, 67-94, Mouton de Gruyter, Berlin.
- Lindner, Sue (1982) "What Goes Up Doesn't Necessarily Come Down: The Ins and Outs of Opposites," *Chicago Linguistic Society*, 305-323.
- 坪井栄治郎・早瀬尚子 (2019) 『認知文法と構文文法』 開拓社, 東京.

コーパス

- Corpus of Historical American English (COHA) <<https://www.english-corpora.org/coha/>>
- Early English Books Online (EEBO) Corpus <<https://www.english-corpora.org/eebo/>>
- News on the Web (NOW) Corpus <<https://corpus.byu.edu/now/>>
- The Movies Corpus <<https://www.english-corpora.org/movies/>>
- The TV Corpus <<https://www.english-corpora.org/tv/>>

辞書

- Collins Cobuild Dictionary* Online. <<https://www.collinsdictionary.com/dictionary/english/>>
- Collins Cobuild Phrasal Verbs Dictionary* (2020) Harper Collins UK, Glasgow.
- Longman Dictionary of Contemporary English* Online (LDOCE) <<https://www.ldoceonline.com/>>
- Oxford English Dictionary* Online (OED) <<https://www.oed.com/>>

The Syntax and Semantics of the Degree Intensifier *So* and its Dependent Degree Clause: Implications for Syntactic Hierarchy*

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Keywords: extraposition, late merge, quantifier raising, *so*, syntactic hierarchy

1. Introduction

In the literature on linguistics, it has been traditionally observed (e.g., Hornby (1975)) that the *so that* adverbial clause (cf. (1a)) is semantically similar to a dependent degree clause introduced by *so* (cf. (1b)) in that they are separated by a comma intonation break and carry a result interpretation.

- (1) a. John's dog barked loudly yesterday, so that he woke up the neighbors.
b. John's dog barked so loudly yesterday, that he woke up the neighbors.

Scholars have investigated the syntax and semantics of *so* and its dependent degree clause from the perspectives of LF movement and extraposition (e.g., Guéron and May (1984), Baltin (2006), Rochemont and Culicover (2013)). Guéron and May (1984) first observed that *so* exhibited different scope readings, each of which is informally represented in (2a, b).

- (2) Mary believes that Harry_i is so crazy that he_i acted irrationally. (Guéron and May (1984:17))
a. Mary believes that so [Harry is crazy] [that he acted irrationally]
b. so [Mary believes that Harry is crazy] [that he acted irrationally]

Culicover and Rochemont (2013:197) paraphrase the readings in (2a, b) as follows: “(a) Mary has the belief that Harry is so crazy that he acted irrationally, or (b) the extent to which Mary believes that Harry is crazy is such that he acted irrationally.” If the notion of the *de dicto/de re* distinction is borrowed, then the former will correspond to a *de dicto* interpretation in which *so* is interpreted within the scope of the attitude verb *believe*, whereas the latter will correspond to a *de re* interpretation in which *so* is interpreted outside the scope of *believe*.¹ The fact that *so* can take a clausal scope at LF is supported by the following contrast ((Rochemont and Culicover (2013:196), with slight modifications)):

- (3) a. * She_i met few people at the party, who Mary_i upset. [Relative Clause Extraposition]
b. She_i met so few people at the party, that Mary_i was upset. [Result Clause Extraposition]

The abovementioned contrast demonstrates that the pronominal matrix subject *she* is not coreferential with the subject in the extraposed relative clause, which causes a Condition C violation effect, whereas the subject in the extraposed result clause does not. This fact also implies that the dependent degree clause, as well as the degree intensifier, takes a sentential scope.

The majority of previous studies (e.g., Guéron and May (1984), Baltin (2006), Rochemont and Culicover (2013)) have seemingly reached a consensus that *so* and its (result) degree clause take a sentential scope. However, less research has been conducted to consider whether they always take a sentential scope or if they take a scope within the predicate (*vP*) domain. To fill this gap in the literature, the current study aims to explore the possibility that *so* and its degree clause co-occur within the sentential and predicate domains. Building on the analysis proposed by Bhatt and Pancheva (2004) on degree heads and degree clauses, it proposes that the degree intensifier behaves as a degree quantifier head, undergoes quantifier raising (QR) to *vP* or IP, and introduces a degree clause as its complement; then, it provides supportive evidence for the proposed analysis in terms of the syntactic dependency of a degree clause on the matrix clause.

The remainder of this paper is organized as follows. After observing the major properties of *so* and its dependent degree clause, Section 2 reviews previous analyses and points out empirical and theoretical issues. Section 3 proposes an alternative analysis to solve the issues presented in Section 2 and provides additional supportive evidence from the perspective of the syntactic dependency of a degree clause on a matrix clause. Section 4 argues that the proposed analysis can be applied to another type of degree clause introduced by *enough*. Section 5 concludes the paper.

2. Previous Studies

2.1. Basic Properties of *So* and its Degree Clause

This subsection first observes the three basic properties of *so* and its degree clause. As discussed in Section 1, since Guéron and May (1984), it has been observed that the degree intensifier *so* behaves similarly to a quantifier and takes a sentential scope; furthermore, the degree clause, as well as *so*, takes a sentential scope. These two observations led Rochemont and Culicover (2013) to pose the two following arguments: first, *so* undergoes LF movement and adjoins the sentential clause (IP); second, the degree clause adjoins the sentential clause to which the LF-moved *so* adjoins. To strengthen their arguments, Rochemont and Culicover (2013:197) provide the following example, which illustrates that *so* is forced to take a wide scope (i.e., a *de re* interpretation) due to the Condition C violation effect.

- (4) She_j believes that Harry_i is so crazy that Mary_j left him_i.
- (5) a. * She_j believes [that **so** [Harry_i is crazy] [that Mary_j left him_i]]. Condition C violation
- |-----↑
- b. ^{OK} **so** [She_j believes that Harry_i is crazy] [that Mary_j left him_i]. No Condition C violation

In support of their assumption, that is, *so* undergoes LF movement, Rochemont and Culicover (2013: 197–198) further observed that the LF movement of *so* exhibits island effects such as subject (cf. (6b)), complex NP (cf. (7b)), and adjunct (cf. (8b)) islands.

- (6) a. [[That so many people ate cheesecake] that we had to order more] surprised us.
 b. * [That so many people ate cheesecake] surprised us that we had to order more.
- (7) a. She_i claimed that so many people left that Mary_i must have been lying.
 b. * She_i made the claim that so many people left that Mary_i must have been lying.
- (8) a. She_i tried to do so many pushups that Mary_i hurt herself.
 b. * She_i bent to do so many pushups that Mary_i hurt herself.

In summary, *so* undergoes LF movement and adjoins to IP; furthermore, the degree clause adjoins to the IP position adjoined by the LF-moved *so*. These assumptions enable the explanation of the co-occurrence of *so* and its degree clause in the sentential domain. The third property to be reviewed below is concerned with the finiteness of a degree clause that co-occurs with degree modifiers such as *so*, *too* and *enough*. White (1997:3) puts forward the following two observations: first, degree clauses cannot stand on their own without any degree modifier (cf. (9a, b)); second, *enough* can introduce a finite/non-finite degree clause (cf. (10a, b)), whereas the degree clause introduced by *too* is restricted to non-finite (cf. (11b)) and that introduced by *so* is to finite (cf. (12a)).

- (9) a. * Mary was sad that she cried. b. * Mary was sad to cry.
 (10) a. Mary was sad enough that she cried. b. Mary was sad enough to cry.
 (11) a. * Mary was too sad that she cried. b. Mary was too sad to cry.
 (12) a. Mary was so sad that she cried. b. * Mary was so sad to cry.

The fact that a consistent pattern exists between degree modifiers and the finiteness of their degree clauses is ascribed to one of the s-selectional restrictions imposed on the head–complement structural relation (e.g., Guéron and May (1984), White (1997), Meier (2001, 2003), Bhatt and Pancheva (2004); see also Bresnan (1973)).

Having examined the three basic properties of *so* and its dependent degree clause, the next subsection discusses several empirical and theoretical issues to be addressed in this paper.

2.2. Previous Analyses and their Potential Problems

This subsection reviews two previous analyses that were proposed in the literature on the treatment of *so* and its dependent degree clause for brevity. The first is a classical one that assumes that *so* is generated at the degree head and introduces a degree clause as its complement in the base structure. From this classical view, *so* and the degree clause form a head–complement relationship, and the degree clause complement undergoes extraposition. Based on the classical approach, Meier (2001) proposes the derivation in (13) (simplified for ease of explanation), according to which the degree head *so* selects a degree clause as its complement in the base structure (cf. (13a)); then, the extraposition applies to the degree clause (cf. (13b)). The LF representation of *so* and its degree clause is demonstrated in (13c).

- (13) a. [CP Martha is [AP [DegP so] [CP that she can reach for the top shelf]] tall]]
 b. [CP Martha is [AP [AP [[DegP so t_i] t_i] tall] t_i] ... [CP that she can reach for the top shelf]_i]]

- c. $[[_{\text{DegP}} \text{so } [_{\text{CP}} \text{that she can reach the top shelf}]_j [_{\text{CP}} \text{Martha is } [_{\text{AP}} t_j \text{ tall}]]]]$ (LF)

Several empirical and theoretical problems have been raised against the classical approach (see Bhatt and Pancheva (2004) for a detailed discussion on the relevant issues). First, because the assumption is that the degree clause is generated as a complement to the degree head in the base structure, the subject in the degree clause can be predicted to exhibit a Condition C violation effect, which is contrary to the fact in (3b). Second, *so* and its dependent degree clause are separated from each other after the degree clause complement undergoes extraposition at syntax (cf. (13b)), whereas they occupy a CP-adjoined position as a single constituent at LF. To fill the structural gap between the representation in (13b) and the LF representation in (13c), one needs to assume a complex reconstruction mechanism that first reconstructs the extraposed degree clause to its base position then adjoins the entire degree phrase to CP. Although the current study adopts the classical approach, the two problems identified need to be solved.

The second analysis is based on clausal adjunction (e.g., Castroviejo-Miró (2011)). Based on the clausal adjunction approach, the matrix and degree clauses are generated as independent clauses, and the degree clause is syntactically treated as an adjunct of the main clause. On the one hand, the clausal adjunction approach correctly predicts the lack of Condition C effects, such as that in (3b); on the other hand, it does not provide a consistent account of the fact that *so* and its dependent degree clause fall under the scope of negation in the matrix clause when the degree clause is modalized, as pointed out by Castroviejo-Miró (2011:93):

- (14) a. ? My dog didn't bark so loud that he woke up the neighbors.
 b. My children don't grow so fast that I have to buy them new clothes every now and then.

Because the matrix clause and the degree clause are generated as independent clauses, the clausal adjunction approach predicts that *so* and the degree clause does not fall under the scope of negation in the matrix clause, which is contrary to the fact in (14b).²

Reviewing the two previous approaches to *so* and its dependent degree clause, this subsection discussed the several empirical and theoretical problems they face. Adopting and modifying the classical approach based on Bhatt and Pancheva (2004), the next section proposes an alternative analysis and provides supportive evidence for the proposed analysis.

3. Proposal

3.1. A Late Merge Analysis of *So* and its Degree Clause

Focusing on the syntactic place of degree clauses, such as *than-/as*-phrases in the overall structure of comparatives, Bhatt and Pancheva (2004) propose that a degree head (i.e., *-er/as*) and its degree clause complement form a constituent after the QR of the degree head and the counter-cyclic merger of the degree clause. Although they did not discuss the result clauses and degree heads (i.e., *so* and *too*), they cited the possibility of extending their general proposal to them (see Bhat and Pancheva (2004:fn. 1)). On the basis of the syntactic mechanism of Bhat and Pancheva, this subsection proposes a detailed analysis of *so* and its dependent degree clause (see also Honda (2024)).

clause is directly accounted for, because the Deg head introduces a degree clause as its complement in its scope position. Furthermore, if the proposed analysis is correct, then one can predict that the QR of *so* may target *vP*, right-adjoin to it, and introduce a degree clause in the predicate domain. If this prediction is borne out, it will be the case that *so* can introduce a degree clause as its complement not only in the sentential (IP) domain but also in the predicate (*vP*) domain. Another related prediction is that the degree clause behaves differently according to its syntactic position: if *so* introduces a degree clause in the *vP* domain, then the degree clause becomes a part of the matrix clause; if *so* introduces a degree clause in the IP domain, then the degree clause is separated from the matrix clause. The next subsection tests these predictions in order.

3.2. Supportive Evidence

The possibility that *so* and its dependent degree clause may co-occur in the sentential (IP) or predicate (*vP*) domain is implicated by (14a, b), which is reiterated below for convenience:

- (19) a. ? My dog didn't bark so loud that he woke up the neighbors.
 b. My children don't grow so fast that I have to buy them new clothes every now and then.

The fact that the degree clause easily falls under the scope of negation in the matrix clause when it is modalized can be naturally accounted for if we assume that the modalized and nonmodalized degree clauses in (19a) and (19b) are introduced in the *vP* and IP domains, respectively. In connection with this, it is worthwhile mentioning the semantic difference between the modalized and nonmodalized degree clauses in terms of the connotation of the result. My informant noted that the nonmodalized degree clause with the past tense carries a result interpretation as its logical connotation, but the modalized one does not, as demonstrated below:

- (20) a. My dog barked so loud, that he woke up the neighbors (# but he didn't wake them up).
 (Castroviejo-Miró (2011:80))
 b. The interviewer spoke English so loudly that I could understand everything (but I didn't understand everything).

Thus, this study assumes that the modalized degree clause carries a high degree interpretation in which the high degree denoted by *so* is contextually specified in the modalized degree clause; for example, a sentence, such as “*Mary is so hungry that she could eat a horse,*” does not carry a result interpretation but a high degree or hyperbolic interpretation.⁵ Informally, the interpretive difference between the degree clauses introduced in the sentential (IP) domain (i.e., the result degree clause) and predicate (*vP*) domain (i.e., the high degree clause) is expressed by the following (it should be noted that the distinction in question is similar to the one between result and purposive *so that* adverbial clauses (cf. Nakau (1994))):

- (21) a. My dog barked so loud, that he woke up the neighbors (# but he didn't wake them up).
 = “The interviewer spoke English very loudly, **and as a result**, I understood everything.”

- b. The interviewer spoke English so loudly that I could understand everything (but I didn't understand everything).
 = "The interviewer spoke English very loudly to the extent that I could understand everything."

Another clue for distinguishing result degree clauses from high degree clauses is the break in phonological intonation. My informant observed that when the matrix clause is separated from the degree clause by a comma intonation break, then the degree clause tends to obtain a result interpretation (cf. (21a)). On the basis of these two types of degree clauses, let us consider whether or not they behave differently in terms of quantifier binding and Condition C. If the proposed analysis is correct, then the study predicts that when the matrix subject is a bare negative quantifier, it can bind the pronominal subject in the high degree clause introduced in the ν P domain, whereas it cannot bind the one in the result degree clause introduced in the IP domain. According to my informant, this prediction is borne out, as demonstrated by the following contrast:

- (22) a. * No student_i was so busy, that he_i didn't read a book last month. [Result]
 b. No student_i was so busy that he_i couldn't read a book last month. [High Degree]

Another related prediction is that the subject of the result degree clause does not exhibit a Condition C violation effect, while that of the high degree clause does. My informant also confirmed that this prediction is correct, as depicted in the following contrast:

- (23) a. She_i was so beautiful, that Mary_i won Miss America (#, but she didn't). [Result]
 b. * She_i was so beautiful that Mary_i could win Miss America (, but she didn't). [High Degree]

Finally, let us consider the syntactic difference between the result and high degree clauses from the perspective of syntactic dependency on the matrix clause. Within the cartographic framework (Haegeman (2013), Endo (2019), Endo and Haegeman (2019)), it has been proposed that adverbial clauses are divided into two types, namely, peripheral and central. The former describes the background of the matrix clause and is independent of the matrix clause. By contrast, the latter modifies the event described by the matrix clause; the event described by the central adverbial clause is unified into the matrix clause. The occurrence of high adverbs and tag questions indicate the difference between peripheral and central adverbial clauses, as Endo (2009:99, 100, with modifications) shows below:

- (24) a. The ferry will be fairly cheap, while the plane {may/will probably} be too expensive.
 b. ?? John works best while his children {are probably/might be} asleep.
 (25) a. Bill took a degree at Oxford, while his daughter is studying at UCL, {isn't she / * didn't he}?
 b. Bill took a degree at Oxford while his children were still very young, {* weren't they / didn't he}?

Among high adverbs (e.g., [*frankly* Mood_{speech act}] [*fortunately* Mood_{evaluative}] [*allegedly* Mood_{evidential}] [*probably* Mod_{epistemic}] [... (Cinque (1998:106))]), the evaluative adverb is used to test the prediction that

result degree clauses, in contrast to high degree clauses, behave similar to peripheral clauses. My informant reported that the prediction is correct in terms of the occurrence of high adverbs and tag questions, as shown below:

- (26) a. Mary was so studious, that, fortunately, she passed JLPT N1. [Result]
 b. * Mary was so studious that, fortunately, she could pass the JLPT N1. [High Degree]
- (27) a. Mary was so studious, that she passed the JLPT N1, { wasn't she / didn't she }? [Result]
 b. Mary was so studious that she could pass the JLPT N1, { wasn't she / * couldn't she }? [HD]

One remaining issue is why the tag question in (27a) can target the matrix and result clauses, which is contrary to the corresponding case of peripheral adverbial clause in (25a).

In summary, this subsection provided supportive evidence for the claim that degree clauses are divided into two types, namely, result and high degree. The former is introduced in the sentential domain and behaves as independent from the matrix clause, while the latter is introduced in the predicate domain and is unified into the matrix clause as a part of it.

4. Further Application to *Enough* and its Dependent Degree Clause

This subsection briefly discusses the possibility that the proposed analysis of *so* and its degree clause can be extended to the *enough (so) that* configuration (see Meier (2001, 2003) and Okada (2003)). Previous studies have observed that the function of the degree clause introduced by *enough* is to specify the minimal standard requirement that needs to be satisfied. In addition to this standard interpretation, my informant reported that, in the *enough that* configuration, the degree clause may carry a result (cf. (28a)) or standard (cf. (28b)) interpretation; furthermore, the informant found that the degree clause introduced by *enough* behaves similarly to the one introduced by *so*.

- (28) a. * John was smart enough, that he passed the entrance examination for the university, but he didn't take (nor pass) it. [Result]
 b. John was smart enough that he could pass the entrance examination for the university, but he didn't take (nor pass) it. [Standard]
- (29) a. * No student₁ was smart enough, that he₁ passed the entrance examination for the university.
 b. No student₁ was smart enough that he₁ could pass the entrance examination for the university.
- (30) a. Mary was studious enough that, fortunately, she passed the JLPT N1. [Result]
 b. * Mary was studious enough, that, fortunately, she could pass the JLPT N1. [Standard]
- (31) a. Mary was studious enough, that she passed the JLPT N1, { wasn't she / didn't she }? [Result]
 b. Mary was studious enough that she could pass the JLPT N1, { wasn't she / * couldn't she }? [Standard]

The facts provided in this subsection imply that the degree clauses introduced by *so* and *enough* can be uniformly addressed in such a manner that they can be syntactically realized in the sentential (IP) or

predicate (ν P) domain. These properties also point to the possibility that the distinction between peripheral and central adverbial clauses exists even in degree clauses introduced by degree modifiers.

5. Conclusion

This study has argued that the so-called degree clauses are divided into two types, namely, result and high degree. More precisely, this paper has proposed that as a quantificational element, the degree intensifier *so* undergoes QR, and it adjoins to ν P or IP, both of which are a semantic type $\langle t \rangle$. If *so* undergoes QR, adjoins to ν P, and introduces a degree clause as its complement, then the degree clause typically carries a high degree interpretation; if the QR-ed *so* adjoins to IP and introduces a degree clause as its complement, then it carries a result interpretation. The proposed analysis is supported by (i) the c-command relationship between the matrix and result/high degree clauses and (ii) the syntactic dependency of the result/high degree clause on the matrix clause. The major findings of this study support the view that the interpretation of a clausal element is determined according to syntactic hierarchy.

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NOTES

¹ I appreciate Nobuhiro Kaga for pointing out to me that the scope difference illustrated in (2a, b) can be understood in terms of the *de dicto/de re* distinction. This study assumes that certain aspects of the *de dicto/de re* distinction, although not all, can be explained as a consequence of quantifier raising (QR).

² In connection with the occurrence of negation in the matrix clause, Takeo Kurafuji asked whether or not the negated matrix clause can be followed by a negated degree clause while maintaining a causal interpretation between them. Degree modifiers are known to show scope island effects (O'Connor (2015)); thus, it is predicted that *so* and its degree clause are, in principle, interpreted under the scope of negation in the matrix clause. However, further investigation is required to confirm whether or not the prediction is borne out.

³ Independent research is required to justify this assumption, because late merge was originally proposed to be applied to adjuncts but not to arguments (cf. Lebeaux (1988)).

⁴ I appreciate Takeo Kurafuji for the suggestion that the optional occurrence of *that* in the degree clause can be assimilated to a head-head incorporation process (cf. Pesetsky (1994)).

⁵ The assumption stated here is neutral with respect to the issue of whether or not the possibility that a nonmodalized degree clause is introduced in the sentential domain is excluded. I would like to leave this subject open for future research due to the scope limitation.

REFERENCES

- Baltin, Mark (2006) "Extraposition," *The Blackwell Companion to Syntax, Volume II*, ed. by Martin Everaert, Henk van Riemsdijk, Rob Goedemans, and Bart Hollebrandse, 237–271, Blackwell, Malden.
- Bhatt, Rajesh and Roumyana Pancheva (2004) "Late Merger of Degree Clauses," *Linguistic Inquiry* 35(1), 1–45.
- Bresnan, Joan (1973) "The Syntax of the Comparative Clause Construction in English," *Linguistic Inquiry* 4(3), 275–343.
- Castroviejo-Miró, Elena (2011) "So as a Weak Degree Expression," *Semantics and Linguistic Theory* 21, 76–94.
- Cinque, Guglielmo (1998) *Adverbs and Functional Heads: A Cross-Linguistic Perspective*, Oxford University Press, Oxford.
- Endo, Yoshio (2009) "The Cartography of the Speaker and the Addressee," *Gengo Kenkyu* 136, 93–119.
- Endo, Yoshio and Liliane Haegeman, (2019) "Adverbial Clauses and Adverbial Concord," *Glossa: A Journal of General Linguistics* 4(1), 1–32.
- Guéron, Jacqueline and Robert May (1984) "Extraposition and Logical Form," *Linguistic Inquiry* 15(1), 1–31.
- Heim, Irene, and Angelika Kratzer (1997) *Semantics in Generative Grammar: An Introduction*, Blackwell Publishers, Oxford.
- Honda, Masatoshi (2024) "A Note on the Syntax and Semantics of the Degree Modifier So and Its Dependent Clause," *Tsukuba English Studies* 42, 25-39.
- Hornby, Albert S. (1975) *Guide to Patterns and Usage in English, 2nd Edition*, Oxford University Press, Oxford.
- Lebeaux, David (1988) *Language Acquisition and the Form of Grammar*, Doctoral dissertation, University of Massachusetts, Amherst.
- Meier, Cécile (2001) "Result Clauses," *Semantics and Linguistic Theory* 11, 268–285.
- Meier, Cécile (2003) "The Meaning of *Too*, *Enough*, and *So ... That*," *Natural Language Semantics* 11, 69–107.
- Nakau, Minoru (1994) *Ninchiimiron no Genri (Principles of Cognitive Semantics)*, Taishukan, Tokyo.
- Okada, Nobuo (2003) *Eego no Koobun (English Constructions) 150, Second Edition*, Biseisha, Kyoto.
- O'Connor, Ellen (2015) "Trapped in the Noun Phrase: When Degree Quantifiers Can't QR," *WCCFL* 32, 149–158.
- Pesetsky, David (1994) *Zero Syntax: Experiencers and Cascades*, MIT Press, Cambridge, MA.
- Rochemont, Michael S. and Peter W. Culicover (1997) "Deriving Dependent Right Adjuncts in English," *Rightward Movement*, ed. by Dorothee Beerman, David LeBlanc, and Henk van Riemsdijk, 279–300, Benjamins, Amsterdam. [Reprinted as Rochemont, Michael S. and Peter W. Culicover (2013) "Deriving Dependent Right Adjuncts in English," *Explaining Syntax: Representations, Structures, and Computation*, ed. by Peter W. Culicover, 191–211, Oxford University Press, Oxford.]
- White, Jonathan R. (1997) "Result Clauses and the Structure of Degree Phrases," *UCL Working Papers in Linguistics* 9, 1–20.

連濁は何のためにあるのか? : 決着問題、未解決問題、そして音韻理論のいま*
(What is the Nature and Function of Rendaku?: Its Findings and Mysteries in Current Phonological Theory)

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キーワード : 連濁, ライマンの法則, 異形態選択, 不透明性問題, 形態的実在性

1. はじめに

連濁研究が 80 年代から盛況なのは、成熟しつつあった音韻・形態・意味・統語を含む文法理論はもとより、その獲得・第二言語学習・方言変異・歴史変化も問題となる複合的な研究対象だからである。用いる手法も理論研究・心理実験・統計分析を問わず、その技術的発展とともに、言語学全体において国内外のあらゆる研究者を巻き込んできた。

とりわけ文法の観点から見れば、連濁の研究史はまさに、その適用を起動/阻止する諸条件・要因を発見することで、例外を例外でなくする問題解決の歴史であった。

本論文の狙いは「そもそも連濁は何のためにあるのか」の考察にある。その目的のため、連濁研究の通史を概観しつつ (セクション 2.1)、連濁の本質的性質に関する 3つの可能性を紹介する (セクション 2.2)。本稿では定説と異なって、連濁とは「異形態選択」のプロセスであることを主張する。さらに連濁の複合的特徴ゆえの 3つの未解決問題 (「例外処理が提起する理論的問題」、「他現象との相互作用が提起する不透明性問題」、「手法の違いが提起する矛盾の問題」) を取り上げつつ (セクション 3)、「異形態選択」による分析がおのずと 3つの問題解決につながることを立証し、この主張の根拠となることを示す。

2. 連濁のメカニズム

2.1. 連濁研究の歴史

20 世紀後半になるまで、連濁は伝統的な国語学において単に「字音の濁り」として捉えられ、あくまで文字レベルの現象に過ぎなかった。ただ、João Rodrigues (1604-1608; 原典はポルトガル語)による体系的記述文法は、17 世紀初期の時点ですでに「濁り」を文法現象として捉え、(1a)のように述べている。また、賀茂真淵 (1765-1769)は連濁適用の 2つの条件として、並列複合語でないこと、主要部に濁音を含まないことを、18 世紀の時点で述べている。Lyman (1984)より 100 年以上前のことである。

(1) 文法現象としての連濁

a. 連濁の適用環境

「二つの名詞があり、その中の一つが属格に立つべきであるのに、その *no* (の) が省略されて、先行語が崩れてゐるか、二語が一種の複合法をとって全く一語のやうになって

あるかする場合に、後続語が濁る性質のものならば‘にごり’となる。」(土井忠生訳)

b. 連濁の適用条件

「言便の濁りは、二言をいひつゞくる時必あり、そも又海川・山川・我人などの類は、彼此をたゞならべいふ故に濁る事なし、山之川の之を略きてやまかはといふには、川のかを濁る、浦之人・山之人をうら人・山人といふ時も濁るは皆これ也、又山之風をも山風といへど、こは下にぜの濁りあれば、ゆづりてかを濁らず、此類も有めり。」
“The sound change of *nigori* necessarily occurs when a noun precedes and modifies another, but it does not in *umi-kawa* ‘sea and river,’ *yama-kawa* ‘mountain and river,’ *ware-hito* ‘self and others,’ and so on since the two words are merely coordinated. However, when you omit the genitive marker *-no* of *yama-no kawa* ‘the mountain’s river,’ you should voice the *ka* of *kawa* ‘river’ just as *ura-no hito* ‘bay’s man’ and *yama-no hito* ‘mountain’s man’ change to *ura-bito* ‘fisherman’ and *yama-bito* ‘mountaineer,’ respectively. Note you can also omit the *-no* of *yama-no kaze* ‘mountain’s wind,’ but this time it becomes *yama-kaze*: you should not bother to voice the *ka* of *kaze* ‘wind’ because it is followed by the *nigori* of *ze*.” (私訳)

そして、20世紀後半の連濁研究史を総括して、鈴木(2004)は次のように述べている。曰く、「和語の連濁について記述のあるものとしてはロドリゲス(1604-1608)、賀茂真淵(1765)、本居宣長(1767-1798)が古く、それ以前は連濁はもっぱら字音の濁音化に関する問題だったわけである。「連濁」の範囲は、奥村三雄(1980)に記すように「おもんばかり」などの半濁音化や「飛んで」のような撥音便を含めるものもあるが、近年の中川芳雄(1966, 1978) … などの研究で、形態音韻論的現象としての和語の連濁と音声的現象としての濁音化(漢字音の新濁も含む)を分けて考えるべきであることが主張されているが、これは連濁研究の基盤に関わる重要な指摘である。」つまり、国語学にも、半濁音化・撥音便に伴う濁り・漢字音の新濁(「流産」「軍勢」「年中」など)のような音声現象を、真正な連濁と分離する流れができたのであった。こうした流れの中で、生成音韻論においても Otsu(1980), Vance(1986), Ito and Mester(1986)など連濁適用の諸条件の研究が発展し、それ以降の理論研究・心理実験研究・統計調査研究の量産の起爆剤となった。

2.2. 連濁の本質的性質：3つの分析可能性

連濁の本質的性質については、3つの分析可能性がある。まず第1に、Otsu(1980), Ito and Mester(1986), 窪菌(1999)のように「有声同化」だという主張がある。修飾部末の母音・鼻音に続いて主要部第一音節が無声であるのは調音上不自然であり、その回避のためだとされる。

(2) 有声同化分析 (X = V or N)

a. C → [+voice] / X##_

b. $\begin{array}{cc} X\# & \#C \\ | & \diagdown \\ [+voice] & \end{array}$

cf. *[+voice]##[-voice][+voice]

しかしながら、英語の弾音化(flapping)のように音声現象だとするなら例外なく起こるものであり、語種に左右されたり語彙的例外を持ったりする点を説明できない。

第2に、ここで主張するのは「異形態選択」による分析である。(3a)のように、一般に品詞決定能力のある動詞接辞は主要部として異形態を持つが、これと同様に複合語主要部も無声・有声の異形態を持つという主張である。単独では(3b)のように、有坂 (1955)の制約により無声異形態が選ばれる。これは Kuroda (2002)による「和語は基底形ですべて有声始まりであり複合語でそう現れるが、単独の時は有坂 (1955)の制約により無声化する」という主張とは異なる。無声化以外にも語頭子音削除や語頭母音挿入など、制約違反の回避方法は他にもあり得る(なぜ無声化するかの説明が必要だ)からである。

(3) 異形態選択分析

- a. kae 'change' (stem) + {ru, u} 'infinitive' (suffix)
 → kae·ru 'to change' - - - - after a vowel
 kaer 'return' (stem) + {ru, u} 'infinitive' (suffix)
 → kaer·u 'to return' - - - - after a consonant
- b. yama 'mountain' (modifier) + {zakura, sakura} 'cherry tree' (head)
 → yama·zakura 'mountain cherry tree' - - - - after a modifier
 φ + {zakura, sakura} 'cherry tree' (head)
 → sakura 'cherry tree' - - - - after nothing, standing alone
- cf. *#[+voice]...# (Native) (有坂 1955)

この異形態を持つのは基本的に和語のみであり、和語以外や和語の例外は無声異形態のみ持つとすることで、語種的・語彙的例外を説明できる。ただし、基底で濁音を語中に含む語 (tokage/*dokage) は無声異形態のみを持つことになり、*#[+voice]...# (Native)と同様に、ライマンの法則 *#[+voice]...#[+voice]...# (Native)が基底レベルでも働いていることになる。この点は、OT では表層レベルでいずれにしろ諸制約が必要なので、簡潔な文法を阻害する重複問題 (Duplication Problem; McCarthy 2002)を生む。それは基底レベルには制約が存在しないという Richness of the Base の原則によるからである。

第3の分析可能性は、Ito and Mester (2003 et seq.)により定説となった考えで、連濁とは有声化を具現する「接中辞」(連濁形態素)が語と語をつなぐことで起こるものだとする分析である。

(4) 接中辞分析

PrWd + [+voice] + PrWd (Native)

これは英語の *statesman*, *salesman* の-s のふるまいに似る (*mailman*, *fisherman* には付かない)。この接中辞を持つのは和語のみであり、和語以外や和語の例外は持たないとすることで、語種的・語彙的例外を説明できる。また OT との相性もよく、*#[+voice]...# (Native)や*#[+voice]...[+voice]...# (Native)を、他の諸条件とともに表層レベルで課すだけですむ。さらには、次のような韓国語の「saisiot 現象」との並行性も捉えられる。濃音化や重子音化は C-slot の挿入 (と後続音への同化) に他ならないからである。

(5) 複合語形成における接中辞 (C-slot) : 田中 (2015)、データは孫 (2008)

- a. 主要部の語頭子音が平音の場合に濃音化 (重子音化)

pom + pi → pom·p·pi 「春雨」
 tɨl + čimsɨŋ → tɨl·č·čimsɨŋ 「野獣」
 namu + kači → namu·k·kači 「木の枝」

- b. 主要部の語頭子音が鼻音の場合に重子音化

pi + mul → pi·m·mul 「雨水」
 honča + mal → honča·m·mal 「独り言」

このように、2000年代以降はほぼ接中辞分析が支持され、定説として今日に至っている。

3. 連濁のミステリー

しかしながら、こうした定説が確立しながらも、未解決問題が少なくとも3つは存在している。まず第1は「例外処理が提起する理論的問題」である。それは端的に言えば、Ito and Mester (2003)が例外処理に関して(6a,b)のように、接中辞の有無による方法と制約階層による方法という2つの方略が重複している点である。

(6) Ito & Mester (2003)の例外処理

- a. 制約階層
Faith_{Foreign}, Faith_{Sino-Japanese}, Faith_{Mimetics} >> Realize-M >> Faith
- b. 基底での接中辞付加
sirihuki-[+voice]-kami → sirihukigami miso-φ-siru → misosiru
- c. 連濁する漢語・外来語・擬態語：最下位の Faith (ラベルがないのがミソ)
boueki-[+voice]-kaisya → boueki-gaisya ama-[+voice]-kappa → amagappa
simi-[+voice]-simi → simizimi hono-[+voice]-hono → honohono
- d. 連濁しない漢語・外来語・擬態語：上位の各 Faith のラベル
kokusai-φ-syakai toiretto-φ-peepaa pota-φ-pota

これにより、連濁する漢語・外来語・擬態語は和議と同様に、(6a)の最下位の Faith に紐づけられる一方で、(6c)のように連濁形態素を持つことになる。また、連濁しない漢語・外来語・擬態語は(6a)の Realize-M より上位の Faith に紐づけられる一方で、(6d)のように連濁形態素を持たないことになる。しかしながら、このような方略は例外処理の関する別の意味での「重複問題」を喚起し、接中辞分析と OT の相性の良さが裏目に出ることを示している。オッカムの剃刀の原則に抵触するからである。これに対し、異形態分析は必ずしも OT や制約階層の存在を含意しない、いわば理論中立の考え方であり、このような問題が生じることはない。

第2の未解決問題は「他現象との相互作用が提起する不透明性問題」である。これにはライマンの法則が関連しており、接中辞分析は基底レベルでの連濁形態素を仮定するので、主要部に濁音が含まれる場合にはこの形態素を表層レベルで削除することになる。

(7) ライマンの法則の定式化 (表層制約)

*[underlying-V ... underlying-V] : sakura-~~[+voice]~~-hubuki 「桜吹雪」

つまり、同一領域内では基底形からの有声性 V により、同じく基底レベルから存在する連濁形態素 V を削除するしかない。しかしながら、この定式化は以下のような深刻な問題を生む。(8b),(9a)のように、他の規則適用により、必ずしも基底形からの V が表層レベルで存在しているわけではないからである。

(8) 「逆とげ」問題：ライマンの法則の適用過剰

- a. saka-dome 「坂止め」 koi-bumi 「恋文」
yaki-zakana 「焼き魚」 osi-bana 「押し花」
- b. saka-tone /*saka-done 「逆とげ」 maru-hane /*maru-bane 「丸はげ」
oo-tokane /*oo-dokane 「大とかげ」 ai-kani /*ai-gani 「合鍵」
鼻濁音化 (g → ŋ / V_V) との関連で (Ito and Mester 1997)

(9) 「赤とんぼ」問題：ライマンの法則の適用過剰

- a. aka-tombo /*aka-dombo 「赤とんぼ」
sirooto-kangae /*sirooto-gangae 「素人考え」
- b. 鼻音後有声化 (C → [+voice] / N_) との関連で

(13) 日本語のその他の異形態分析

- a. 複合語の**母音変異**
{ame, ama}-gasa 「雨傘」 {siro, sira}-kaba 「白樺」
{ki, ko}-dati 「木立」 {siro}-usagi 「白うさぎ」
- b. 複合語の**[s]-挿入**
haru-{ame, same} 「春雨」 ma-{ao, sao} 「真っ青」
naga-{ame} 「長雨」 usu-{ao} 「薄青」

以上のように、語種や語彙的な例外や、不透明な例外現象の多い連濁とは、接中辞分析より異形態選択分析の方が相性が良く妥当だといえる。そのことは複合語に見られる他現象(13)と同様である。

最後の未解決問題は「手法の違いが提起する矛盾の問題」である。これは連濁に課せられる諸条件の開発に関わるものである。たとえば、ライマンの法則のような類音・同音連続回避の制約に関連して、次のような傾向が観察されている。

(14) ライマンの法則以外の類音・同音連続回避の制約

- a. **唇音連続回避**の制約：*Lal.Lab（語中）（金田一 1976）
sirayuki-hime 「白雪姫」 suna-hama 「砂浜」 kutu-himo 「靴紐」
- b. **同音節連続回避**の制約：*C₁V₂.C₁V₂（語間）（佐藤 1989）
tobi-hi 「飛び火」 kidzu-tzukeru 「傷つける」

しかし、前者には *koi-bumi* 「恋文」、*soroi-bumi* 「揃い踏み」、*beta-bome* 「ベタ褒め」、後者には *tabi-bito* 「旅人」、*kizi-ziru* 「雉汁」、*muda-damesi* 「無駄試し」などと例外も多い。はたして、こうした制約に実在性があるのだろうか。たとえば、同音節連続回避の制約 (14b)については、定量的手法を用いた、(15)のような2つの異なる検証研究がある。

(15) 定量的検証をした2つの研究

- a. 無意味語を用いた心理実験（Kawahara and Sano 2014）
ika-kaniro 「いかかにろ」 > ika-taniro 「いかたにろ」（連濁促進効果）
iga-taniro 「いがたにろ」 > iga-kaniro 「いがかにろ」（連濁阻止効果）
→ 同音節連続回避の効果は認められる。
- b. コーパスを用いた統計調査（Irwin 2014）
複合語間における同音節連続回避の効果に統計的な証拠はない：“[T]he analyses in §3 and §4 have demonstrated conclusively that any putative influence exerted by duplicate moras in the direction of restricting rendaku must be rejected. This conclusion has been drawn from statistical analyses of empirical data.”

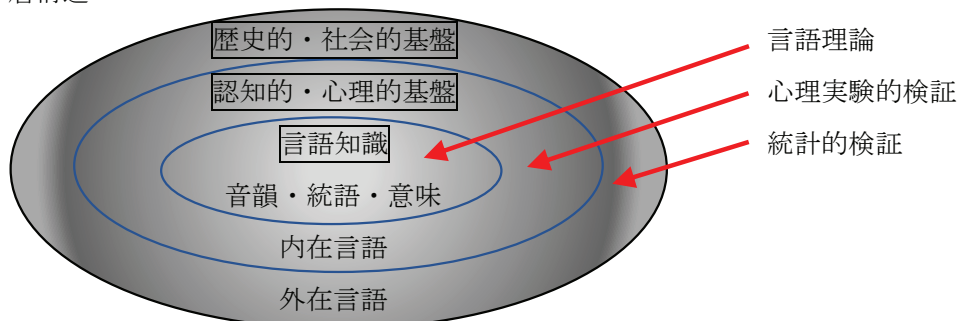
(15a)の「>」は左側が連濁傾向が有意に高いことを示しているが、心理実験とコーパス調査では異なる結果を得たようである。つまり、心理的実在性 (psychological reality)と統計的実在性 (statistic reality)が矛盾する。

これについて、心理実験における無意味語は「形と意味のペア」ではない点で「語」ではなく、形態的な実在性はない。また、用いられる語も和語の条件に従うというだけで、和語である保証もない。和語の諸条件を満たす外来語や漢語はいくらでもある（外来語や漢語は和語の諸条件を違反するものもあるというだけである）。一方で、(14)の制約はある種の例外を抱えつつも一定の一貫性を持ち、連濁という他の形態現象との関連性も持つという意味で、形態的実在性 (morphological reality)はある。そして、類音連続回避が働くことによる異形態選択分析も可能である。(14)の語は関連する形態構造制約 (morpheme structure constraint)により、有声異形態を持たないというだけである。

また、そもそも心理実験とコーパス調査による検証結果が異なる点については、もし言語が下記のような多層構造を持つならば、特に不思議なことではない。むしろ一致する方が不思議ともいえる。

(16) 言語の多層構造：田中 (2025)

言語の多層構造



言語知識：言語固有部分

認知的・心理的基盤：上記に記憶、知覚、心の理論、社会認知などが被さった部分

歴史的・社会的基盤：上記に歴史的・社会的な約束事が加わり、実際に発話（外在化）された部分

つまり、理論から導かれる帰結（結果予測）を心理実験や統計調査で間接的に裏づけることはできても、必ずしも直接証拠にはなり得ないということである。連濁などの形態音韻現象は、心理的実在性 (psychological reality) や統計的実在性 (statistic reality) よりも、言語内的な形態的実在性 (morphological reality) をこそ求めるべきではないかと思われる。

4. 結論

2000年代以降、連濁は形態音韻現象であると認識され、その本質的性質は和語を中心とした複合語形成に現れる有声化接中辞であるというのが定説であった。しかしながら、例外現象を処理する方略や他現象との相互作用が不透明性問題の観点からは、むしろ異形態選択による分析の方が妥当であるとする根拠を、本稿では示してきた。韓国語の *sasiot* も異形態選択分析で可能である。また、連濁に課せられる諸条件を発掘する場合、心理実験や統計調査による裏づけも有効だが、形態的実在性をこそ重視すべきであるとも主張した。

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参考文献

有坂秀世 (1955) 『上代音韻攷』. 三省堂.

Irwin, Mark (2014) "Rendaku across duplicate moras," *NINJAL Research Papers* 7, 93-109.

Ito, Junko, and Armin Mester (1986) "The phonology of voicing in Japanese: Theoretical consequences for morphological accessibility," *Linguistic Inquiry* 17(1), 49-73.

Ito, Junko, and Armin Mester (2001) "Alternations and distributional patterns in Japanese phonology," *Journal of*

- the Phonetic Society of Japan* 5(2), 54-60. [Revised and extended from “Lexical classes in Japanese: A reply to Rice,” *Phonology at Santa Cruz (PASC)* 6, 39-46.]
- Ito, Junko, and Armin Mester (2003) *Japanese Morphophonemics*. Cambridge, MA: MIT Press.
- 賀茂真淵(1765-1769)『語意考』。[国立公文書館デジタルアーカイブ <https://www.digital.archives.go.jp/file/1237120.html>]
- Kawahara, Shigeto, and Shin-ichiro Sano (2014) “Identity avoidance and rendaku,” *Proceedings of the Annual Meeting on Phonology 2013*. [Available at <https://journals.linguisticsociety.org/proceedings/index.php/amphonology/article/view/23>]
- 金田一春彦 (1976) 「連濁の解」, *Sophia Linguistica: Working Papers in Linguistics* 2, 1-22. 上智大学大学院言語学研究室.
- Kuroda, Shigeyuki (2002) “Contrasts in Japanese; A contribution to feature geometry,” Ms., University of California, San Diego.
- Lyman, Benjamin Smith (1894) “Change from surd to sonant in Japanese compounds,” *Oriental Studies: A Selection of the Papers Read before the Oriental Club in Philadelphia 1888-1894*, ed. by the Oriental Club in Philadelphia, 160-176. Boston: Ginn and Company.
- McCarthy, John J. (2002) *A Thematic Guide to Optimality Theory*. Cambridge: Cambridge University Press.
- 本居宣長 (1767-1798) 『古事記伝』。[国立公文書館デジタルアーカイブ <https://www.digital.archives.go.jp/file/3694448.html>]
- 中川芳雄 (1966) 「連濁・連清 (仮称) の系譜」, 『国語国文』 35(6), 302-314.
- 中川芳雄 (1978a) 「連濁涵精 (上)」 『国語国文』 47(2), 34-56.
- 中川芳雄 (1978b) 「連濁涵精 (下)」 『国語国文』 47(3), 41-58.
- 奥村三雄 (1980) 「連濁」, 『国語学大辞典』 (国語学会編), 925-926. 東京堂出版.
- Otsu, Yukio (1980) “Some aspects of rendaku in Japanese and related problems,” *Theoretical Issues in Japanese Linguistics (MIT Working Papers in Linguistics 2)*, ed. by Ann Farmer and Yukio Otsu, 207- 228.
- Rice, Keren (1993) “A reexamination of the feature [sonorant]: The status of ‘sonorant obstruents,’” *Language* 69, 308-344.
- Rodrigues, João “Tçuzu (通詞)” (1604-1608) *Arte Grande da Lingoa de Iapam*. [グーグルブックス https://books.google.co.jp/books?id=NwnUAAAAMAAJ&printsec=frontcover&redir_esc=y#v=onepage&q&f=false. 土井忠生訳 『日本大文典』, 三省堂, 1969.]
- 佐藤大和 (1986) 「複合語におけるアクセント規則と連濁規則」, 『日本語の音声 音韻 (上)』 (杉藤美代子編), 233-265. 明治書院.
- 孫範基 (2008) 「韓国語の連濁: sai-sios [sa.i.ši.ot]」, 第3回熱海音韻論フェスタ, 2008年2月21日, KKR 熱海.
- 鈴木豊 (2004) 「『連濁』の呼称が確立するまで: 連濁研究前史」, 『国文学研究』 142, 134-124, 早稲田大学国文学会.
- 田中伸一 (2015) 「有声性の強さから見た日本語の不透明現象」, 『日本語研究とその可能性』 (益岡隆志編), 26-51.
- 田中伸一 (2025) 「座談会: 音韻論はどこへゆくのか」, 『生成音韻論の歴史と展望: 田中伸一教授還暦記念ハンドブック』 (橋本大樹・渡部直也・黄竹佑編), 360-413.
- Vance, Timothy J. (1987) *An Introduction to Japanese Phonology*. New York: State University of New York Press.

主要部パラメータ再考—外在化の観点から*
(Head Parameter Reconsidered—From the Perspective of Externalization)

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キーワード：主要部パラメータ, 外在化, 線形化, 語順, 右方指定部

1. はじめに

生成文法では、言語間の語順の差異を説明するために、X バー理論のもと主要部パラメータが定式化されていた。句 XP 内で、主要部 X が(1a)のように先頭に来るか、(1b)のように末尾に来るかにより、主要部と補部の順序が決定される。

- (1) a. [XP X YP]
b. [XP YP X]

ミニマリスト・プログラムでは、句構造は無順序集合であり X バー式型は採用されておらず、語順は外在化 (Externalization) の過程で決定されると考えられるため、主要部パラメータを採用することはできない。このため、言語間の語順の差異を統辞的移動に帰する考えなどが提案されているが (Chomsky (1995), cf. Kayne (1994))、本論では、外在化の観点から主要部パラメータが捉えていた効果を再考する。また、X バー理論では言及されていない指定部の生起方向についても検討する。

近年の統辞論研究では、計算効率などの第三要因が統辞派生に関与していると考えられているが (Chomsky (2005))、本論では外在化の過程にも第三要因が関与していると考えられる。¹ 具体的には、最小探査 (Minimal Search) で探知される要素、すなわち統辞構造における主要部が語順の決定に関与していると考えられる。これを念頭に、統辞派生の基本単位であるフェイズ領域内を見ても、複数の主要部が最小探査で探知される。たとえば、X をフェイズ主要部とする(2)の領域には、X と Y という二つの主要部が探知される。

- (2) {X, {WP, {Y, ZP}}}

ここで、主要部パラメータにおける主要部先頭／末尾の語順を、外在化の過程で利用可能な概念である隣接性の観点で捉え直すと、主要部同士が必ず隣接するように線形化が適用されると(3b)に示す主要部末尾の効果が得られ、主要部同士が隣接する必要がない形で線形化が適用されると(3a)に示す主要部先頭の効果が得られることがわかる。

- (3) a. [XP X [YP WP [Y' Y ZP]]]
 b. [XP [YP WP [Y' ZP Y]] X]

これを(4)に示す隣接性要件にもとづき述べ直すと、(3b)は(4)を満たし、(3a)は(4)を満たさないということになる。

(4) 形態音韻的隣接性要件

主要部は句構造内で一つ下の主要部に形態音韻的に隣接する。

なお、2.3節で見るように、(3a)の主要部先頭の語順でも(4)を満たす場合があるので注意されたい。

これに加え、(5)に示す違反可能な一般条件を仮定する (cf. Kayne (1994))。 ²

(5) 線形化に課される統辞構造条件 (違反可能)

統辞構造において α が β より高い位置にある場合、 α は β に先行するよう線形化される。

この条件は、主要部同士の隣接性だけで決定されない語順、例えば(3a, b)において指定部要素が左側に置かれることなどを捉える。ただし、(3b)のように、主要部同士の隣接性が求められる場合は、低い方の主要部 (Y) が高い方の主要部 (X) に先行することを許すという点において、(5)は違反可能である。すなわち、(4)を満たすためには(5)の違反が許される。

これらの条件のもと、(6)のパラメータが定式化される。

(6) 拡大主要部パラメータ (Extended Head Parameter)

{ X, { WP, { Y, ZP } } }において、

- a. X が Y に先行するよう線形化される。(主要部先行)
 b. X が Y に後行するよう線形化される。(主要部後行)

このパラメータは、二つの主要部を持つ領域、すなわち従来の主要部パラメータよりも広い (拡大された) 領域で定式化されているので、拡大主要部パラメータと呼ぶ。また、本論では(6a)を主要部先行、(6b)を主要部後行と呼ぶことにする。

以下、2.1節では、英語と日本語を例に、どのように提案したパラメータの値が決定されるのかを示す。2.2節では、ドイツ語を例に動詞第二位語順の分析を試みる。2.3節では、ルンディ語を例に右方指定部の原理的な説明を試みる。3節で結語を述べる。

2. 語順と隣接性

2.1. 英語と日本語

従来の主要部パラメータでは、英語は主要部先頭、日本語は主要部末尾とされてきた。この効果が、拡大主要部パラメータのもとでどのように捉えられるのかを見る。まず、英語は主要部同士の隣接性が要請されない言語である。

- (7) a. [_{CP} **Can** [_{TP} John [_{VP} **open** the door]]]?
 b. I know [_{CP} **that** [_{TP} John **could** [_{VP} open the door]]].
 c. The new law certainly **may** possibly **have** indeed **been** badly **formulated**.
 (Quirk et al. (1986: 495))

これに対し、日本語は主要部同士の隣接性が要請される言語である。

- (8) a. [_{TP} Taro-ga [_{VP} ringo-o **tabe**] -ta]
 Taro-NOM apple-ACC eat -PAST
 ‘Taro ate an apple.’
 b. [_{CP} [_{TP} Taro-ga [_{NegP} [_{VP} ringo-o **tabe**] -na] -katta] -no]
 Taro-NOM apple-ACC eat -NEG -PAST -Q
 ‘Didn’t Taro eat an apple?’

これらの事実にもとづき、英語は隣接性要件(4)を満たさないが統辞構造条件(5)を満たし拡大主要部パラメータ主要部先行の値を取り、日本語は(4)を満たすために主要部間で(5)の違反となり主要部後行の値を取るが、指定部は(5)に従い左側に生起する。その結果、英語では指定部-主要部-補部、日本語では指定部-補部-主要部の語順が得られる。このように、従来の主要部パラメータの効果を得ることができ、指定部の生起方向も決めることができる。

2.2. ドイツ語

次にドイツ語の動詞第二位語順 (V2) の分析を試みる。V2 では主節の定形動詞類 (定形の T にある要素) が C へ移動すると仮定する (Vikner (1995))。

- (9) a. [_{CP} Er **hat** [_{TP} *ter* das Buch **gekauft** *that*]]
 he has the book bought
 ‘He has bought the book.’
 b. **dass** die Theorie wohl tatsächlich schlecht **formuliert** (*) **worden** (*) **sein** (*) **mag**
 that the theory possibly indeed badly formulated been be may
 ‘The new theory certainly may possibly have indeed been badly formulated.’ (Haider (2003))

(9a)は、定形の T が主節の C に移動し、主節の C と動詞の間に隣接性が要請されないことを示す。(9b)は埋め込み節で、「(*)」はこの位置に副詞類を置くことができないことを示している。この例は、まず、C へ移動していない (元位置の) 動詞類の間に隣接性が要請されることを示している。次に、埋め込み節の C (*dass*) が一つ下の主要部 T (*mag*) と隣接する必要がない点も示している。これらの事実から、ドイツ語では、C と T の関係は統辞構造条件(5)を満たし主要部先行の値が与えられる一方、その他の主要部 (T, v, V など) は隣接性要件(4)を満たすために(5)の違反となり主要部後行の値が与えられることが分かる。また、指定部要素は(5)により左側に置かれる。このように、統辞構造的に直近の主要部間の形態音韻的隣接

関係と統辞構造条件にもとづき拡大主要部パラメータの値が決定され、従来の主要部パラメータの効果（CPは主要部先頭、TPやVPは主要部末尾）を捉えることができる。

2.3. ルンディ語

バントゥ諸語のルンディ語の基本語順はSVOである（Ndayiragije (1999)）。

- (10) Abâna ba-á-ra-nyôye amatá
 children 3P-PST-F-drink:PERF milk
 ‘Children drank milk.’ (Ndayiragije (1999: 408))

この言語では、主語マーカー (*ba-*)、時制マーカー (*-á*)、そして、文中に焦点要素がなく中立的な解釈がされる文には反焦点 (*antifocus*) マーカー (*-ra*) が、(10)に示す順に接頭辞として動詞 (*nyôye*) の前に生起する。Cinque (1999: 70)の提案に従い、バントゥ諸語の接頭辞の順はそれに対応する統辞主要部の順に一致すると仮定し、ルンディ語の句構造を以下のように分析する。

- (11) [_{AgrsP} *Subj* Agrs [_{TP} T [_{FocP} Foc [_{VP} V *Obj*]]]]
ba- á- ra- nyôye

この句構造にもとづくくと、主要部 (Agrs, T, Foc, V) は形態音韻的隣接性要件(4)を満たし、且つ、統辞構造条件(5)も満たし、主要部先行（従来のXバー理論における主要部先頭）の値を取るようになる。

この言語で焦点要素が文中に現れると、反焦点マーカーが消え、焦点要素が文末に置かれる。焦点要素を太字で示す。

- (12) Amatá y-á-nyôye **abâna**
 milk 3S-PST-drink:PERF children
 ‘Children (not parents) drank milk.’ (Ndayiragije (1999: 400))

ここでは、*abâna* ‘children’が焦点として解釈される。この現象について、Ndayiragije (1999)は焦点句 (FocP) の指定部を右側に置くことが妥当であることを経験的に示している。Kayne (1994)に端を発する現在主流となっている語順に関する考えのもとでは、指定部は必ず左側に置かれると考えられている。以下では、本論の提案のもとでルンディ語の焦点句の指定部が右側に置かれることが自然に説明されることを示す。

(11)の句構造をもとに、(12)を考えてみよう。(12)の基底構造は(13)となる。なお、議論の便宜上、目的語は考慮に入れない。

- (13) [_{AgrsP} Agrs [_{TP} T [_{FocP} Foc [_{VP} *Subj* V ...]]]]
y- á- ø- abâna nyôye

ここで、主語 *abâna* ‘children’は動詞句内主語位置に基底生成されている。この主語が焦点の解釈を得るためには FocP の指定部に移動する必要があると考える。この指定部が左側に線形化されると、時制接頭辞 *á-* と動詞 *nyôye* の形態音韻的隣接性の要請を満たすことができない。しかし、FocP の指定部を右側に置くよう線形化すると、統辞構造条件(5)の違反とはなるが形態音韻的隣接性要件(4)を満たすことができる。日本語では(4)を満たすために主要部間での(5)の違反が許されたが、ルンディ語では(4)を満たすために指定部とその他の要素間で(5)の違反が許されると考えることができる。この考え方が正しいとすると、右方指定部を原理的に捉えることができる。

3. おわりに

本論では、第三要因原理の一つである最小探査で探知される要素、つまり統辞構造における主要部に着目することにより、主要部パラメータの効果を捉え、言語間の語順の差異を説明することを試みた。主要部間の形態音韻的隣接性の要請の有無と、線形化に課される統辞構造条件の相互作用から、主要部と補部の順だけでなく指定部の生起方向が説明される可能性を示した。このようなアプローチは、外在化にも第三要因が関わっていることを示唆するかもしれない。

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注

¹ 同様の考えにもとづく音韻句形成のメカニズムについては Dobashi (2020: 第4章)を参照。

² このような条件は、指定部の線形化について触れていない従来の主要部パラメータでも必要であるように思われる。この条件の導入に関し、貴重なコメントをくださった中京大学の太滝宏一氏に御礼申し上げます。

参考文献

- Chomsky, Noam (1995) *The Minimalist Program*, MIT Press, Cambridge, MA.
- Chomsky, Noam (2005) “Three Factors in the Language Design,” *Linguistic Inquiry* 36, 1-22.
- Cinque, Guglielmo (1999) *Adverbs and Functional Heads: A Cross-linguistic Perspective*, Oxford University Press, Oxford.
- Dobashi, Yoshihito (2020) *Externalization: Phonological Interpretations of Syntactic Objects*, Routledge, London.
- Haider, Hubert (2003) “V-Clustering and Clause Union: Causes and Effects,” in *Verb Constructions in German and Dutch*, ed. by Pieter Seuren and Gerard Kempen, 91-126, John Benjamins, Amsterdam.
- Kayne, Richard (1994) *The Antisymmetry of Syntax*, MIT Press, Cambridge, MA.
- Ndayiragije, Juvénal (1999) “Checking Economy,” *Linguistic Inquiry* 30, 399-444.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey N. Leech and Jan Svartvik (1986) *A Comprehensive Grammar of the English Language, 4th ed.*, Longman, London.
- Vikner, Sten (1995) *Verb Movement and Expletive Subjects in the Germanic Languages*, Oxford University Press, Oxford.

Understanding and Extending the Miracle Creed Framework *

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This symposium explored a number of extensions of the Miracle Creed MC framework of Chomsky 2023 & the Keio-EMU lectures, specifically: (i) Internal Merge transitions a theta-marked element E from the propositional to the clausal domain where E is subject to clausal domain properties and (ii) a strong form of Minimal Yield MY derives desirable aspects of the phase-impenetrability condition PIC and the Duality of Semantics.

To fully appreciate these innovations, we first reviewed key aspects of the Miracle Creed system including the guiding principle that Merge and all relations derived from Merge “are thought-related, with semantic properties interpreted at CI.” There are a number of categories of thought: *propositional*, basic theta-structure; and *clausal*, force- and information-related (interrogative, topic, focus, among others). For the MC, this duality of semantics is derived from the two modes of application of Merge, namely External Merge EM for the propositional domain and Internal Merge IM for the clausal domain. We traced just how this works in the MC and its consequences, in particular its reanalysis of successive cyclic movement “in terms of access to the closest phase in the derivation.”

Having provided the necessary background, our primary goal was to pursue the consequences, both conceptual and empirical, of a number of extensions of the MC. We first considered the idea that IM exits an element E from the propositional domain and enters it into the clausal domain where E is, naturally enough, subject to properties of the clausal domain. Assuming that only theta-marked elements are subject to IM, it follows that there is exactly one instance of IM for any given element. Thus an object raises to the ‘object shifted’ position and the subject raises to spec of Infl, and no farther. This, in turn, requires a reconsideration of the MC’s reanalysis of successive cyclic movement in terms of phase-based access under minimal search.

We explored a strong form of MY whereby an application of Merge must decrease (if possible) and can never increase the number of accessible terms in the WorkSpace. We showed that this version of MY has a number of important advantages, including that it derives the PIC and, in fact, derives the

Duality of Semantics, such duality following as a desideratum, while maintain the empirical advantages traced above.

Finally, we explored the conceptual and empirical consequences of several extensions of the MC framework to empirical domains, which include: contraction, complementizers and their externalization requirements, parasitic gaps and across-the-board, reconstruction with successive cyclic A- and A'-movement effects, and remnant movement and its interaction with NP-movement, *Wh*-movement, and scrambling.

Overall, we advanced understanding of the MC system and considered its prospects for future work, consistent with the Strong Minimalist Thesis.

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REFERENCES

Chomsky, Noam (2023) “The Miracle Creed and SMT.” Ms., University of Arizona. [Published in Matteo Greco and Davide Mocci eds., *A Cartesian dream: A geometrical account of syntax – In honor of Andrea Moro*, 2024]

実験語用論の最先端：やってみなくちゃわからない、言語コミュニケーションへの多面的アプローチ

(Cutting edge of experimental pragmatics: A multi-dimensional approach to linguistic communication)

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キーワード：推意, 終助詞, 指示詞, 授与動詞, 脳波, 談話完成課題, オンライン(Web)実験

1. 状況モデル構築としての語用論的推論 (担当：時本真吾)

本発表では推意 (implicature) 理解のメカニズムを神経言語学的に考察する。実験刺激は、3 人の話者からなり、間接的発話を含む会話で、会話の作成に当たって、(1)推意理解に想定される語用論的推論のための文脈が明示的か非明示的か、(2)話者の含意が現在の意志または過去の経験のいずれに関わるかの2 要因を操作した。会話の聴覚呈示に伴う実験参加者の脳波を分析した結果、推意理解が惹起する頭皮上事象関連電位(ERP)について、過去の経験に関わる会話のみに文脈明示性の効果が認められた。推意理解の推論については、命題的表現の連鎖を想定することが一般的で (Grice, 1975), 文脈が非明示な条件では、文脈を補う推論のステップが最低一つ想定されるが、現在の意志ならびに過去の経験に関する会話に共通した神経活動は認められなかったため、命題的表現の連鎖として語用論的推論を理解することは難しい。また、有意な ERP が認められた潜時帯について、脳波の発生源推定によりメンタライジングネットワークと時間認知ネットワークとの因果的相互作用(effective connectivity)を分析した結果、過去経験を含意する会話の文脈非明示条件において脳内の多くの領域から海馬傍回への information flow の増加が認められた。本発表では、この information flow を自伝的記憶へのアクセスの現れと解釈し(Ward et al., 2014)、話者の過去経験に関する推意の理解においては、心の理論の働きとして聞き手の自伝的記憶が探索されていると主張する。

参考文献 (時本分)

Grice, H. Paul. (1975). "Logic and conversation," *Syntax and Semantics, vol. 3: Speech Acts*, ed. by Peter Cole and Jerry L. Morgan, 41-58, Academic Press.

Ward, M. Andrew et al. (2014). "The parahippocampal gyrus links the default-mode cortical network with the medial temporal lobe memory system," *Human Brain Mapping, 35*, 1061–1073.

2. 自閉スペクトラム症者と定型発達者の文脈に応じた終助詞使用の違いと共通点（担当：直江大河）

神経発達症の一種である自閉スペクトラム症（autism spectrum disorder, ASD）者は、言語・知的障害の併存と独立に、言語の語用論的側面が一貫して定型発達（typical developed, TD）者と異なるとされている（American Psychiatric Association 2013; World Health Organization 2022）が、具体的な特徴は言語の類型的特徴や話者が属する文化慣習に依存する。本発表では、日本語を母語とする ASD 者の語用論的特徴の一つとして指摘されている終助詞使用の非典型性（Kato et al. 2022; 綿巻 1997）について詳しく検討した実験語用論研究について報告した。はじめに先行研究を概説し、ASD 者の終助詞獲得が遅れる可能性と、成人 ASD 者と TD 者の終助詞使用の違いは文脈に対する非典型性に現れる可能性を指摘した。

次に、終助詞が典型的に用いられる文脈を指摘した語用論研究を紹介し（Kiyama et al. 2018; Maynard 1993; 神尾 1990）、「ね」「よ」の典型性は文の命題部分に対する話し手と聞き手の心的状態の相対関係に依ることを説明した。それらを応用した談話完成課題を用いて終助詞を産出させた実験研究（Naoe et al. 2024）を紹介し、ASD 者は TD 者よりも「ね」の産出頻度が低く、TD 者が「ね」を典型的に発話する文脈で「よ」を多く発話することを報告した。最後に、ASD 者の終助詞使用についての関連研究と近年の神経発達症研究の動向を概観し、ASD 者の語用論的特徴がそのまま言語運用の知識を反映しているとは限らない点、他の終助詞も検討する意義、実験語用論手法の更なる発展の必要性を議論した。

参考文献（直江分）

- American Psychiatric Association (2013) *Diagnostic and statistical manual of mental disorders (5th ed)*, American Psychiatric Publishing, Inc., Arlington, VA, US
- Kato, Sumi, Kazuaki Hanawa, Vo Phuong Linh, Manabu Saito, Ryuichi Imura, Kentaro Inui and Kazuhiko Nakamura (2022) “Toward mapping pragmatic impairment of autism spectrum disorder individuals through the development of a corpus of spoken Japanese,” *PLoS One* 17, e0264204.
- Kiyama, Sachiko, Rinus G. Verdonschot, Kexin Xiong and Katsuo Tamaoka (2018) “Individual mentalizing ability boosts flexibility toward a linguistic marker of social distance: An ERP investigation,” *Journal of Neurolinguistics* 47, 1-15
- Maynard, Senko Kumiya (1993) *Discourse modality : subjectivity, emotion and voice in the Japanese language*, John Benjamins Publishing Company, Amsterdam
- Naoe, Taiga, Tsukasa Okimura, Toshiki Iwabuchi, Sachiko Kiyama and Michiru Makuuchi (2024) “Pragmatic atypicality of individuals with autism spectrum disorder: Preliminary results of a production study of sentence-final particles in Japanese,” *Issues in Japanese Psycholinguistics from Comparative Perspectives. Volume 2 Interaction Between Linguistic and Nonlinguistic Factors*, ed. by Masatoshi Koizumi, 183-200, De Gruyter Mouton, Berlin
- 綿巻徹 (1997) 「自閉症児における共感獲得表現助詞「ね」の使用の欠如: 事例研究」, 『発達障害研究』 19 巻, 48-59
- World Health Organization (2022) *ICD-11 : International Classification of Diseases Eleventh Revision*, World Health Organization, Geneva
- 神尾昭雄 (1990) 『情報のなわ張り理論 : 言語の機能的分析』大修館書店, 東京

3. 現場指示時における指示詞選択の文脈条件に関する通言語的比較 (担当：菅谷友亮)

指示詞の直示もしくは現場指示用法では、視覚・空間的文脈が与えられ、話し手 (や聞き手) と対象物の位置関係によって指示詞が選択される。本研究は、その文脈条件を明らかにする実験を作成し言語横断的 (日、韓、西、英、伊、独、仏) に実施した。具体的には、以下の (距離判断に関わる) 文脈条件が指示詞選択に影響を与えると想定し、それらの影響の程度を調査する視覚刺激 (絵) を実験参加者に呈示し、指示詞選択させた。

- (i) 話し手 (S) が距離スケール (FS) 上の様々な地点にある**対象物 (T)** に対して判断を行う。
- (ii) S が**聞き手 (H)** の存在を認識し、S-T 間だけでなく H-T 間の距離を考慮する。
- (iii) **比較対象 (C)** があり距離判断が相対的になる。
- (iv) 届く/届かないのような特定の**基準値 (St)** があり絶対的判断の境界となる。
- (v) 親近感の程度など他の**背景スケール (BS)** が FS に影響を与える。

また、H の存在による指示詞選択への影響と心理的な共感性が相関するかを調査するため、視点取得など複数の下位尺度から共感性を測定する心理尺度である IRI (対人反応性指標) を使用した (Davis 1980)。

実験結果として以下のような結果が得られた。最初に、(i) に関して、遠近の対称が失われている言語 (= 独/仏) で、予想通り、指示詞選択における T の位置関係は影響が小さかった。(ii) に関して、日/韓/西で、H から T までの距離を考慮して指示詞選択し、日/韓が西よりその性質が強かった。日/韓は聞き手側、西は中距離という違いが結果に表れたと思われる。英でも H の位置関係の影響が有意に働き、近称以外の指示詞で「S 側ではない」 (= H 側) という意味により、H に影響を受けたと考えられる。また、H の存在による影響と IRI における視点取得の得点の間にはどの言語においても有意な相関関係はなかった。

次に、(iii) に関して、St として透明のパーティションを配置したが、全体的に、St の前にある T に対して近称を使いやすく、St の後ろにある T に対して遠称を使いやすくなった。英/伊において、St が指示詞選択に有意に影響を与えた。(iv) に関して、T が C よりも S 側にあれば、近称を使いやすく、逆に C が T よりも S 側にあれば、遠称を使いやすくなった。伊/西/仏において、C が指示詞選択に有意に影響を与えた。英/伊で絶対判断、日/韓で相対判断を重視と考えていたが、前者はその通りとなったが、後者は想定していた結果とは異なった。

最後に、(v) に関して、視覚刺激の中で S にレーザーポインターを持たせ接近性 (→BS) を変化させたが、それによって全体的に近称を使いやすくなった。独以外で、その BS が指示詞選択に有意に影響を与えた。距離判断は物理的だけではなく心理的な距離の判断であり、想定していた通りであった。

参考文献 (菅谷分)

Davis, Mark H. (1980) "A Multidimensional Approach to Individual Differences in Empathy," *JSAS Catalog of Selected Documents in Psychology* 10, 85.

4. 授受表現の理解における共感性の役割（担当：米田）

自閉スペクトラム症者は視点取得(他者の視点に立つ能力)に困難を抱え、それが言語の理解や発話にも表れる。たとえば、能動文を受動文にすることは、視点を主語から目的語に移動させることを必要とし、視点取得が得意でない自閉スペクトラム症児にとっては困難になりうる(竹尾・伊藤, 2013)。

Web 調査によって募集された 300 名の高校生が、本研究に参加した。分析対象となったのは、229 名の高校生で、高校 1 年生 85 名、高校 2 年生 77 名、高校 3 年生 67 名であった。二人の人物が登場する物語を作成し、2 文目で、時間経過を操作した 12 個の物語を参加者は読解した。2 文目直後の時点で、文の実現可能性を判断した。読解課題の後、共感的関心(自分より不運な人たちを心配し、気にかけることが多い、など)、個人的苦痛(非常事態では、不安で落ち着かなくなる、など)、視点取得(誰かにいらいらしているときにはたいてい、しばらくその人の身になって考えるようにしている、など)、想像性(自分の身に起こりそうな出来事について、空想にふけることが多い、など)から構成される日本語版対人反応性指標(日本語版 IRI、日道他, 2017)と、易興奮性(一度に色々なことが起こっていると不愉快になる、など)、美的感受性(よい味がするものは大好きだ、など)、低感覚閾(大きな音は好きではない、など)から構成される日本語版青年前期用感性尺度(HSCS-A、岐部・平野, 2019)に回答した。相関分析の結果、共感性(共感的関心、個人的苦痛、想像性)が高いほど、「あげる」の正答率が高く、感性(美的感受性、低感覚閾)が高いほど、「もらう」の正答率が高いことがわかった。共感性(IRI total)と感性(HSCS-A 易興奮性、HSCS-A total)が高いほど、可能性判断(「あげる」と「もらう」、「あげる」、「もらう」)の正答率が高いことがわかった。視点取得は、可能性判断と相関しなかった。可能性判断の理解を支える授受表現の正答率を共感性および感性がどのように媒介しているのを確かめるために、媒介分析を行った。その結果、共感性が授受表現の理解と関連しているが、感性が媒介していることが示された。以上のことから、授受表現理解の背後にある特性は、感覚における感性であり、自閉症傾向における細部への注意が高い場合に授受表現の理解が優れるという先行研究の結果と整合していると考えられる。授受表現の理解には共感性が基盤にあり、その上に感性という階層性がある可能性がある。一次の共感性、二次的な感性によって、文脈に応じた授受の理解が可能になる。

参考文献（米田分）

- Baron-Cohen, Simon, Wheelwright, Sally, et al. (2001) "The Autism-Spectrum Quotient (AQ): Evidence from Asperger Syndrome/High-Functioning Autism, Males and Females, Scientists and Mathematicians," *Journal of Autism and Developmental Disorders*, 31, 5–17.
- Davis, Joshua, et al. (2017) "Social and attention-to-detail subclusters of autistic traits differentially predict looking at eyes and face identity recognition ability," *British Journal of Psychology*, 108, 191-219.
- 日道俊之・小山内秀和・後藤崇志・藤田弥世・河村悠太・Davis, Mark H.・野村理朗 (2017) 「日本語版対人反応性指標の作成」『心理学研究』88 巻, 1 号, 61-71.
- 岐部智恵子・平野真理 (2019) 「日本語版青年前期用感性尺度 (HSCS-A) の作成」『パーソナリティ研究』28 巻, 2 号, 108-118.
- 小牧元・前田基成・有村達之・中田光紀・篠田晴男・緒方一子・志村翠・川村則行・久保千春 (2003) 「日本語版 The 20-item Toronto Alexithymia (TAS-20)の信頼性、因子妥当性の検討」『心身医学』43(12), 839-846.

言語変化とパラメータ：ことばの多様性はどこから生まれたのか？
(Language Change and Parameters: Where did linguistic diversity come from?)

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1. はじめに (企画・司会：保坂道雄)

世界には様々な言語が存在するという多様性と人間であればどの言語も獲得できるという普遍性は、言語研究が解明すべき究極の対象と言える。極小主義以前の生成文法では、各種の原理とそれに付随するパラメータを用いて、この2つの関係を説明し大いなる成果をあげてきた。しかしながら、極小主義の発展と共に、より制限的な普遍文法が追究され、パラメータの存在もまた議論の的になっている。

特に、言語変化を対象とする研究では、言語獲得時のパラメータ設定が変化を引き起こす要因として提案され、その後様々な文法変化がパラメータにより説明されてきた。しかしながら、近年、言語獲得時の parsing を重視する仮説(Lightfoot 2020)、厳密化したパラメータ階層と Economy 等の第3要因に基づく仮説(Roberts 2019, 2021)、Determinacy 等の第3要因に帰着させる仮説(van Gelderen 2022)などが提案され、百家争鳴の様相を呈している。

本シンポジウムでは、まず、第1講師の縄田氏が、統語部門での素性継承パラメータの存在を仮定し、英語の多様な統語変化のクラスター効果を説明した。次に、第2講師の小川氏は、日本語の wh 移動の通時的変化を Focus が持つパラメータ値と「か」の文法化に帰す説明を行った。第3講師の保坂では、パラメータは文化進化の創発の付随的現象であると論じ、英語の助動詞連鎖構造の通時的変化を説明した。第4講師の時崎氏は、英語の語順変化に焦点をあて、主要部パラメータを廃し、外在化における強勢のあり方の変化が語順変化を生み出すと説明した。

パラメータの有無についての議論は、立脚する理論によりその扱い方が異なり、一見矛盾しているように見えるが、言語の本質を考える上で避けては通ることのできない問題であり、その多様な考え方から学ぶ点も多々あると思う。各講師の議論を踏まえ、更なる研究に繋げて頂ければと願うものである。

2. 開かれた UG におけるパラメータの在処：クラスター効果と単一言語内変異をめぐって (第1発表：縄田裕幸)

への Focus_N の主要部移動 (Hagstrom 1998) (と、長距離 wh 疑問文の場合、下位節の Focus_VP を上位節の Focus_VP 指定部へ随伴する左方移動(Cable 2010)) があったが、明治・大正時代に、いずれの移動も完全に消失した。

(3) Cheng (1991) の Clause Typing Condition / Collins and Kayne (2023) の No Crowding Condition を満たす上で、「か」の文法化完了前の日本語は、すべての Focus_V がその指定部に wh 句 (または焦点要素) を要求したので「wh 句+か」の左方移動が義務的であり、かつ、Focus_VP の随伴移動が可能だったので wh 句の左方移動は局所的だったが、「か」が Force[+wh]に文法化後は、「か」自身が同条件を満たすので、wh 句の左方移動は失われ、代わって、wh 句と「か」の長距離束縛関係が生じた。

(4) 室町時代に起きた終止連体合一により、「か」の Focus_V への文法化が進んだ。

(5) 江戸時代には、Focus_N の「か」が同一節内の[-wh]Focus_V にコピーされ、それが上位節の [+wh]Focus_V に主要部移動することもできた。これを許す wh パラメータの値は、ドイツ語の部分的 wh 移動や、日本語・英語獲得中の幼児の発話に見られる wh コピーを生じる wh パラメータの値と同じである。

(6) ForceP ではなく Focus_VP の指定部への wh 移動は、シンハラ語やマレー語やハンガリー語にも観察され、古代中国語にも観察された。

(7) 文法化理論とマイクロパラメータ統語論の相互作用は、wh 移動「あり」言語から wh 移動「なし」言語への変化はあるが、その逆はないと予測する。

4. パラメータ理論再考：言語の文化進化の視点から (第3発表：保坂道雄)

本発表では、まず、近年の言語変化研究 (Lightfoot 2017, 2020; Roberts 2019, 2021; van Gelderen 2022)におけるパラメータに対する姿勢に関して概観し、いずれも言語進化的妥当性の観点から不十分であることを指摘した。その上で、英語の助動詞連鎖構造の語順変化を資料として、各理論に基づく構造的な変化の説明を吟味し、言語の文化進化の視座に立ち妥当な対案を提案した。

古英語の動詞連鎖構造の主な語順は、(1)及び(2)に示す割合であった。

(1) Early OE

Modal-BE/HAVE-PP/PrP(55.4%), Modal-PP/PrP-BE/HAVE(21.6%), PP/PrP-BE/HAVE-Modal (20.6%)

(2) Late OE

Modal-BE/HAVE-PP/PrP(86.8%), Modal-PP/PrP-BE/HAVE(5.4%), PP/PrP-BE/HAVE-Modal (6.9%)

また、中英語以降、Modal-BE/HAVE-PP/PrP の語順が9割以上を占め、現代英語の語順として確立する。こうした事実に基づき推論すると、古英語期にある種の機能投射構造が既に発達していた可能性が考えられるが、パラメータやそれに代わる道具立てに基づく考察だけでは十分な説明を行うことが難しいと思われる。具体的には、Lightfoot の Parsing に基づく説明や van Gelderen の determinacy に基づく説明では ModalP や PassiveP 等の機能範疇を前提とした説明が必要となり、普遍文法への負担が大きくなる。また、Roberts の roll-up 素性に基づく説明では、古英語の複雑な統語操作が現代英語で単純な統語操作に変化することが前提となり、進化的妥当性の面から問題がある。

そこで、本発表では、文化進化的視点からこうした機能範疇は通時的変化の中で創発したものであると説明する。創発(emergence)とは複雑系科学の概念で、「混沌から秩序が生まれる過程」と考えられる。機能範疇の創発は、生物進化の結果である Merge の出現により生まれた Language of Thought と外在化の際に生まれる Language of Communication との相克により生じた混沌状態から立ち現れる新たな秩序であるとする。古英語における新たな機能投射構造の出現はまさにこうした創發現象として説明でき、普遍文法は単純な状態のままであり、進化的妥当性の面からも適切な仮説であると主張した。

5. 外在化による言語の多様性と変化（第4発表：時崎久夫）

本発表では、計算部門で構築される統語構造は普遍的で、言語の多様性は構造が外在化される際に生じるというミニマリストの考え（Berwick and Chomsky (2011)）に従い、Longobardi (2001) などの慣性原理をさらに進めて、外的要因の音韻変化によって、語順などの外在化は変化するが統語構造自体は変化しない、という「強い慣性原理」(Strong Inertia Theory) を提案した。

英語では、ノルマン征服以降に古フランス語が流入し、本来のゲルマン語強勢（強弱）にロマンス語強勢（弱強）が加わって優勢となった。しかし15世紀から英語の地位向上などの社会的要因によってゲルマン語強勢が復権した。句の強勢は、古英語では句の最初か末尾にあったが、中英語以降は句の末尾のみとなった。この語と句における強勢位置の変化が、語順の変化や大母音推移を引き起こしたという仮説を示した。

古英語では句の強勢が最初と末尾にあったため、強勢が補部に置かれるという性質から、それぞれ OV と VO の語順として共存していた。中英語以降は、句の強勢が末尾のみとなり、VO 語順が優勢になった。

副詞と動詞の連続では、強勢は動詞よりも副詞に置かれる。古英語では強弱のゲルマン的リズムに従って副詞－動詞の語順が見られたが、中英語で弱強のロマンス的リズムに合う動詞－副詞の語順が優勢となった。15世紀からはゲルマン語強勢の復権により、副詞－動詞の語順が増加した（時崎 (2022)）。

属格表現では、属格に強勢があるため、弱強リズムの中英語で of 属格が現れて優勢となったが、初期近代英語から強弱リズムが復権して s 属格も割合が増加した。

前置詞残留は中英語から現れ始めたが、一定の割合になるのは初期近代英語からである。これは、ゲルマン語強勢が復権し、強勢を持つ動詞と残留する前置詞が1つの音韻語を形成できるようになったためと考えられる。

大母音推移は、英語がロマンス的リズムからゲルマン的な強勢リズムに変化したことで進行していったと考えられる。

この考えに基づけば、種々の統語的なパラメータで扱われてきた現象を、各（時代の）言語の音韻特性による外在化の違いとして統一して説明することができることを論じた。

参考文献

Berwick, Robert C. and Noam Chomsky (2011) “The Biolinguistic Program: The Current State of its Development,” *The Biolinguistic Enterprise, New Perspectives on the Evolution and Nature of the Human Language Faculty*, ed. by Anna Maria di Sciullo and Cedric Boeckx, 19–41, Oxford

- University Press, Oxford.
- Cable, Seth (2010) *The Grammar of Q: Q-Particles, Wh-Movement, and Pied-Piping*, Oxford University Press, New York.
- Cheng, Lisa (1991) *On the Typology of WH-Questions*, Doctoral dissertation, MIT.
- Chomsky, Noam (2008) “On Phases,” *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, Carlos P. Otero and Maria Luisa Zubizarreta, 133–166, MIT Press, Cambridge, MA.
- Collins, Chris, and Richard S. Kayne (2023) “Towards a Theory of Morphology,” *Studies in Chinese Linguistics* 44(1), 1-32.
- Gelderen, Elly van (2022) *Third Factors in Language Variation and Change*, Cambridge University Press, Cambridge.
- Hagstrom, Paul Alan (1998) *Decomposing Questions*, Doctoral dissertation, MIT.
- Ikawa, Hajime (1998) “On Kakarimusubi in Old Japanese: A Possibility under A Perspective of Generative Grammar,” *Journal of Japanese Linguistics* 16, 1998.
- Kayne, Richard S. (2000) *Parameters and Universals*, Oxford University Press, New York.
- Lightfoot, David. W. (2017) “Discovering new variable properties without parameters,” *Linguistic Analysis* 41(3-4), 409-444.
- Lightfoot, David. W. (2020) *Born to Parse*, MIT Press, Cambridge, MA.
- Longobardi, Giuseppe (2001) “Formal Syntax, Diachronic Minimalism, and Etymology: The History of French, *Chez*.” *Linguistic Inquiry* 32, 275–302.
- 縄田裕幸 (2024) 「英語の節構造の変化」, 縄田裕幸・柳朋宏・田中智之『生成文法と言語変化』, 39–145, 開拓社, 東京.
- Rizzi, Luigi (1997) “The Fine Structure of the Left Periphery,” *Elements of Grammar: Handbook of Generative Syntax*, ed. by Liliane Haegeman, 281–337, Kluwer, Dordrecht.
- Roberts, Ian (2019) *Parameter Hierarchies & Universal Grammar*, Oxford University Press, Oxford.
- Roberts, Ian (2021) *Diachronic Syntax* 2nd Edition, Oxford University Press, Oxford.
- Roberts, Ian and Anna Roussou (2003) *Syntactic Change*, Cambridge University Press, Cambridge.
- 時崎久夫 (2022) 「英語における動詞と副詞の語順の変化」, 小川芳樹・中山俊秀(編), 『コーパスからわかる言語変化・変異と言語理論 3』, 287-301. 開拓社, 東京.
- Watanabe, Akira (2002) “Loss of Overt Wh-Movement in Old Japanese,” *Syntactic Effects of Morphological Change*, ed. by David W. Lightfoot, 179-195, Oxford University Press, Oxford.
- Yanagida, Yuko (2005) *The Syntax of FOCUS and WH-Questions in Japanese: A Cross-Linguistic Perspective*, Hituzi yobo, Tokyo.

これからの英語教育で期待される論理的思考力の探究とその教育手法： 国内外で行ったアンケートの分析結果からみる提言

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キーワード：英語教育、論理的思考力、テンプレート

1. はじめに

論理的思考力の伸張は、日本の教育界における喫緊の課題の一つであり、高等学校学習指導要領（外国語編）にも2014年以来組み込まれている。しかしながら、現行の論理英語の学習は、文法を中心とした表現パターンの定着が重視され、論理的思考力の向上を主眼に置いているとは言い難い。そこで本ワークショップでは、企画メンバーで数年前から行っている国内における論理的思考力と英語力の相関関係についての分析結果を、2024年3月に国外（マレーシア）で行った同様のテストの結果と照合し、英語科目を通して論理的思考力を伸ばすためには何をすべきかについての提言を行った。

本ワークショップは3部構成で行った。第1部では、メンバーが国内外で行ってきたアンケートの分析結果を提示し、日本の英語教育において期待される論理的思考力の伸長にはどのような施策が必要であるかの提言を行った。第2部では、その施策の具体例として、メンバーが上梓した大学生向けの英語学習用テキストを使用した実践例を紹介した。第3部では、第1部の提言、第2部での具体的施策の報告をうけて、教育学・教育心理学・英語教育の面からパネルディスカッションを行い、論理的思考力を伸ばすためにはなにをすべきかについて議論を行った。

2. 第1部 英語力と論理的思考力の相関性についてのテストの結果と分析（吉川厚・花崎美紀・花崎一夫）

日本人にとって異なる言語体系である英語を学ぶ理由は何かという疑問から本研究は端を発している。研究を開始した2012年よりも以前に、先行研究においても外国語の習得が論理的思考力の発達に関係があるという研究が存在しており（e.g. Bley-Vroman 1989, Carlson and Meltzoff 2008）、これを参考にしながら Facione や Bloom の研究の枠組みを元に、本研究の論理的思考の枠組みを、分析、評価、推論、表現の4つに設定した（Facione 1990）（Bloom (ed) 1956）。最近の研究においても、批判的思考・論理的思考が外国語習得に影響を与えているという分析があり（e.g. Huang et al. 2023）、そのことから我々が提案した研究の枠組みが妥当であると言える。WSのメンバーらは、2012年から共同で研究を始め、英語力と論理的思考

力の相関性を測る方策とはどのようなものかを、学習指導要領や先行研究から分析し、設定してきた。また、それに基づいてテスト問題を作成し、一般財団法人日本生涯学習総合研究所と共に、2013年度から全国の中・高校生、また理系・文系の大学生を対象に、英語の語彙や文法力を測定する英語力テストと、論理的思考力テストを行い、それらの結果を、量的に調査するとともに、誤答を質的かつ量的に調査し、データ化してきた。その中で、Bloom's Taxonomy で提唱される論理的思考態度の4項目（分析・評価・推論・表現）のうち、分析力・評価力・表現力、特に評価力・表現力と英語力の間に相関性があることがわかった。また、同じテストを、2024年3月にマレーシアで行い、日本語や英語を母語としない海外の英語学習者においても、同じように、評価力・表現力が英語力と相関性を示すことを確認した。その結果から、評価力と表現力を必要とする Argument の型を教えるような英語教育が、英語力と論理的思考力を同時に伸ばす教育としては有効ではないかという分析を示すに至った。

3. 第2部 英語の論理的思考法と型を涵養する教育法の開発：English Template Writing の実践例（多々良直弘・八木橋宏勇）

本発表では、論理的思考力の下位4項目のうち、英語力と高い相関が認められた「表現力」に焦点を当て、英語ライティング教育の観点から「日本語が透けて見える英文からいかに脱却するか？」を論じた。一般的に、センテンスレベルでは適格な英文を書くことができる英語学習者であったとしても、まとまった分量の英文を作成すると、英語らしさを感じられない文章になることがある。これは、言語によって異なると想定される①「好まれる談話展開」および②「言及されることが期待される／されない情報」への理解が不十分であることに一因があると考えられる。そのため、2024年1月に上梓した英語ライティング用教科書ならびにその実践データを題材に、言語運用を形式的に支援する「テンプレート」（＝談話レベルのスキーマ、菅井 2015）を用いた演習を通して、上記①②すなわち日英語で異なる好まれる論理展開パターンへの習熟を図るアプローチが有効であることを報告した。

4. 第3部 英語教育において論理的思考力の伸長のために今からできるこれからの教育手法（吉川厚・菊池聡・花崎美紀・藤原隆史）

英語能力と論理的思考力が正の相関性があるということを第1部と第2部で述べてきた。このことは、英語ができるバイリンガルの子供たちは論理的思考力が高いということからも裏付けられる。もしそうであるならば、一般的には英語能力が高い文系の学生の方が理系の学生よりも論理的思考力が高いということが予想されるが、日本の大学生を対象に実施された論理的思考力に関する調査では、文系と理系でやや異なるデータが得られている。理系は、初期の段階から複雑な要素を取り入れることなく、なるべく小数の要素のわずかな関係性に着目する。また、事象間の「差」に関心が向けられがちな文系と、事象が生じる仕組みに興味があるため「共通性」を見ようとする理系という違いも見られた。さらに、理系では、単文を論理的につなげる作文指導や、論文の書き方として、概要は結論から書き、その結論に向かって書いていく指導をしている大学・大学院もある。このような学問的指向性や、教育訓練に起因してデータが異なる事も考えられる。このようなことをみると、Argument の型を教えることが、論理的思考力の涵養につながっていることを担保すると言えよう。

論理的思考力とはどのような能力で、それを伸ばすための方略はどのようなものかが言語教育では問題になるが、この問題に関しては使用基盤モデル (e.g. Langacker 1988, 2000) を前提として考えることが可能であろう。使用基盤モデルでは、「リストとルールの集合体」として言語知識が構成され、「使用頻度・定着度が高い具体的な表現は、それらを一般化して得られるスキーマとともにネットワークをなし、話者の言語知識を構成する」(辻 2013: 55) とされているが、この考え方を論理的思考力に対して適用することが有効である。つまり、言語知識として形式と意味の対 (リスト) を知っていることとそのリストの使い方 (ルール) を知っていることが必要になるわけであるが、論理的思考力に関しても、論理的思考のパターン (リスト) を知っていることとそのパターンの議論への当てはめ方 (ルール) を知っていることが必須となると言える。さらに、言語能力と論理的思考力に正の相関があるということは、使用基盤モデルが言うところのリストとルールの集合体を構築する能力、すなわち、カテゴリー化能力が高い学習者ほど、言語能力と論理的思考能力がともに高くなると考えられることになる。以上の考察により、英語教育においてテンプレート (型・スキーマ) を多く提示することが、学習者による論理的思考のパターンの抽出を促すことにつながる可能性があると言えることになる。

参考文献

- Bley-Vroman, Robert (1989) "What is the Logical Problem of Foreign Language Learning?," *Linguistic Perspectives on Second Language Acquisition*, eds. by S. M. Gass and J. Schachter, 41-68, Cambridge U.P., Cambridge.
- Bloom, Benjamin. S. (ed) (1956) *Taxonomy of Educational Objectives*, Longman, London.
- Carlson, Stephanie, M. and Andrew N. Meltzoff (2008) "Bilingual Experience and Executive Function in Young Children," *Developmental Science* 11(2), 282-298.
- Facione, Peter A. (1990) *Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction. Research Findings and Recommendations*, The California Academic Press, Millbrae, CA.
- Huang, Qiuyang et al. (2023) "A Study on the Impact of Critical Thinking Skills and Foreign Language Enjoyment on Foreign Language Performance," *International Journal of Academic Research in Progressive Education and Development*, 12(3), 700-710.
- Langacker, Ronald (1988) "A Usage-Based Model," *Topics in Cognitive Linguistics*. ed. by B. Rudzka-Ostyn, 127-161, John Benjamins, Amsterdam.
- Langacker, Ronald (2000) "A Dynamic Usage-Based Model," *Usage Based Models of Language*, eds. by M. Barlow and S. Kemmer, 1-63, CSLI Publications, Stanford.
- 菅井三実 (2015) 『人はことばをどう学ぶか』くろしお出版, 東京.
- 辻幸夫 (編) (2013) 『新編 認知言語学キーワード事典』研究社出版, 東京.
- 八木橋宏勇・野村佑子・多々良直弘・Ash L. Spreadbury (2024) 『English Template Writing: Deeper Idea Development. 英語の思考と型を身に付けるテンプレート・ライティング』金星堂, 東京.

[II]

Seventeenth International Spring Forum

Notes on Adjectival Predicate Ellipsis and Its Theoretical Implication for Argument Ellipsis

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Keywords: ellipsis, LF copy, PF deletion, (adjectival) predicate ellipsis, argument ellipsis, movement

1. Introduction

A variety of ellipsis phenomena have been reported in many languages, as shown in (1) and (2). (1) shows that a vP undergoes deletion (vP ellipsis). (2) demonstrates that a TP is phonologically deleted after Wh movement (sluicing).

(1) John will [_{vP} visit Sally], and Fred will [_{vP} Δ].

(Baltin 2012, p. 386)

(2) He is writing something, but you can't imagine [_{CP} what [_C [_{TP} Δ]]].

(Ross 1969)

In addition to vP ellipsis and sluicing, English permits APs in a complement position of a copula verb, 'be', to be elided, as in (3) (adjectival predicate ellipsis, APE, Baltin (1995), McCawley (1998), a.o.). It is illustrated in (3) that the APs in (3a) and (3b) ('friendly' and 'kind' respectively) can undergo ellipsis under the identity with the APs in the following sentences.

(3) a. Mary should [_{Pred P} be [_{AP1} friendly]], and John should [_{Pred P} be [_{AP2} Δ]], too.

b. Mary is [_{AP1} kind], but John is not [_{AP2} Δ].

There are two issues about APE: how to derive and what licenses APE? Mainly two ways have been proposed to derive ellipsis. One of them is PF deletion (Sag 1976, Merchant 2001, a.o.). The other is LF copy (Williams 1977, Sakamoto 2017, a.o.). PF deletion phonologically elides syntactic objects in PF. On the other hand, LF copy creates a phonological gap by copying an antecedent onto the ellipsis site in LF. Moreover, ellipsis owns its licenser head (Merchant 2001, Aelbrecht 2010, a.o.). For example, vP ellipsis is licensed by a T head (see Aelbrecht 2010). This paper aims to provide an

answer to the two questions and shows that APE is licensed by a finite T head and is derived by LF copy.

This paper is organized as follows. Section 2 shows that APE is available as long as T is finite and extraction from APE does not occur. Section 3 deals with the unavailability of extraction from APE by proposing LF copy approach to APE. Section 4 claims that extraction facts of APE should not be coped with by PF deletion approach represented by derivational ellipsis approach (Aelbrecht 2010). Section 5 extends the LF copy approach to APE to Japanese ‘soo’ predicate anaphora (SPA). Section 6 insists that LF copy approach to APE support a generalization of ellipsis that <e,t> type elements undergo only LF copy (Bošković 2018) and promotion analysis for relative clauses without overt relative operators (Aoun and Li 2003).

2. Observations

It is shown that APE is allowed only with finite T and APE prohibits extraction from itself in this section.

2.1. Licensing Condition for APE

Subsection 2.1 demonstrates that APE only occurs with a finite T head. As seen in (3), a finite T head licenses APE. However, non-finite T heads in control and raising sentences hinders APE, as (4) shows. (4a) is a control sentence. (4b) is a raising sentence. These sentences involve ellipsis of APs. The unacceptability of (4) indicates that only a finite T head can license APE.

- (4) a. *John wants to be more intelligent, but Mary doesn’t want to be [_{AP} Δ].
b. *John seems to be very smart, but Mary doesn’t seem to be [_{AP} Δ].

This hypothesis predicts that small clauses and verbal noun constructions without a T head do not license APE. This is borne out, as shown in (5). (5) illustrates that APE cannot occur in the small clause (SC) in (5a) and in the verbal noun in (5b). These data confirm the view that APE is licensed by a finite T head.

- (5) a. *John considers Mary smart, and Bill considers [_{SC} Mary [_{AP} Δ]], too.
b. *John being healthy and Mary not being [_{AP} Δ], according to the result of medical checkup, was surprising to everyone.

2.2 Extraction from APE

This subsection presents data on unavailability of extraction from APE, which is provided with an explanation by LF copy approach to APE. Logically speaking, Ellipsis can permit extraction from itself. Ellipsis has its internal syntactic structure, from which something can be extracted. vP ellipsis, for instance, allows extraction from the ellipsis site, as in (6) (extracted elements are colored orange,

henceforth). The NP, ‘which book’, is moved out of the elided vP in (6).

(6) I know which book_i Mary read t_i, and **which book** Bill didn’t [vP Δ].

(Fiengo and May 1994)

However, APE does not make it possible that something can be extracted from an APE site, as demonstrated in (7), (8), and (9). (7), (8), and (9) disallow extraction of ‘who’ and ‘whom’ from the APE sites. These data concerning on extraction possibilities of APE need explanations, considering that ellipsis including vP ellipsis allows extraction from ellipsis sites.

(7) * I know who John should be more friendly with, but I don’t know **who** Mary should be [AP Δ].

(8) *John is not friendly to the person **who(m)** he should be [AP Δ].

(9) *I knew who Mary was kind to but I didn’t know **who** John was [AP Δ].

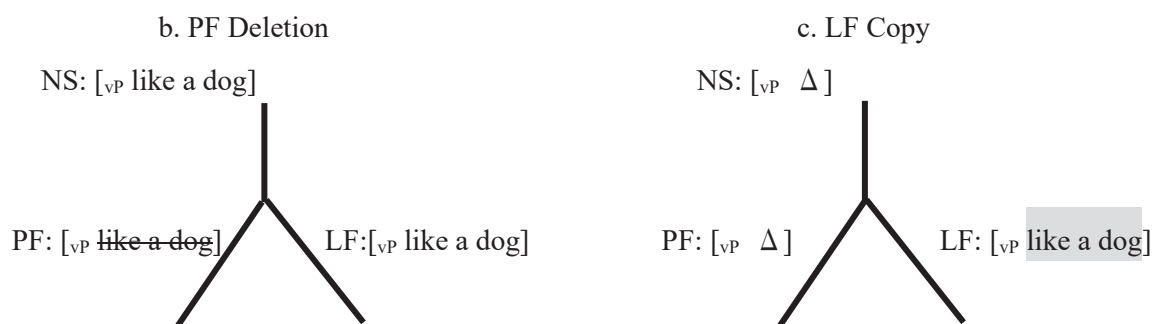
3. A Proposal: LF Copy Approach to APE

Having observed the unavailability of extraction from APE sites, this section proposes LF copy approach to APE to explain why APE bans extraction from itself.

3.1. Two Potential Derivations for Ellipsis: PF Deletion and LF Copy

Before turning to my proposal, this subsection lays down some theoretical foundations of how to derive ellipsis. There are two ways to derive ellipsis: PF Deletion and LF Copy. PF Deletion deletes phonological exponents in PF under identity with the preceding elements. On the other hand, LF Copy is generally considered to take advantage of elements in the preceding sentences to recover meanings of phonologically null elements. Let me demonstrate how the two operations work. (10a) is an example where vP undergoes ellipsis. If (10a) is derived by PF deletion, then vP has syntactic structure in narrow syntax (NS, henceforth) and is phonologically deleted in PF as shown in (10b). (10c) illustrates how LF copy generates (10a). In (10c), the phonologically null vP is literally null in narrow syntax. The preceding vP, ‘like a dog’, in this case is copied onto the null element in LF.

(10) a. John likes a dog, but Hanako doesn’t [vP Δ].



The two approaches have a different prediction about whether extraction is available for certain ellipsis phenomena or not. The prediction is that elements with phonological exponents cannot be extracted from ellipsis sites on the ground that ellipsis is derived by LF copy. This is because no elements exist in narrow syntax in LF copy approach. By contrast, PF deletion does not have such a restriction about extraction possibilities.

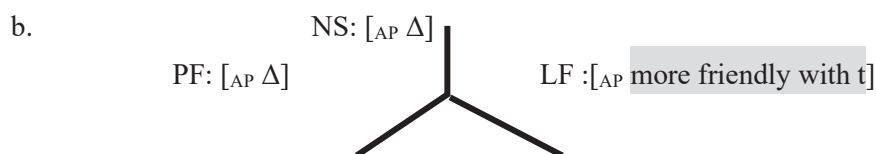
3.2. LF Copy Approach to APE

Having introduced theoretical basics, let us move on to a proposal. The proposal is (11).

(11) AP occupying complement of a copula is LF Copied.

(11) explains why APE does not permit extraction out of itself. A concise illustration for (11) is given in (12). There are no elements in NS, so no elements cannot be extracted from the APE site in (12) before LF copy. This explains the data above, (7), (8), and (9).

(12) a. * I know who John should be more friendly with t, but I don't know **who** Mary should be [_{AP} Δ].

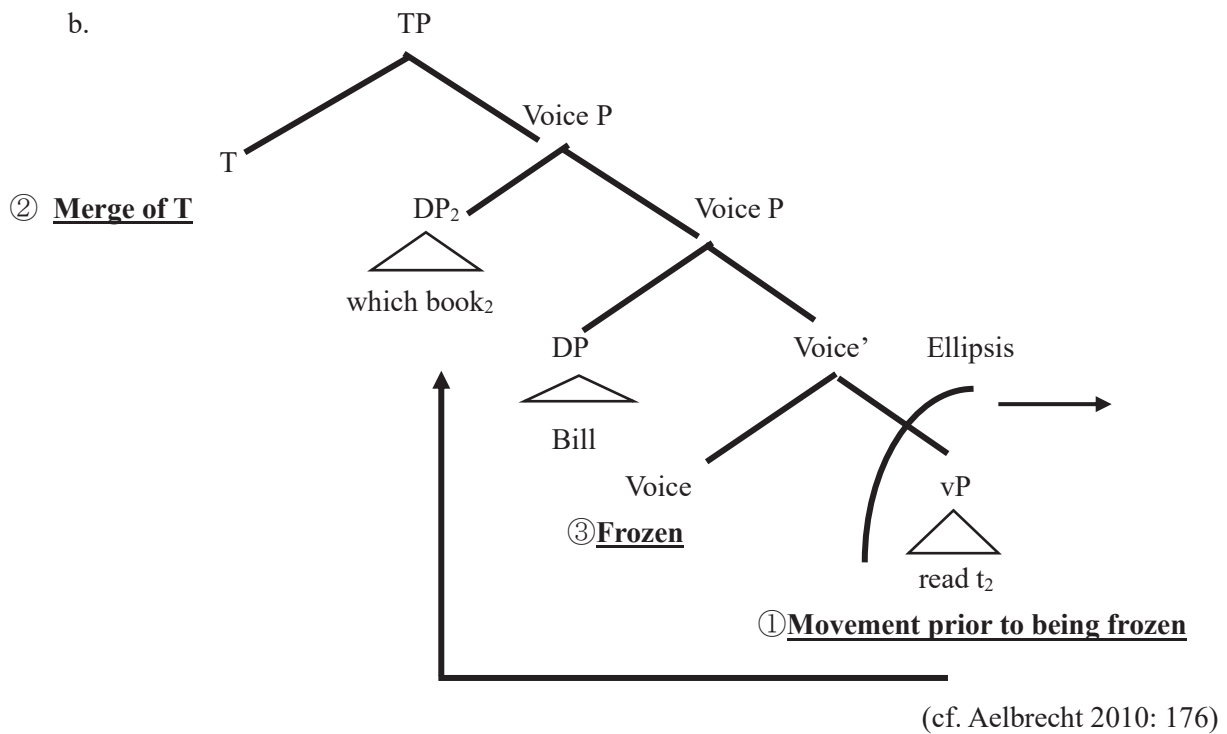


However, is this only approach to APE? To put differently, are there any approaches to be compatible with the data (7), (8), and (9) by adopting PF Deletion, not LF Copy.

4. Some Counterargument Against PF Deletion Approach (Aelbrecht 2010)

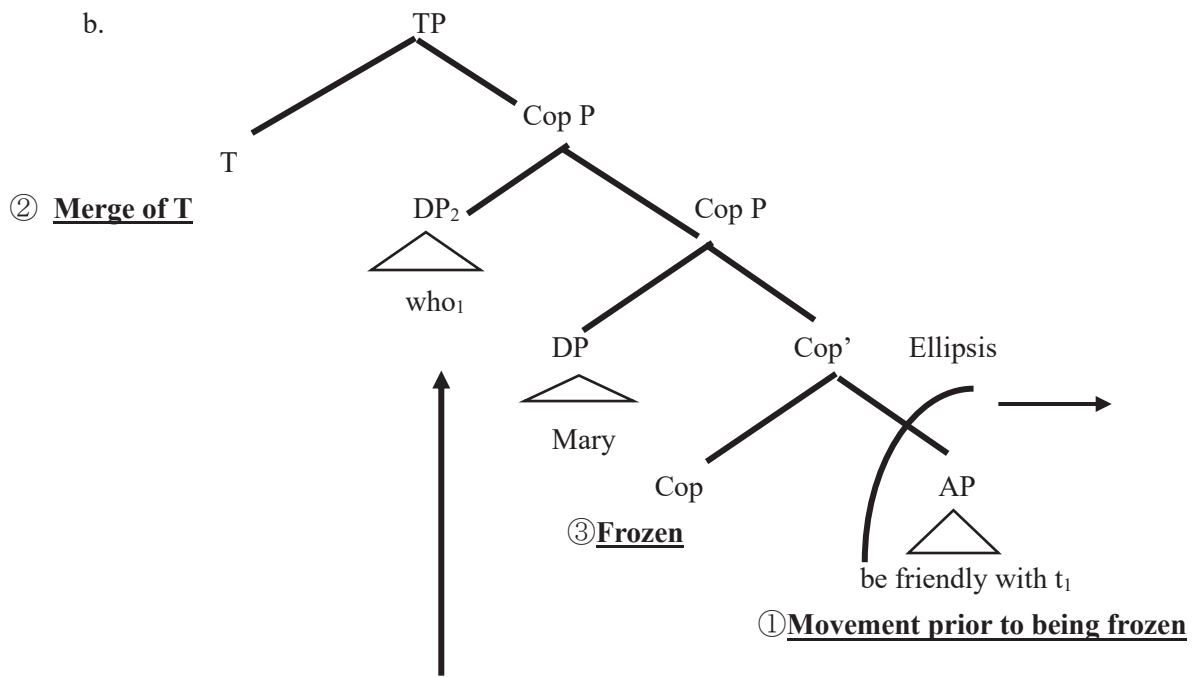
This section focuses on a potential counterargument against LF copy approach to APE: derivational ellipsis approach (Aelbrecht 2010). Aelbrecht (2010) argues extraction possibilities are predicted by her derivational ellipsis approach based on PF Deletion rather than LF Copy. Aelbrecht's assumption is as follows: when licensing head for ellipsis (T for VP ellipsis, etc) merges, extraction from a deletion site becomes unavailable (frozen). In (13a), 'which book' is moved from the vPE site. The NP, 'which book', is moved to Spec Voice P whose head constitutes a phase following Aelbrecht (2010) before licensing head T merges. T merges Voice P and then vP becomes unavailable for further computation. Nevertheless, the object, 'which', has already been extracted. This is why (13) is acceptable.

(13) a. I know which book₁ Mary read t₁, and **which book**₂ Bill didn't [_{vP} Δ].



Some may wonder whether her mechanism can be applied to APE. This is unavailable, considering Fin T licenses APE according to (4) and (5). Consider the derivation in (14). Since finite T is a licensing head for APE, it is possible to extract ‘who’ to Spec Voice P before merge of T, which suggests that Aelbrecht’s derivations ellipsis approach makes a wrong prediction about extraction possibilities of APE. This is why LF copy approach to APE is superior to PF deletion approach.

(14) a. * I know who John should be more friendly with t, but I don’t know **who**₁ Mary should be [_{AP} Δ].



5. Extension of the Proposal to ‘Soo’ Predicate Anaphora in Japanese

Having confirmed LF copy approach to APE, this section attempts to extend (11) to ‘soo’ predicate anaphora in Japanese. In Japanese, ‘soo’ is used as a predicate combined with copula (‘soo’ predicate anaphora, SPA), as shown in (15).

- (15) a. Taro-wa [_{AP1} kodomo-ni sinsetsu]-da. b. Hanako-mo soo da.
 Taro-TOP child-DAT kind-COP Hanako-also so COP
 ‘Taro is kind to children.’ ‘Hanako is so (=kind to children), too.’

It is important to pursue a question: is ‘soo’ pro-form? My answer is yes. ‘Soo’ predicate anaphora should be considered to have syntactic structure replaced by ‘soo’ in a later stage at least in some cases. The evidence is availability of null operator movement from ‘soo’ in Japanese cleft. Japanese cleft is said to involve null operator movement according to Hoji (1990). In the following sentence of (16), the null operator, ‘OP2’ is extracted from ‘soo’. This shows that ‘soo’ has its internal syntax.

- (16) [_{CP} Op₁ Taro-ga [_{AP} t₁ hizyouuni amak]-atta no]-wa [hakusikatei-no insei]₁-
 Taro-NOM very lenient-PST NML-TOP doctor course-GEN graduate student
 ni da ga, [_{CP} Op₂ Hanako-ga soo da-tta no]-wa gakubusei₂-ni da.
 DAT COP but Hanako-NOM so COP-PST NML-TOP undergraduate-DAT COP
 ‘It was to doctor course graduate students that Taro was very lenient but it was to
 undergraduates that Hanako was so.’

However, SPA doesn't allow overt clause internal and external scrambling from itself as demonstrated in (17) and (18). The NP, ‘gakusei-ni (student)’, is extracted from the APE site clause internally in (17b) and across a clause boundary in (18b).¹ These two sentences are unacceptable, which shows extraction of phonologically overt elements from SPA is impossible.

- (17) a. Gakusei₁-ni Taro-wa [_{AP} t₁ sinsetsu]-da. b. *Gakusei-ni Hanako-mo soo da.
 student-DAT Taro-TOP kind-COP student-DAT Hanako-also so COP
 ‘To John, Taro is kind.’ ‘To [John]₂, Hanako is so, too.’

- (18) a. Gakusei₁-ni Taro-wa John-ga [_{AP} t₁ sinsetsu]-da to itta.
 student-DAT Taro-TOP John-NOM kind-COP C said
 ‘To [students]₁, Taro said John was kind t₁’
 b. *Gakusei-ni Hanako-wa Mike-mo soo da to itta.
 student-DAT Hanako-TOP Mike-also so COP C said
 ‘To [students]₂, Hanako said Mike was so, too’

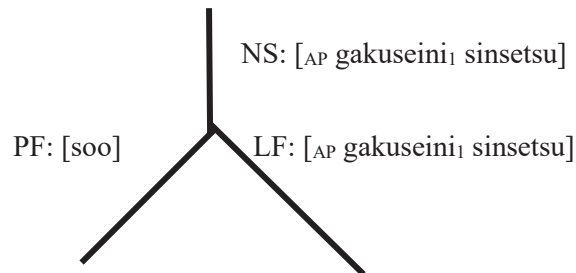
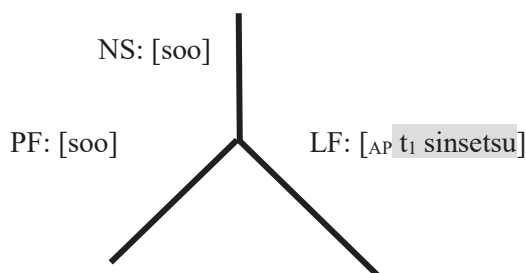
Here is a question to answer: why does SPA disallow overt extraction? LF Copy Approach to AP in complement of copula (11) solves this problem, as illustrated in (19). Only ‘soo’ exists in narrow syntax in LF copy approach (19c). In LF, the preceding AP is copied onto ‘soo’. Then, extraction of ‘gakusei-ni (student)’ from SPA is unavailable because ‘soo’ is the only element to move in narrow syntax.

(19) (=17) a. *gakusei*₁-ni Taroo-wa [_{AP} *t*₁ sinsetsu]-da.

b. * *gakusei-ni* Hanako-mo [soo] da.

c. LF Copy replaces ‘soo’ in LF

d. PF Deletion of AP + ‘soo’ insertion



If PF deletion of AP is available (with ‘soo’ inserted in PF somehow), then the derivation (19d) permits overt extraction of ‘gakusei-ni (student)’ from the APE site. This supports LF Copy approach to APE/SPA. In addition, null operators can move in LF, following Sakamoto (2017) and others. This assumption allows (16) involving null operator movement from SPA to be acceptable. This is why (11) correctly predicts that LF Copy approach is applicable to SPA as well as APE in English.

6. Consequences

This section turns to consequences of the current analysis. LF copy approach to APE supports a generalization that <e,t> type elements undergo LF copy rather than PF deletion. Furthermore, that-relatives are formed by relative head movement instead of null operator movement.

6.1. An Implication for Argument Ellipsis (Bošković 2018)

This subsection points out that LF-Copy approach to APE/SPA supports the assumption of Bošković (2018). It is available to make use of Bošković (2018) to provide some reasons why Argument Ellipsis (see (20)) is LF Copied (Oku 1998, Saito 2007, Sakamoto 2017 and a.o).² (20) shows Japanese has argument ellipsis. The object ‘zibun no kuruma (self’s car)’ is elided in the following sentence.

(20) Hanako-wa zibun-no kuruma-wo aratta ga, Ziro-wa [_{DP} Δ] arawa-nak-atta.

Hanako-TOP self-GEN car-ACC washed but, Ziro-TOP wash-NEG-PST

‘Hanako washed her car, but Ziro didn’t wash [_{DP} Δ]’

Boškovic (2018) assumes the followings. First, NPs are type $\langle e, t \rangle$ in syntax (i). Second, Elements of type $\langle e, t \rangle$ are copied in LF (ii). However, it is unclear whether (ii) actually holds. LF Copy approach to APE/SPA leads support to the assumption (ii) since AP is type $\langle e, t \rangle$. This might contribute to further understanding the nature of argument ellipsis: why LF copy derives argument ellipsis.

6.2. Relative Clause Formation

LF copy approach to APE upholds the idea that that-relatives are formed by relative head movement. There are two potential derivations for relative clauses. Consider (21). (21a) moves the relative operator, ‘OP₁’, to Spec CP while the relative head, ‘man’, is directly moved in (21b).

- (21) a. The man OP₁ (that) Hanako loves t₁. (WH movement: Chomsky (1977), a.o.)
 b. The man₁ (that) Hanako loves t₁. (promotion analysis: Schachter (1973), a.o.)

APE can be used to test which moves in that-relatives, a null operator or a relative head with the assumption that null operators can move in LF as in Section 5. Take a look at (22), which is a that-relative clause involving APE. The unacceptability of (22) shows that the relative head, ‘person’, is extracted from the APE site rather than a null operator.

- (22) *John is not friendly to [_{DP} the [_{CP} person (that) he should be [_{AP1} Δ]]].

This supports promotion analysis for relative clauses without overt relative operators (Aoun and Li 2003).

7. Conclusion and Future Research Perspectives

It is proposed that APE/SPA is derived by LF Copy instead of PF Deletion and some consequences are explored after identifying a licensing head of APE, that is, finite T. APE and SPA disallow overt extraction from the ellipsis sites and SPA permits null operator movement from itself. LF copy approach to APE/SPA successfully explains it. It is also illustrated that LF copy approach to APE supports the view that syntactic objects typed $\langle e, t \rangle$ undergo LF copy rather than PF deletion and a relative head is promoted to derive that-relatives.

There are some future issues of this study. One of them is why APE takes place via LF Copy. One direction is that complement of a copula is LF Copied. (23) demonstrates that NP and PP positioned in complement of a copula can be deleted.

- (23) a. John should [_{Pred P} be [_{NP1} friends with Mary]], and Bill should [_{Pred P} be [_{NP2} Δ]], too.
 b. John should [_{Pred P} be [_{PP1} in Room A]], and Mary should [_{Pred P} be [_{PP2} Δ]], too.

These two predicate ellipsis phenomena prohibit extraction from their ellipsis sites, as illustrated in (24). The NPs, ‘which person’ and ‘which room’, cannot be extracted from the ellipsis sites in (24).

- (24) a. *I know which person John should be [_{NP} friends with t for the future], but I don’t know **which person** Bill should be [_{NP} Δ].
b. *I know which room John should be [_{PP} in t], but I don’t know **which room** Bill should be [_{PP} Δ].

(24) might suggest that deletion of sister of a copula is derived by LF Copy.

NOTES

1. There may be some cases where overt extraction from SPA is possible (Hironobu Kasai, Kenta Mizutani, and Masashi Yamaguchi independently point out to me, p.c.). (17b) and (18b) become acceptable if ‘gakusei-ni (student)’ is replaced with ‘kyouin-ni (teacher)’, for example. This might suggest the unacceptability of (17b) and (18b) is ascribed to some kind of ‘anti-similar’ effects of extracted objects in antecedent and ellipsis sentences. I leave this issue for future research.
2. His main theme is different from this point. He tries to explain why only D-less languages (Japanese, Serbo-Croatian, etc.) have Argument Ellipsis and languages with D (English, Bulgarian, etc) doesn’t. This is irrelevant to today’s talk, so I would like to refrain from going into details regarding this point. Interested readers should refer to Bošković (2018).

REFERENCES

- Aelbrecht, Lobke. (2010). *“The Syntactic Licensing of Ellipsis”*. Amsterdam: John Benjamins.
- Aoun, Joseph and Li, Audrey. (2003). *“Essays on the Representational and Derivational Nature of Grammar”*. Cambridge, Mass: MIT Press.
- Baltin, Mark. (1995). “Floating Quantifiers, PRO, and Predication”. *Linguistic Inquiry*, 26, 199-248.
- Baltin, Mark. (2012). “Deletion Versus Proforms: An Overly Simple Dichotomy?”. *Natural Language and Linguistic Theory*, 30, 381–423.
- Bošković, Željko. (2018). “On Pronouns, Clitic Doubling, and Argument Ellipsis: Argument Ellipsis as Predicate Ellipsis”. *English Linguistics*, 35(1), 1-37.
- Chomsky, Noam. (1977). “On Wh-movement”. *Formal syntax*. Culicover, P., T, Wasow, and A, Akmajian, (eds), 71–132. Cambridge, Mass: Academic Press.
- Citko, Barbara. (2014). *“Phase Theory: An Introduction”*. Cambridge: Cambridge University Press.
- Fiengo, Robert and Robert, May. (1994). *“Indices and Identity”*. Cambridge, Mass: MIT Press.
- Hoji, Hajime. (1990). “Theories of Anaphora and Aspects of Japanese Syntax”, MS, University of Southern California.

- McCawley, Daniel. (1998). *The Syntactic Phenomena of English, 2nd ed*. Chicago: University of Chicago Press.
- Oku, Satoshi. (1998). *A theory of selection and reconstruction in the minimalist program*. Doctoral dissertation, University of Connecticut, Storrs.
- Ross, John. (1969). "Guess who?" *Papers from the Fifth Regional Meeting of Chicago Linguistic Society*, Binnick, R., A, Davison., G, Green., and J, Morgan (eds), 252–286. University of Chicago.
- Saito, Mamoru. (2007). "Notes on East Asian argument ellipsis". *Language Research*, 43, 203–227.
- Sakamoto, Yuta. (2017). *Escape from silent syntax*. Doctoral dissertation. University of Connecticut, Storrs.
- Schachter, Paul. (1973). "Focus and relativization". *Language*, 49, 19–46.

A Phase-based Analysis of Subject-Object Asymmetry in Nonfinite Clauses*

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Keywords : phase, anaphor binding, Quantifier Raising, Subject Condition

1. Introduction

When we investigate phenomena observed in *want*-infinitives with overt subjects, we find subject-object asymmetry. As shown in (1) and (2), in nonfinite clauses, an embedded subject anaphor in (1) can take an antecedent from the upper clause, while an embedded object anaphor in (2) cannot. However, as shown in (3), the asymmetry of this kind does not occur in finite clauses. Regardless of whether the embedded anaphor is a subject or object, it cannot be coreferential with the matrix element.

- (1) a. They_i want very much for each other_i to succeed. (Saito (2017: 64, fn. 3))
b. John and Mary_i want each other_i to win. (Kallmeyer and Romero (2007: 9))
- (2) a. *They_i want very much for John to nominate each other_i. (Saito (2017: 64, fn. 3))
b. *John and Mary_i want Bill to visit each other_i. (Lasnik (2017: 4))
- (3) a. *Mary_i insisted that herself_i saw it. (Saito (2017: 61))
b. *John_i thinks that Mary recommended himself_i. (Saito (2017: 62))

Similar subject-object asymmetry is observed with Quantifier Raising (QR), in which a structurally lower quantifier covertly moves over another quantifier, resulting in an inverse scope construal. While embedded subject quantifiers in (4) can undergo QR, embedded object quantifiers in (5) cannot. Again, finite clauses do not show this kind of contrast, as illustrated in (6). Neither embedded subjects nor objects can undergo QR.

- (4) a. Some juror wants for every defendant to be acquitted. ($\exists > \forall, \forall > \exists$)
b. Some juror wants every defendant to be acquitted. ($\exists > \forall, \forall > \exists$)
(adapted from den Dikken (2015: 91))
- (5) a. Someone wanted for you to meet every woman. ($\exists > \forall, * \forall > \exists$) (Cecchetto (2004: 370))
b. Someone wants John to visit everyone. ($\exists > \forall, * \forall > \exists$) (Thoms (2016: 297))
- (6) a. #Someone said that every man is married to Sue. ($\# \exists > \forall, * \forall > \exists$)
b. #Someone said that Sue is married to every man. ($\# \exists > \forall, * \forall > \exists$) (Fox (2000: 62))

An account of these facts must accommodate the contrast between finite and nonfinite clauses as well as the subject-object asymmetry in nonfinite clauses. It has been argued that finite complements constitute syntactic phases, which render the elements embedded in them inaccessible for further operations. It may be possible that nonfinite *C* is not a phase head, but this does not seem to resolve the issue, as shown in (2) and (5), where embedded objects *must* be inaccessible. Therefore, we need an account that allows only embedded *subjects*, but not *objects*, to undergo binding or movement in nonfinite clauses.

This paper addresses the subject-object asymmetry observed in nonfinite clauses. Section 2 presents the theoretical background. I introduce the phase theory and the labeling theory, after which I lay out previous approaches to anaphor binding and QR. Section 3 outlines the proposed account. I suggest that nonfinite CP constitutes a phase, whose head is a prepositional complementizer. Section 4 presents an analysis of anaphor binding and QR. Section 5 extends the analysis to the Subject Condition insensitivity in nonfinite clauses. Section 6 concludes the discussion.

2. Theoretical Background

2.1. p^* P Phase

Chomsky (2000) argues that CP and v^* P constitute computational units called phases and that syntactic computation proceeds phase by phase. Once a phase is completed and the complement of the phase head is transferred to SM (sensorimotor) and CI (Conceptual-Intentional) interfaces, no further syntactic operations can apply to the transferred structures by Phase Impenetrability Condition (PIC).

In this paper, I follow Matsubara (2000), who argues that a prepositional phrase PP constitutes a phase as well. Matsubara points out the parallelism between DP and PP, both of which can satisfy EPP. Matsubara proposes that, as shown in (7), PP comprises a functional head p^* and its complement PP headed by a substantive P. He further argues that P affixes onto p^* in a similar way to the derivation of v^* P, in which a lexical V affixes onto v^* .

$$(7) \quad [_{p^*P} p^* [_{PP} P DP]]$$

2.2. The Labeling Theory

When two syntactic objects are merged to create a set, a label is assigned to it. Pointing out that Merge is a symmetric operation and labels should be provided systematically, Chomsky (2013, 2015) proposes the Labeling Algorithm (LA) shown in (8).

(8) Labeling Algorithm

- (i) If a set $\{H, XP\}$ is formed, H is the label.
- (ii) If a set $\{XP, YP\}$ is formed, the LA cannot determine a label unless
 - a. either XP or YP undergoes movement, or
 - b. they share a prominent feature.

Chomsky (2015) holds that T in languages such as English and R(oot) are too weak to serve as labels by themselves. It is then necessary to strengthen them with a $\langle\varphi, \varphi\rangle$ label, achieved through agreement between T or R and an element merged in its specifier position. Under Chomsky's proposed system, the derivation of the v^*P phase proceeds as follows. As illustrated in (9a, b), unvalued features are inherited by R. Agreement takes place between R and Internal Argument (IA) merged in Spec-R. This enables R to function as a label and the labels for α and β are determined as R and $\langle\varphi, \varphi\rangle$, respectively. As shown in (9c), once R attaches to v^* , the phasehood is activated on R, and the complement of R is transferred.

- (9) a. $\{\delta \text{ EA } \{\gamma \text{ } v^*_{[u\varphi]} \{\beta \text{ IA}_{[\varphi]} \{\alpha \text{ R IA}\}\}\}\}$
 b. $\{\delta \text{ EA } \{\gamma \text{ } v^* \{\beta \text{ IA}_{[\varphi]} \{\alpha \text{ R}_{[u\varphi]} \text{ IA}\}\}\}\}$ ($\alpha=R, \beta=\langle\varphi, \varphi\rangle$)
 c. $\{\delta \text{ EA } \{\gamma \langle R_{[v\varphi]}, v^* \rangle \{\beta \text{ IA}_{[\varphi]} \{\alpha \text{ R IA}\}\}\}\}$

As with the CP phase, as shown in (10a, b), C passes unvalued features to T, which in turn enters an agreement relation with the External Argument (EA) merged in its specifier position. T is strengthened by this agreement and labels for γ and δ are determined as T and $\langle\varphi, \varphi\rangle$, respectively. In (10c), the complement of the phase head C is transferred.

- (10) a. $\{\varepsilon \text{ C}_{[u\varphi]} \{\delta \text{ EA}_{[\varphi]} \{\gamma \text{ T } \{\beta \text{ EA } \{\alpha \langle R, v^* \rangle \dots\}\}\}\}\}$
 b. $\{\varepsilon \text{ C } \{\delta \text{ EA}_{[\varphi]} \{\gamma \text{ T}_{[u\varphi]} \{\beta \text{ EA } \{\alpha \langle R, v^* \rangle \dots\}\}\}\}\}$ ($\alpha=\beta=R-v^*, \gamma=T, \delta=\langle\varphi, \varphi\rangle, \varepsilon=C$)
 c. $\{\varepsilon \text{ C } \{\delta \text{ EA}_{[\varphi]} \{\gamma \text{ T}_{[v\varphi]} \{\beta \text{ EA } \{\alpha \langle R, v^* \rangle \dots\}\}\}\}\}$

2.3. Anaphor Binding

One of the phase-based approaches of anaphor binding is explored in Charnavel and Sportiche (2016). Charnavel and Sportiche propose that (plain) anaphors¹ must be in the same Spell-Out (or Transfer) domain as their antecedents, as illustrated in (11).

- (11) Condition A
 A plain anaphor must be bound within the Spell-Out domain containing it.
 (Charnavel and Sportiche (2016: 71))

To see how Charnavel and Sportiche's proposal works under Chomsky's (2013, 2015) framework, let us first consider the example shown in (12a). As in (12b, c), the anaphor *himself* is transferred along with the subject *John* at the CP phase level. This accounts for the possibility of binding *himself* to *John*.

- (12) a. $\text{John}_i \text{ loves himself}_i.$
 b. $\{\delta \text{ John } \{\gamma \langle R, v^* \rangle \{\beta \text{ himself } \{\alpha \text{ R himself}\}\}\}\}$
 c. $\{\eta \text{ C } \{\zeta \text{ John } \{\varepsilon \text{ T } \{\delta \text{ John } \{\gamma \langle R, v^* \rangle \{\beta \text{ himself } \{\alpha \text{ R himself}\}\}\}\}\}\}\}$

As shown in (3a) and (3b), duplicated here as (13a) and (14a), anaphor binding cannot apply across finite clauses. Under Charnavel and Sportiche's approach, the embedded subject anaphor *herself* in (13a)

cannot receive an interpretation because, as shown in (13b), at the embedded CP phase stage, the complement of C is transferred. As illustrated in (13c), the anaphor cannot fall in the same Transfer domain as the matrix subject *Mary*. Similarly, in (14a), the inability of *himself* to bind to the matrix subject *John* is due to the inaccessibility of *himself* after the introduction of *John*, as shown in (14c).

- (13) a. **Mary*_i insisted that *herself*_i saw it. (=3a)
 b. $\{\beta C \{\alpha \text{ herself } \dots\}\}$
 c. $\{\epsilon C \{\delta \text{ Mary } \{\gamma T \dots \{\beta C \{\alpha \text{ herself } \dots\}\}\}\}$
- (14) a. **John*_i thinks that *Mary* recommended *himself*_i. (=3b)
 b. $\{\delta \text{ Mary } \{\gamma \langle R, v^* \rangle \{\beta \text{ himself } \{\alpha R \text{ himself}\}\}\}\}$
 c. $\{\theta \text{ John } \dots \{\eta C \{\zeta \text{ Mary } \{\epsilon T \{\delta \text{ Mary } \{\gamma \langle R, v^* \rangle \{\beta \text{ himself } \{\alpha R \text{ himself}\}\}\}\}\}\}\}$

2.4. Quantifier Raising

As shown in the introductory section, QR is an instance of covert movement, and it exhibits clause-boundedness. Otsuka (2023) deduces covert movement from internal pair-Merge, arguing that it is the property of pair-Merge that gives rise to the clause-boundedness of QR. Otsuka proposes that in English, when an item undergoes internal pair-Merge, the lower copy is phonetically realized, and the effect of QR arises when the higher copy is interpreted. He further suggests that internal pair-Merge must occur within a single Transfer domain. According to Chomsky (2004), pair-Merged elements are merged in a separate plane and return to the primary plane at the time of Transfer, through an operation called SIMPL(ification). Otsuka argues that if the copies are transferred separately, SIMPL cannot apply properly.

Let us consider two scenarios. In a schematized structure shown in (15), the object QP undergoes pair-Merge to γ . Note that in this case, the lower copy QP₁ and the higher copy QP₂ fall within the same Transfer domain, since the complement of the phase head C is to be transferred. SIMPL successfully applies, allowing for a proper interpretation.

- (15) $\{\epsilon C \langle_{\delta} \text{QP}_2 \{\gamma \text{EA } \{\beta T \dots \{\alpha \langle R, v^* \rangle \text{QP}_1 \dots\}\}\}\rangle\}$
-

Meanwhile, in (16), QP undergoes pair-Merge to δ and only the lower copy QP₁ falls in the Transfer domain of C. In this case, when the higher copy QP₂ is transferred at the next phase level, QP₁ has already been transferred. SIMPL thus fails to apply properly.

- (16) $\langle_{\epsilon} \text{QP}_2 \{\delta C \{\gamma \text{EA } \{\beta T \dots \{\alpha \langle R, v^* \rangle \text{QP}_1 \dots\}\}\}\rangle\}$
-

It is impossible for an item to be set-Merged to the phase edge before undergoing pair-Merge at the matrix phase level. Assuming that labeling is applied before SIMPL, the operation occurring at the time of Transfer, Otsuka (2023) argues that this would lead to a labeling failure. As illustrated in (17), even

after the application of pair-Merge, the middle copy XP₂ remains visible when labeling is applied. Therefore, the XP-YP problem for ε is inevitable.

$$(17) \quad \langle_{\zeta} \text{XP}_3 \dots \{_{\varepsilon=?} \text{XP}_2 \{_{\delta} \text{C} \{_{\gamma} \text{EA} \{_{\beta} \text{T} \dots \{_{\alpha} \langle \text{R}, \nu^* \rangle \text{XP}_1 \} \} \} \} \} \rangle$$

Let us now consider how QR is derived under Otsuka’s (2023) proposal. As illustrated in (18), in the case of clause-internal QR, the object quantifier *everyone* undergoes pair-Merge to the position higher than the subject quantifier *someone*. Since the Transfer domain is the complement of C, SIMPL applies successfully, resulting in the inverse scope interpretation.

$$(18) \quad \begin{array}{l} \text{a. Someone loves everyone. } (\exists > \forall, \forall > \exists) \\ \text{b. } \{_{\eta} \text{C} \langle_{\zeta} \text{everyone} \{_{\varepsilon} \text{someone} \{_{\delta} \text{T} \{_{\gamma} \text{someone} \{_{\beta} \langle \text{R}, \nu^* \rangle \{_{\alpha} \text{everyone} \dots \} \} \} \} \} \} \rangle \} \end{array}$$

QR cannot apply across finite clauses. As illustrated in (19), when the matrix subject *someone* is introduced, the embedded object *every man* has already been transferred, making it impossible for it to move to the matrix domain.

$$(19) \quad \begin{array}{l} \text{a. } \# \text{Someone said that Sue is married to every man. } (\# \exists > \forall, * \forall > \exists) \quad (= (6b)) \\ \text{b. } \langle_{\zeta} \text{every man} \{_{\varepsilon} \text{someone} \dots \{_{\delta} \text{C} \{_{\gamma} \text{Sue} \{_{\beta} \text{T} \{_{\alpha} \langle \text{R}, \nu^* \rangle \dots \text{every man} \} \} \} \} \} \} \rangle \end{array}$$

3. Proposal

Based on the assumptions laid out in the previous section, I propose that nonfinite CP phase consists of the phase head c^* and its complement CP. I argue that nonfinite C, as a phase head, is minimally different from finite C in that the former, externalized as *for*, is a “prepositional” complementizer. Note that I assume with Matsubara (2000) that PP functions as a phase, with the structure parallel to ν^*P . It should thus be possible that the derivation of the p^*P phase is as illustrated in (20).

$$(20) \quad \{_{\gamma} \langle \text{P}_{[\nu\varphi]}, p^* \rangle \{_{\beta} \text{DP}_{[\varphi]} \{_{\alpha} \text{P} \text{DP} \} \} \}$$

After P affixes onto p^* , rendering the latter invisible, phasehood is activated on the lower copy of P. The Transfer domain thus shifts to its complement.

Suppose here that nonfinite CP, whose head is a prepositional complementizer, has a parallel structure as p^*P and ν^*P . As shown in (21a), the EA is merged at Spec-C, not at Spec-T, and the phase head c^* is introduced. In (21b), C inherits unvalued features from c^* . I assume that the EA is assigned oblique case as a reflex of φ -agreement. As illustrated in (21c), C undergoes pair-Merge to c^* , and the Transfer domain shifts to the complement of the lower copy of C.

- (21) a. $\{\zeta c^*_{[u\varphi]} \{\varepsilon EA_{[\varphi]} \{\delta C \{\gamma T \{\beta EA \{\alpha \langle R, v^* \rangle \dots \}\}\}\}\}\}$
 b. $\{\zeta c^* \{\varepsilon EA_{[\varphi]} \{\delta C_{[u\varphi]} \{\gamma T \{\beta EA \{\alpha \langle R, v^* \rangle \dots \}\}\}\}\}\}$ ($\delta=C, \varepsilon=\langle\varphi, \varphi\rangle$)
 c. $\{\zeta \langle C_{[v\varphi]}, c^* \rangle \{\varepsilon EA_{[\varphi]} \{\delta \in \{\gamma T \{\beta EA \{\alpha \langle R, v^* \rangle \dots \}\}\}\}\}\}$

The crucial difference between the derivation of nonfinite complements proposed here and that of finite ones as shown in (11) is whether the Transfer domain includes the subject. In the nonfinite c^*P phase in (21), the subject survives Transfer, meaning that it is expected to remain accessible at the next phase level. Contrastively, the embedded subject in the finite CP phase in (11) is rendered inaccessible for further syntactic operations.

Note that in the proposed account, subjects in nonfinite clauses are merged at Spec-C, while those in finite clauses are merged at Spec-T. Following Epstein, Kitahara and Seely (2014) and Mizuguchi (2017), I assume that, unlike finite T, nonfinite T is strong enough to serve as a label by itself.

4. Analysis

4.1. Anaphor Binding

Let us see how the proposed approach can account for subject-object asymmetry in nonfinite clauses. As shown in (1) and (2), repeated here as (22) and (23), when the embedded nonfinite clause has an overt subject, a subject anaphor can take an element in the matrix clause as its antecedent, while an object anaphor cannot.

- (22) a. They_i want very much for each other_i to succeed.
 b. John and Mary_i want each other_i to win. (=1)
- (23) a. *They_i want very much for John to nominate each other_i.
 b. *John and Mary_i want Bill to visit each other_i. (=2)

As illustrated in (24), the subject anaphor is merged at Spec-C and the Transfer domain is the complement of the copy of C, which undergoes pair-Merge to the phase head c^* . This makes it possible for *each other* to take an element in the upper clause as its antecedent. The grammaticality of the examples in (22) is successfully accounted for.

- (24) a. They_i want very much for each other_i to succeed. (=22a)
 b. $\{\zeta \langle C, c^* \rangle \{\varepsilon \text{each other} \{\delta \in \{\gamma T \{\beta \text{each other} \{\alpha \langle R, v^* \rangle \dots \}\}\}\}\}\}$
 c. $\{\eta \text{they} \dots \{\zeta \langle C, c^* \rangle \{\varepsilon \text{each other} \{\delta \in \{\gamma T \{\beta \text{each other} \{\alpha \langle R, v^* \rangle \dots \}\}\}\}\}\}\}$

In the case of (23), as illustrated in (25), the object anaphor *each other* is transferred at the embedded c^*P phase level. It thus cannot be bound to the matrix element.

- (25) a. *They_i want very much for John to nominate each other_i. (=23a)
 b. $\{\eta \langle C, c^* \rangle \{\zeta EA \{\varepsilon \in \{\delta T \{\gamma EA \{\beta \langle R, v^* \rangle \{\alpha \text{each other} \dots \}\}\}\}\}\}\}$
 c. $\{\theta \text{they} \dots \{\eta \langle C, c^* \rangle \{\zeta EA \{\varepsilon \in \{\delta T \{\gamma EA \{\beta \langle R, v^* \rangle \{\alpha \text{each other} \dots \}\}\}\}\}\}\}\}$

Regarding finite clauses in (3), repeated here as (26), whether the anaphor is a subject or an object, it cannot take a referent from the matrix clause.

- (26) a. *Mary_i insisted that herself_i saw it.
 b. *John_i thinks that Mary recommended himself_i. (=3)

The anaphors cannot be bound because, in the finite structure shown in (27), the complement of C, including the subject or object anaphor, is necessarily transferred, preventing them from receiving an interpretation.

- (27) a. $\{\zeta \text{ Mary } \dots \{ \epsilon \text{ C } \{ \delta \text{ herself } \{ \gamma \text{ T } \{ \beta \text{ herself } \{ \alpha \langle \text{R}, \nu^* \rangle \dots \} \} \} \} \}$
 b. $\{ \eta \text{ John } \dots \{ \zeta \text{ C } \{ \epsilon \text{ Mary } \{ \delta \text{ T } \{ \gamma \text{ Mary } \{ \beta \langle \text{R}, \nu^* \rangle \{ \alpha \text{ himself } \dots \} \} \} \} \} \}$

4.2. Quantifier Raising

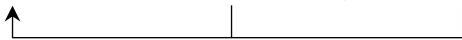
As shown in (4) and (5), duplicated here as (28) and (29), a subject quantifier can undergo QR across clause boundaries, while it is difficult for an object quantifier to do so in when the clause has a lexical subject.

- (28) a. Some juror wants for every defendant to be acquitted. $(\exists > \forall, \forall > \exists)$
 b. Some juror wants every defendant to be acquitted. $(\exists > \forall, \forall > \exists)$ (=4)
 (29) a. Someone wanted for you to meet every woman. $(\exists > \forall, * \forall > \exists)$
 b. Someone wants John to visit everyone. $(\exists > \forall, * \forall > \exists)$ (=5)


I assume, following Otsuka (2023), that what makes inverse scope interpretation possible is the pair-Merge of a quantifier to the structure higher than another quantifier. As shown in (30), the availability of inverse scope in (28) is attributable to the movement of the universal quantifier from the embedded subject position to the position higher than the matrix subject. Object quantifiers embedded in nonfinite clauses cannot undergo movement across clauses, since as shown in (31), they undergo Transfer at the embedded c*P phase level.

- (30) a. Some juror wants for every defendant to be acquitted. $(\exists > \forall, \forall > \exists)$ (=28a)
 b. $\{ \epsilon \langle \text{C}, c^* \rangle \{ \delta \text{ every defendant } \{ \gamma \in \{ \beta \text{ T } \{ \alpha \langle \text{R}, \nu^* \rangle \text{ every defendant } \} \} \} \} \}$
 c. $\langle \eta \text{ every defendant } \{ \zeta \text{ some juror } \dots \{ \epsilon \langle \text{C}, c^* \rangle \{ \delta \text{ every defendant } \{ \gamma \in \{ \beta \text{ T } \{ \alpha \langle \text{R}, \nu^* \rangle \text{ every defendant } \} \} \} \} \} \rangle$
 (31) a. Someone wanted for you to meet every woman. $(\exists > \forall, * \forall > \exists)$ (=29a)
 b. $\{ \eta \langle \text{C}, c^* \rangle \{ \zeta \text{ you } \{ \epsilon \in \{ \delta \text{ T } \{ \gamma \text{ you } \{ \beta \langle \text{R}, \nu^* \rangle \{ \alpha \text{ every woman } \dots \} \} \} \} \} \}$
 c. $\langle \iota \text{ every woman } \{ \theta \text{ someone } \dots \{ \eta \langle \text{C}, c^* \rangle \{ \zeta \text{ you } \{ \epsilon \in \{ \delta \text{ T } \{ \gamma \text{ you } \{ \beta \langle \text{R}, \nu^* \rangle \}$

Goto and Ishii argue that the hypothesis in (36) can account for the Subject Condition. Let us consider how the example in (34a) is ruled out. When the CP phase is completed, the structure in (37b) is derived. The subject moves from Spec- v^* to Spec-T, from which the wh further moves to Spec-C. Note that, in order to move the wh to Spec-C from within the subject DP merged at Spec-T, there are two accessible copies of wh in Spec-T and Spec- v^* . Goto and Ishii claim that this violates Binariness, and thus the Subject Condition is derived from the Minimal Search-free Merge Hypothesis.

- (37) a. *Of which car_i did [the driver t_i] cause a scandal? (=34a)
 b. $\{\zeta wh_3 \{\epsilon C \{\delta \{DP \dots wh_2\} \{\gamma T \{\beta \{DP \dots wh_1\} \{\alpha \langle R, v^* \rangle \dots \}\}\}\}\}\}$


In nonfinite clauses, the problem of Binariness can be circumvented. Under the present proposal, the c^*P phase structure makes the embedded subject accessible in the next phase level. As shown in (38b), the subject merged at Spec-C is not transferred at the embedded c^*P level, where the phase head c^* is rendered invisible by pair-Merge and the Transfer domain shifts to the complement of C. As in (38c), the wh can move to its landing site from the embedded Spec-C after the copy of the subject, left in Spec- v^* , is transferred. Note that Goto and Ishii (2024) argue that Merge obeys the PIC as well as Binariness. Since the lowest wh_1 is transferred at the embedded c^*P phase level, there is no way for two copies of wh to remain accessible, and thus no violation of Binariness occurs.

- (38) a. Of which car_i would you have liked (for) [the driver t_i] (not) to cause a scandal? (=35a)
 b. $\{\zeta \langle C, c^* \rangle \{\epsilon \{DP \dots wh_2\} \{\delta \in \{\gamma T \{\beta \{DP \dots wh_1\} \{\alpha \langle R, v^* \rangle \dots \}\}\}\}\}\}$
 c. $\{\theta wh_3 \{\eta C \dots \{\zeta \langle C, c^* \rangle \{\epsilon \{DP \dots wh_2\} \{\delta \in \{\gamma T \{\beta \{DP \dots wh_1\} \{\alpha \langle R, v^* \rangle \dots \}\}\}\}\}\}\}\}$


6. Concluding Remarks

This paper has addressed the issue of the subject-object asymmetry observed with anaphor binding and QR in nonfinite clauses. I have proposed that nonfinite CP has a structure parallel to the p^*P phase and the phase head c^* has CP as its complement. I have also argued that the present analysis successfully accounts for the Subject Condition insensitivity in nonfinite clauses.

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NOTES

¹ Charnavel and Sportiche (2016) distinguish “plain anaphors” from “exempt anaphors,” which do not require locally c-commanding antecedents.

REFERENCES

Cecchetto, Carlo (2004) “Explaining the Locality Condition of QR: Consequences for the Theory of

- Phases,” *Natural Language Semantics* 12, 345-397.
- Charnavel, Isabelle and Dominique Sportiche (2016) “Anaphor Binding: What French Inanimate Anaphors Show,” *Linguistic Inquiry* 47, 35-87.
- Chomsky, Noam (2000) “Minimalist Inquiries: The Framework,” *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels and Juan Uriagereka, 89-155, MIT Press, Cambridge, Massachusetts.
- Chomsky, Noam (2004) “Beyond Explanatory Adequacy,” *Structures and Beyond: The Cartography of Syntactic Structures* 3, ed. by Adriana Belletti, 104-131, Oxford University Press, Oxford.
- Chomsky, Noam. (2008) “On Phases,” *Foundational Issues in Linguistic Theory. Essays in Honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, Carlos P. Otero and Maria Luisa Zubizarreta, 133-166, MIT Press, Cambridge, Massachusetts.
- Chomsky, Noam (2013) “Problems of Projection,” *Lingua* 130, 33-49.
- Chomsky, Noam (2015) “Problems of Projection: Extensions,” *Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti*, ed. by Elisa Di Domenico, Cornelia Hamann, and Simona Mateine, 1-16, John Benjamins, Amsterdam.
- Chomsky, Noam (2021) “Minimalism: Where Are We Now, and Where Can We Hope to Go,” *Gengo Kenkyu* 160, 1-41.
- den Dikken, Marcel (2015) “Raising the Subject of the ‘Object-of’ Relation,” *50 Years Later: Reflections on Chomsky’s Aspects*, ed. by Ángel J. Gallego and Dennis Ott, 85-98, MIT Press, Cambridge, MA.
- Epstein, Samuel D, Hisatsugu Kitahara and T. Daniel Seely (2014) “Labeling by Minimal Search: Implications for Successive-Cyclic A-Movement and the Conception of the Postulate “Phase,”” *Linguistic Inquiry* 45, 463-481.
- Fox, Danny (2000) *Economy and Semantic Interpretation*, MIT Press, Cambridge, Massachusetts.
- Goto and Ishii (2024) “Seeking an Optimal Design of Search and Merge: Its Consequences and Challenges,” *The Linguistic Review*, 1-34.
- Kallmeyer, Laura and Maribel Romero (2007) “Reflexive and Reciprocals in LTAG,” *Proceedings of the Seventh International Workshop on Computational Semantics IWCS-7*, ed. by Jeroen Geertzen, Elias Thijsse, Harry Bunt, and Amanda Schiffrin, 271-282, Tilburg.
- Lasnik, Howard (2017) “Clause-mates, Phases, and Bound Pronouns,” ms., University of Maryland. <<https://terpconnect.umd.edu/~lasnik/Handouts/Lasnik%20ABRALIN%20HO%20corrected.pdf>>
- Matsubara, Fuminori (2000) “*p**P Phases,” *Linguistic Analysis* 30, 127-161.
- Matsubara, Fuminori (2008) “Remarks on Chomsky’s (2008) Analysis of Extraction from Subject,” *English Linguistic* 25, 464-474.
- Mizuguchi, Manabu (2017) “Labelability and Interpretability,” *Studies in Generative Grammar* 27, 327-365.
- Otsuka, Tomonori (2023) “On Internal Pair-Merge and Ambiguous Chains,” *English Linguistics* 39, 157-190.
- Saito, Mamoru (2017) “A Note on Transfer Domains,” *Nanzan Linguistics* 12, 61-69.
- Thoms, Gary (2016) “Pseudogapping, Parallelism, and the Scope of Focus,” *Syntax* 19, 286-307.

Nominalising Suffixed Adjectives via Lexicalisation and Clipping*

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Keywords: derivational morphology, conversion, prenominal modification, suppletive adjective

1. Introduction: No Morphological Restriction for Adjective-to-Noun Conversion?

It is widely recognised that lexical items derived through suffixation systematically resist further verb-forming conversions regardless of their base category. For example, the derived noun *curiousness* cannot serve as the input for noun-to-verb conversion in this sentence: **Jane curiousnesses every day* (Plag (2018: 114)). Similar examples are presented in (1) and (2).

- (1) a. * *We happinnessed* all night.
b. * *They happinnessed* Fenster.
- (2) a. * *We hopelessed* all night.
b. * *They hopelessed* Fenster.
(Lieber (1992: 164), italics added)

Since its initial documentation by Marchand (1969), this observation has been validated by numerous scholars such as Bauer (1983), Farrell (2001), Nagano (2008), and Plag (2018). Although various theoretical frameworks have been proposed to explain this constraint on conversion, the relisting approach captures conversion well, as defined by Lieber (1992: 159) (cf. Nagano (2008: 85)) in (3).

- (3) Relisting approach to conversion
- a. The lexicon allows for the addition of new entries.
- b. Conversion occurs when an item already listed in the lexicon is re-entered as an item of a different category.

We use the relisting approach as our theoretical foundation based on the tenet in (4).

- (4) Words derived by using productive suffixes are not listed in the lexicon unless they are lexicalised; thus, they cannot be targets for relisting.

However, apparent counterexamples to this generalisation are frequently observed. For example, suffixed adjectives appear to undergo conversion into nouns, as shown in (5).

- (5) a. The *dailies* were delivered to the door.
 b. This sweet *digestive* sat on her plate.
 c. A famous *intellectual* of international standing addressed the meeting.
 (Bauer (2021: 176), italics added)

The adjective *daily* in (5a) becomes *dailies*, denoting ‘daily newspaper’. Similarly, *digestive* in (5b) functions as a noun, meaning ‘a digestive biscuit’ and *intellectual* in (5c) is presented as a noun, expressing ‘an intellectual person’. These cases appear to contradict the assumption stated in (4) that suffixed words cannot undergo further derivation. This raises the question: What are the morphological processes that change suffixed adjectives into nouns? In attempting to answer this question, this paper argues that the relevant nouns originate from prenominal modifications (i.e., Suffixed Adjective + Noun expressions) through two morphological successive processes: lexicalisation of the entire expression, followed by clipping of the head noun. This analysis allows us to reconcile the examples in (5) with the generalisation in (4) rather than treating them as counterexamples.

The remainder of this paper is structured as follows. Section 2 provides a brief review of the existing literature. Section 3 presents an in-depth analysis of the relevant expressions supported by empirical data. Section 4 conducts a comparative examination of suffixed adjectives and their simple counterparts. Finally, Section 5 presents the conclusions of this study.

2. True-Adjective Type vs. True-Noun Type

In examining the nominal use of adjectives, one typically assumes a structure consisting of a determiner followed by an adjective such as *the rich* or *the poor*, which invariably denotes human referents. However, this assumption does not apply to the relevant suffixed adjectives.

Let us first review a structure involving simplex adjectives, termed the HUMAN construction by Kester (1996) (cf. Yamamura (2010)), whose typical examples are *the rich* ‘those who are rich’ and *the very poor* ‘those who are very poor’ (Bauer and Huddleston (2002: 417)). The examples denote ‘those who have the characteristic expressed by the adjective’. Notably, this construction can also be used with derived adjectives such as *assembled*, as shown in *the assembled* ‘those who are assembled’ (Quirk et al. (1984: 423)).

Regarding the construction’s syntactic analysis, Borer and Roy (2010) argue that it should be treated as an elliptical phenomenon in which the head noun is syntactically elided, as illustrated in (6). They further contend that the determiner phrase (DP) fundamentally refers to a generic human noun.¹

- (6) *the* Adj [_N *pro*] (Borer and Roy (2010: 90); cf. Marchand (1969))

However, the examples we are focussing on, in fact, denote not only human referents but also objects or abstract notions (cf. Cetnarowska (2010)). Furthermore, considering the differences in grammatical behaviour, the examples should be divided into two types. The adjective analysed in (6) retains its true adjectival properties, whereas the examples we examine are considered true nouns because they show typical nominal characteristics. Therefore, we name the former the True-Adj(ective) type, in which the

adjective can be pre-modified by determiners or adverbs and still exhibit adjectival inflectional endings. In contrast, the latter is called the True-N(oun) type, where the apparent adjective can be pre-modified by additional adjectives or numerals other than determiners and can take plural markings.

Regarding the True-Adj type, as in (7), for instance, the adjective *poor* is pre-modified by a determiner while showing superlative inflection in (7a), and is modified by the adverb *very* in (7b).

- (7) a. *The poorest* were the most honest.
 b. *The very poor* need more help than charity alone.

(Cetnarowska (2010: 120))

As evidenced by the ungrammaticality in (8), such adjectives never exhibit nominal properties.

- (8) a. * I met *a rich*.
 b. * I met *two riches*.

(Kester (1996: 60))

As for the True-N type, for instance, *factive* in (9a) is pre-modified by a determiner and denotes not a human referent but a ‘factive verb (or predicate)’ in the context. In (9b), *hopeful* is modified by another adjective and shows plural inflection. Finally, in (9c), *daily* is modified by a numeral, and agrees with it by taking a plural ending. This grammatical behaviour can be attributed to true nominal elements.

- (9) a. So why, when a speaker uses a *factive* evidentially, does she take on a commitment to the truth of the complement? This must be a consequence of the lexical meaning of the verbs. (Simons (2007: 1047), italics added)
 b. Some of the young *hopefuls* make their parents pay pretty smartly for their love.²
 c. [...], two *dailies* based in the prefectural capital Naha, [...] (*The Mainichi 2013*³)

These seemingly adjectival elements arguably possess true nominal properties, as illustrated in (10).

- (10) a. Kim and Pat are *intellectuals*.
 b. Kim is a {*remarkably / remarkable} *intellectual*.

(Bauer and Huddleston (2002: 418))

As summarised in Table 1 (cf. Borer and Roy (2010: 90)), only the True-N type exhibits nominal properties, unlike the True-Adj type. While Borer and Roy (2010) accurately account for the latter, the former remains a puzzle. Although Borer and Roy (2010) do touch on what we call the True-N type, they classify it as a ‘restricted class’ of nouns that happen to be homophonous with adjectives (e.g., *an American, two Russians, the Barbarians, a communist, three pragmatists, a Greek, the Arabs*). However, we argue that our examples do not fall under this class, because Borer and Roy’s (2010) examples are restricted only to ‘ethnic’ and ‘human’ referents, whereas we have found a large number of relevant expressions denoting

objects or abstract notions. The True-N type should be analysed differently from the True-Adj type.

Table 1: True-Adj Type vs. True-N Type

	True-Adj type	True-N type
Definite plural	<i>the poor(*s), the sick(*s)</i>	<i>the factive, the intellectuals</i>
Indefinite plural	<i>*three sads</i>	<i>two dailies, some adjectivals</i>
Indefinite article	<i>*a pretty, *a rich</i>	<i>a friendly, an attributive</i>
Demonstrative	<i>*these wise(es), *those lucky</i>	<i>these nominals, those predicatives</i>

3. Process Behind Grammatical Category Change

The True-N type presents a complex puzzle requiring in-depth investigation into the mechanisms driving its transformation from an adjectival to a nominal element. As a related case, let us first examine Nishiyama and Nagano's (2020) account of the nominal use of phrasal verbs.

Nishiyama and Nagano (2020: Ch.2, §6.4) note that some phrasal verbs have formally identical nominal counterparts denoting agents. Such nominals pose a challenge to their analysis of deverbal nominalisation in English. Specifically, they argue that subject-referencing nominalisation with the suffix *-er* takes priority over other nominalisation processes, including conversion. If these nominal counterparts were formed through conversion, it would mean that conversion is exceptionally applied to the relevant verbs to form agent nominals. Nishiyama and Nagano address this issue by arguing that the apparent converted nominal forms in question originate from prenominal modifications. For instance, *a pay-off* in (11a) means an agent, likely originating from *a pay-off man* in (11b). Other examples include *a pick-up* in (12) and *sit-down* in (13).

- (11) a. *a pay-off* ‘a person responsible for sharing out the proceeds of a fraud, robbery, or other criminal operation’
 b. *a pay-off man*
- (12) a. *a pick-up* ‘a small van or truck with low sides’
 b. *We'd ride old dirt roads in a pick-up truck.*
- (13) a. *sit-down*, 1836, *Sketches by Boz*, 1st Ser. I. 264,
 b. *Jemima thought we'd better have a regular sit-down supper, in the front parlour.*

(Nishiyama and Nagano (2020: 96, 97))

Nishiyama and Nagano's (2020) prenominal modification analysis can be extended to different categories and units. Although they do not detail the elliptical process, we assume that the clipping of a word is involved, a phenomenon we examine next.

Following Bauer (1983: 233), the morphological process of *clipping* can be defined as follows: “Clipping refers to the process whereby a lexeme (simplex or complex) is shortened, while still remaining the same meaning and still being a member of the same form class”. Typical examples are provided in (14).

For example, *daily* first appears as an adjective in a prenominal modification such as *daily newspaper*, and once this Adj + N expression is lexicalised as a unit, the head noun *newspaper* is clipped, leaving the remnant *daily* to function as a noun. Let us examine the reasons for assuming this process.

If the prenominal modification is the original form and suffixed adjectives are clipped from it, then their attested usages in the history of English should be prenominal expressions, with the True-N-type forms emerging later. To investigate this prediction, a diachronic study of the *Oxford English Dictionary Online (OED)* is conducted. The examples given in the Introduction section follow our prediction according to the *OED* entries, as shown through (18) to (21).

- (18) *daily* ‘A daily newspaper or periodical.’
A Daily paper ... (1711) → ... *to read the daily*, ... (1754)
- (19) *digestive* ‘*spec.* Designating a type of wholemeal biscuit. Also *elliptical.*’
Digestive Biscuits (1876) → ... *Digestives were what she fancied.* (1935)
- (20) *intellectual* ‘An intellectual being; a person of superior or supposedly superior intellect; *spec.* (a) a highly intelligent person who pursues academic interests; (b) a person who cultivates the mind or mental powers and pursues learning and cultural interests.’
As the intellectuall Angels could haue done. (1599) → *First Race of Intellectuals.*(1652)
- (21) *hopeful* ‘As *n. (colloquial).* A ‘hopeful’ boy or girl: often ironical.’
 ..., *Shee’s the hopefull Lady* ... (1599) → *Else young Hopeful might have* ... (1720)

For example, in (18), *daily* is attested in 1711 as part of *a daily paper* meaning ‘a daily newspaper or periodical’, while its nominal use *the daily* appears afterwards in 1754. Similarly, *digestive* in (19) surfaces in *digestive biscuits* in 1876, specifically meaning ‘a type of wholemeal biscuit’, with the nominal form following around 60 years later in 1935. In (20), *intellectual* was initially attested in *the intellectuall Angels*, though *angel* does not refer to a genuine person. The nominal usage then appears later in 1652. Finally, *hopeful* in (21), defined as a male or female person, appears in *the hopefull Lady* in 1599, with the nominal form following in 1720. Thus far, regardless of whether the nominal use of the suffixed adjectives denotes a human referent or not, their attested forms in the *OED* were consistently prenominal modifications. When we further focus on the status of prenominal modifiers, English has many adjectives that are used solely in attributive positions, such as relational adjectives.

An alternative analysis can be to regard the suffixes used in (5), such as *-ly* of *daily*, *-ive* of *digestive*, or *-al* of *intellectual*, as nominalisers. However, our analysis can be directly applied to a subclass of denominal adjectives. In English, there exists a special class of relational adjectives, often called collateral adjectives (Koshiishi (2002, 2011)), which are suppletive adjectival forms corresponding to nouns. Although the term ‘suppletion’ is normally used in inflectional morphology, such as the comparative or superlative forms of *good*, that is, *better* and *best*, this phenomenon can also be observed in derivational morphology, as exemplified in (22).

- (22) a. *canine* (< *dog*) ‘canine teeth’
 b. *cardiac* (< *heart*) ‘cardiac disease, heart stopping/attack’

- c. *pluvial* (< *rain*) ‘pluvial periods/seasons’

For example, in (22a), the English noun *dog* has several adjectival forms such as *doggy*, *doggish*, or *dogly*, but it also has the suppletive form, *canine*, borrowed from Latin and denoting ‘relating to dogs’. What is interesting here is that *canine* can also be used as a noun, specifically meaning a type of tooth, namely ‘a canine tooth’ or ‘canine teeth’. Similarly, in (22b), *cardiac* is a suppletive adjectival form corresponding to the noun *heart*, and in (22c), *pluvial* is that of the noun *rain*. Since these suppletive adjectives are genuinely borrowed from Latin, which means that they were not created in English, they are “hard to reduce to any transparent morphological processes synchronically” (Koshiishi (2002: 51)).

According to the *OED*, such suppletive adjectives show the same result as the suffixed ones.

(23) *canine*

... *their canine teeth*, ... (1607) → ..., *termed incisors, canines, and molars*. (1835)

... *all the canine race*. (1810) → *As though ‘Hullah’ had tutored each canine to sing*. (1863)

cf. ‘A dog (sometimes *jocular*).’

(24) *cardiac*

..., *sudden cardiac arrest always occurs*. (1873) → ... *and die of a cardiac when ...* (1972)

(25) *pluvial*

They indicate a Pluvial period, ... (1868) → ... *the deposits of the various Pluvials*. (1929)

For example, *canine* in (23) was attested in a prenominal form in 1607, and its noun usage appeared almost 200 years later in 1835. Regarding *cardiac* in (24), it appeared in a prenominal form in 1873, and its nominal use emerged later in 1972. Finally, *pluvial* in (25) also emerged as the prenominal modification *a pluvial period* in 1868, and its nominal usage appeared in 1929.

On the other hand, our analysis predicts that predicative-only adjectives, such as those prefixed by *a-* (hereafter *a*-adjectives) like *aloud*, *afire*, *afloat*, *alive*, and *asleep* cannot undergo the derivation process of lexicalisation and clipping. This prediction is evidenced by the ungrammaticality in (26).

(26) a. * In this zoo, you can always see at least two *asleeps*.

b. * Those *afloats* worsen the environment of the beach.

The intended reading of (26a) is ‘you can always see at least two animals sleeping’ and that of (26b) is ‘those cans and bottles floating worsen the beach’s environment’. As expected, our informants judge such nominal uses of *a*-adjectives in (26) to be completely ungrammatical.⁵

Therefore, including suppletive adjectives, our analysis reasonably predicts that suffixed adjectives, excluding genuine predicative adjectives like *a*-adjectives, can nominalise through the morphological processes of lexicalisation and clipping.

5. Concluding Remarks

In this paper, we have analysed the case of suffixed adjectives. However, it is pertinent to consider

the case of simplex adjectives. Simplex adjectives exist in the lexicon, and they can be converted into nouns by themselves such as *empty*_N, *heavy*_N, *human*_N, *private*_N, *short*_N, *sweet*_N (Bauer and Huddleston (2002: 1642)). As shown in (27), some of these denote not only human referents but also objects or abstract notions, raising the possibility of even simplex adjectives undergoing the proposed morphological processes of lexicalisation and clipping.

- (27) a. *slow*_N ‘a slow train; a slow-paced horse; a slow-going person; a slow tune’
 b. *wet*_N ‘moisture; liquid or moist substance’

(cf. Cetnarowska (2010: 120))

Our analysis is summarised in Table 2. While simplex adjectives can be converted into nouns in two ways, suffixed adjectives acquire nominal function only through lexicalisation and clipping. In passing, both simplex and complex adjectives can be inputs for HUMAN constructions such as *the rich* or *the poor*, because they are syntactically formed with *pro*.

Table 2: Comparison of Simplex and Suffixed Adjectives in Three Grammatical Processes

	Conversion of Adj itself	Lexicalisation of Adj+N & Clipping	HUMAN construction
Simplex Adj	✓	✓	✓
Suffixed Adj	—	✓	✓
	True-N Type		True-Adj Type

Thus, our analysis does not defy the generalisation for conversion of derived words and extends the applicability of the relisting approach. Again, it involves lexicalisation of the whole suffixed adjective + noun phrase, allowing it to be relisted in the lexicon as a single derived noun, followed by clipping, where the lexicalised words are shortened.

Finally, when the relevant examples in English are contrasted with Japanese, they should be realised with appropriate classifiers such as *-gata* or *-rui* (cf. Nagano (2016), Shimada and Nagano (2018)), as shown in (28).

- (28) a. *(the) factive(s)*: *jojitsu-gata* (叙実型)
 b. *(the) nominal(s)*: *meishi-rui* (名詞類)
 c. *(the) intellectual(s)*: *chishiki-jin/-kaikyū* (知識人/知識階級)
 d. *(the) canine(s)*: *ken-shu* (犬種) / *inu-ka* (イヌ科) (cf. *kenshi* 犬齒)
 e. *(the) pluvial(s)*: *u-ki* (雨季/雨期)

For instance, in (28a), *the factive* or *factives* should appear with the classifier *-gata*, thus *jojitsu-gata*, because the simple word *jojitsu* cannot refer to the kind or class of *factive predicates*. Additionally, in (28b), *the nominal* or *nominals* can be translated as *meishi-rui*, particularly as a term of linguistics. Therefore, the Japanese counterparts appear with nominal classifiers meaning ‘a kind or class’ such as

-gata or -ruī (cf. Ishida and Naya (2022a, b)). The examination of such a contrastive English-Japanese realisation process will be the focus of our next study.

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NOTES

- ¹ See Bauer and Huddleston (2002: 419ff) for a different approach.
- ² The data and the definitions are cited from the *Oxford English Dictionary Online* unless otherwise specified (accessed on 8 May 2024).
- ³ <https://mainichi.jp/english/articles/20181001/p2a/00m/0na/012000c> (accessed on 8 May 2024)
- ⁴ Maeda (2016, 2018) offers a comparable analysis within the framework of Construction Grammar. Incidentally, although Kanazawa (2023) also applies ellipsis analysis for noun phrases, our analysis essentially differs from his, as we contend that the relevant examples constitute ‘words’ and not ‘phrases’ (see Waldron’s (1967) statement in (15)).
- ⁵ Nagano (2015) demonstrates that *a*-adjectives are inherently stage-level predicates (see Nagano’s (2015) analysis for the prefix *a*-). As this property appears to clash with the nature of lexicalisation, which involves transforming elements into individual-level predicates, such stage-level adjectives cannot directly become individual-level nominal elements. According to the *OED* (s.v. *awake*), however, when another adjective *wide* is added to *awake*, it turns to have a nominal use and refers to a specific kind of bird, *wide-awake* (*wideawake tern* ‘the sooty tern’) (e.g., *Sea-gulls and wide-awakes hovered in hundreds over the water*). Further research is required to explore this expression.

REFERENCES

- Bauer, Laurie (1983) *English Word-Formation*, Cambridge University Press, Cambridge.
- Bauer, Laurie (2021) *An Introduction to English Lexicology*, Edinburgh University Press, Edinburgh.
- Bauer, Laurie and Rodney Huddleston (2002) “Lexical Word-Formation,” *The Cambridge Grammar of the English Language*, ed. by Rodney Huddleston and Geoffrey L. Pullum, 1621–1721, Cambridge University Press, Cambridge.
- Borer, Hagit and Isabella Roy (2010) “The Name of the Adjective,” *Adjectives: Formal Analyses in Syntax and Semantics*, ed. by Patricia Cabredo Hofherr and Ora Matushansky, 85–114, John Benjamins, Amsterdam.
- Cetnarowska, Bożena (2010) “On Deadjectival Conversion in English,” *Studia Neofilologiczne VI*, ed. by Andrzej Miszczak, 111–123, Wydawnictwo Akademii im. Jana Długosza, Częstochowa.
- Farrell, Patrick (2001) “Functional Shift as Category Underspecification,” *English Language and Linguistics* 5, 109–130.
- Ishida, Takashi and Ryohei Naya (2022a) “*Presidential Company* vs. *President Company*: Very Subtle but Crucial Semantic Differences Between RA-N and N-N,” *Tsukuba English Studies* 41, 19–32.
- Ishida, Takashi and Ryohei Naya (2022b) “Why Does Contrast Allow Relational Adjectives to Be Used Predicatively? A Qualia Structure-Based Account,” *JELS* 39, 171–177.

- Kanazawa, Shungo (2023) “Eigo-no Meishiku-ni Mirareru Koseiso-no Shoryaku-nitsuite (On the Ellipsis of Constituents in English Noun Phrases),” *Hanashite • Kikite to Gengo-Hyogen* (Speakers/Hearers and Linguistic Expressions), ed. by Koji Yoshida, 31–67, Kaitakusha, Tokyo.
- Kester, Ellen-Petra (1996) “Adjectival Inflection and the Licensing of Empty Categories in DP,” *Journal of Linguistics* 32, 57–78.
- Koshiishi, Tetsuya (2002) “Collateral Adjectives, Latinate Vocabulary, and English Morphology?,” *Studia Anglica Posnaniensia* 37, 49–88.
- Koshiishi, Tetsuya (2011) *Collateral Adjectives and Related Issues*, Peter Lang, Bern.
- Lieber, Rochelle (1992) *Deconstructing Morphology: Word Formation in Syntactic Theory*, University of Chicago Press, Chicago.
- Maeda, Mitsuru (2016) *Shiteki-kobun Kenkyu (Diachronic Studies on Construction)*, Doctoral dissertation, Ritssho University.
- Maeda, Mitsuru (2018) “Naze *Gold* dakede ‘Kin-medaru’? Shoryaku to Imihenka (Why Can Only *Gold* Express ‘Gold Medal’? Ellipsis and Semantic Change),” *Eigogaku ga Katarumono* (What English Linguistics Tells About), ed. by Hiroshi Yonekura and Yoshihisa Nakamura, 109–126, Kuroshio, Tokyo.
- Marchand, Hans (1969) *The Categories and Types of Present-Day English Word-Formation: A Synchronic-Diachronic Approach*, 2nd ed., C. H. Beck’sche Verlagsbuchhandlung, München.
- Mattiello, Ellisa (2013) *Extra-grammatical Morphology in English: Abbreviations, Blends, Reduplicatives, and Related Phenomena*, De Gruyter Mouton, Berlin.
- Nagano, Akiko (2008) *Conversion and Back-Formation in English: Toward a Theory of Morpheme-Based Morphology*, Kaitakusha, Tokyo.
- Nagano, Akiko (2015) “The Category and Historical Development of the Prefix *a-*,” *JELS* 33, 86–92.
- Nagano, Akiko (2016) “Are Relational Adjectives Possible Cross-Linguistically? The Case of Japanese,” *Word Structure* 9(1), 42–71.
- Nishiyama, Kunio and Akiko Nagano (2020) *Keitairon to Rekishikon* (Morphology and Lexicon), Kaitakusha, Tokyo.
- Plag, Ingo (2018) *Word-Formation in English*, 2nd ed., Cambridge University Press, Cambridge.
- Quirk Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language*, Longman, London.
- Shimada, Masaharu and Akiko Nagano (2018) “Relational Adjectives Used Predicatively (But Not Qualitatively): A Comparative-Structural Approach,” *Lexique* 23, 62–89.
- Simons, Mandy (2007) “Observations, on Embedding Verbs, Evidentiality, and Presupposition,” *Lingua* 117(6), 1034–1056.
- Waldron, Ronald A. (1967) *Sense and Sense Development*, Andre Deutsch, London.
- Yamamura, Shuto (2010) “The Development of Adjectives Used as Nouns in the History of English,” *English Linguistics* 27, 344–363.

DICTIONARIES

Oxford English Dictionary Online, retrieved from <https://www.oed.com>

The Reciprocal Uses of Relational Nouns in Japanese and English: Conceptual Symmetry and its Linguistic Manifestations*

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Keywords : relational noun, reciprocal use, symmetry, cognitive linguistics

1. Introduction

While reciprocity is mainly discussed in relation to verb semantics or grammatical voice, it also plays an important role in the nominal realm. The relational noun *sister* in its plural form can refer to a group of individuals each member of which bears a “sister-of” relation to the others, as illustrated in (1).

- (1) The sisters entered the room. (Eschenbach 1993: 4)

Cases like this, often called “reciprocal plurals,” have been discussed in the formal semantics literature (Eschenbach 1993, Barker 1999, Hackl 2002, Staroverov 2007). Similar phenomena can also be observed in Japanese, as shown in (2), where the noun *itoko* ‘cousin(s)’ can receive reciprocal interpretation, but with some notable differences.

- (2) Taro to Yoko wa itoko da.
Taro and Yoko TOP cousin COP
‘Taro and Yoko are cousins.’

The present paper examines the reciprocal uses of relational nouns in English and Japanese. Its aim is twofold: (i) to elucidate the lexical and grammatical constraints on this interpretation of nouns in Japanese, and (ii) to investigate the nature of reciprocity in nouns, with a focus on symmetry at the conceptual level.

2. Reciprocal Plurals in English

Since nouns like *birthday*, *pet* and *daughter*, often called “relational nouns” (RNs), describe a referent as being in a particular relation with another individual, they require a point of reference. For example, *birthday* requires specification of whose birthday it is, like ‘the birthday of Peter’ (Barker 2011). Thus, the subject noun phrase in (3a) requires contextual specification of the person to whom its

referents stand in the “daughter-of” relation. In contrast, the subject noun phrase in (3b) allows for a reciprocal reading where all the referents are the others’ sisters, as well as a unilateral reading, where the referents are the sisters of a particular person.

- (3) a. The daughters entered the room.
 b. The sisters entered the room. (Eschenbach 1993: 4)

Eschenbach (1993) argues that the plural forms of a specific subclass of RNs in English can have special semantic values, and offers an analysis in terms of a semantic operator called ‘rec,’ associated with the plural form. This operator transforms a binary relation (e.g. *sister-of* (x, y)) into a unary predicate, which applies to a set of entities such that, for every ordered pair (x, y) within that set, x bears that relation to y . While refinements of the method of derivation have been proposed by Hackl (2002) and Staroverov (2007), it is taken for granted that nouns like *sister* inherently denote a unilateral relation, from which the reciprocal meaning is derived. This assumption will be critically examined in Section 4.

As for constraints on the meanings of nouns, Eschenbach (1993) proposes that RNs denoting “**not anti-symmetric**” relations can have reciprocal interpretations. A relation is “not anti-symmetric” if it does not exclude situations where both $R(x, y)$ and $R(y, x)$ hold. For example, the “daughter-of” relation is anti-symmetric because it is impossible for A to be B’s daughter and for B to be A’s daughter at the same time, so *daughters* doesn’t have reciprocal reading.

According to Staroverov (2007), however, some nouns are not anti-symmetric yet resist reciprocal interpretation. He imagines a scenario where A is B’s uncle and vice versa, and observes that even in such cases *uncles* cannot be interpreted reciprocally. (Such situations are rare but possible, for instance, John’s nephew marries John’s aunt.) This suggests that Eschenbach’s constraint is too weak. Staroverov therefore proposes that for relational nouns to be used reciprocally, they must denote **symmetric or nearly symmetric** relations, a stronger constraint than Eschenbach’s. (The reason why the phrase “nearly symmetric” is used here is that the “sister-of” relation is not strictly symmetrical, because the sentence “A is B’s sister” does not entail “B is A’s sister,” since B could be male. To accommodate such cases, Staroverov tries to give a properly weakened definition of symmetry, using the notion of presupposition.¹⁾

3. Observations on the Reciprocal Uses of RNs in Japanese

Relational nouns can also be used reciprocally in Japanese. Although no systematic research has been conducted on this topic, Sadanobu (2016: 299 n.16) mentions in passing the sentence in (4) and describes it as expressing a “reciprocal and symmetric relation.” Similar examples are available with other RNs as in (5).

- (4) Ichiro to Jiro ga raibaru da.
 Ichiro and Jiro NOM rival COP
 ‘Ichiro and Jiro are rivals.’

- (5) Taro to Yoko wa {itoko / tomodachi / kurasumeito} da.
 Taro and Yoko TOP {cousin / friend / classmate} COP
 ‘Taro and Yoko are {cousins / friends / classmates}.’

There are two notable differences when compared to English. Firstly, they are basically restricted to the predicate position. As shown in (7), RNs are difficult to interpret reciprocally when functioning as arguments.

- (7) ??{Itoko / Raibaru / Tomodachi} ga heya ni hai-tta.
 {cousin / rival / friend} NOM room to enter-PAST
 [Reciprocal reading difficult or impossible]
 (intended) ‘The {cousins / rivals / friends} entered the room.’

This observation is supported by the available corpus data. As shown in Table 1, reciprocal occurrences of *raibaru* are found only in the predicate position in BCCWJ, a corpus of contemporary written Japanese.

Table 1. Grammatical positions of *raibaru* and its reciprocity

Position	Non-reciprocal	Reciprocal
Subject (-ga) or Object (-o)	111	0
Predicate	100	15

Yet, reciprocal usage in argument positions is permitted in some contexts, as in generic statements like (8), or when the relational component of the noun phrase is highlighted, for example, by a temporal adverb as in (9).³

- (8) Itoko wa soshiki de au.
 cousin TOP funeral at meet [Reciprocal reading possible]
 ‘Cousins meet at funerals.’
- (9) Katsute no Raibaru ga ima wa nakayoshi da.
 once in rival NOM now TOP good.friends COP [Reciprocal reading possible]
 ‘They used to be rivals, but they’re now good friends.’

Though the precise conditions remain to be explored, here is a tentative generalization: the reciprocal uses of RNs in Japanese do not primarily serve the function of referring, but that of describing. In other words, they are **adjectival** in nature.

Secondly, there is a seemingly unpredictable lexical restriction in Japanese. For example, while *raibaru* ‘rival’ can be used reciprocally, *teki* ‘enemy’ cannot.

(10) ?? Taro to Yoko wa {teki / aite / konyakusya} da.
 Taro and Yoko NOM {enemy / opponent / fiancé} COP
 [Reciprocal reading difficult or impossible]
 (intended) ‘Taro and Yoko are {enemies / opponents / fiancés}.’

This is puzzling given the fact that their English counterparts, such as *John and Sue are {enemies / opponents / fiancés}*, are quite natural in their reciprocal reading.

4. Reciprocity and the Base-Profile Structure

Where does the reciprocity of nouns come from? Previous studies have generally assumed that it is derived from the basic unilateral relation denoted by the noun through a certain semantic operation. However, a different view becomes possible when the conceptual structures of the nouns are taken into account. In the framework of Cognitive Grammar, a linguistic expression is said to evoke an array of conceptual content as its **base** and to designate (or **profile**) a specific part of it. *Hypotenuse*, for example, refers to a line segment, but it does so only by evoking the concept of a right triangle as its base (Langacker 1990: 6). For relational nouns, the base-profile structure is particularly important, as illustrated by the case of *aunt* diagrammed below (Langacker 2008: 67). It essentially involves the kinship relation between a female and a reference individual (labeled R) as its base, while profiling the female within that relation.

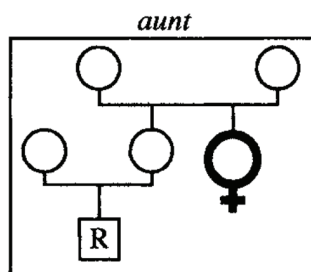


Figure 1. *Aunt* (Langacker 2008: 67)

Then, *rival* can be seen as evoking a competitive relationship between two individuals as its base and profiling one of them as in *John's rival* (Figure 2 (a)). In this analysis, the symmetric, mutual relationship is already present in the base of the noun, even in its singular form or non-reciprocal plural use. In the reciprocal plural use, it simply profiles both participants within that same base, as Figure 2 (b) shows. The difference between them is subtle and **metonymic** in nature.

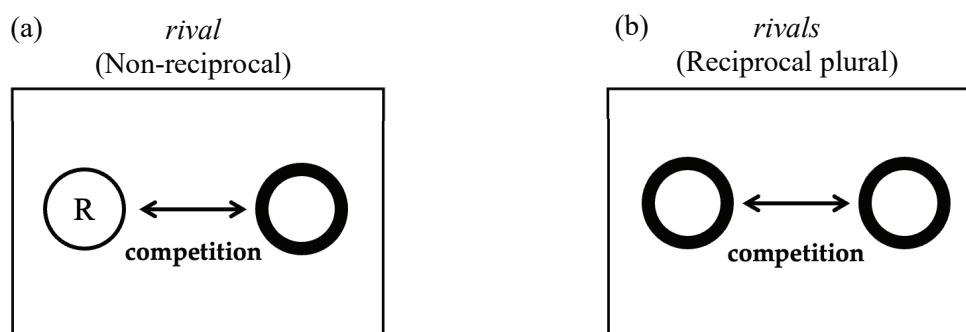


Figure 2. *Rival* in non-reciprocal use and in reciprocal plural use

A single symmetrical relation serves as the background for both reciprocal and non-reciprocal uses. This account obviates the need to derive the reciprocal relation from a basic unilateral one as was done in the previous studies. My claim that nouns like *rival*, *sister*, or *friend* inherently evoke mutual relations is supported by the observation that abstract nominals derived from them, such as *rivalry*, *sisterhood*, or *friendship*, consistently imply reciprocal relations.³ Furthermore, this explains Staroverov’s (2007) observation that *uncles* cannot express reciprocal relations: there is no inherent reciprocity in the base of the word *uncle*.

The reciprocal uses of RNs in Japanese are treated in a similar way, though with a slight difference. For example, the base and profile of *raibaru* in its non-reciprocal usage are presumably the same as those of English *rival* in Figure 2(a). But the reciprocal usage is basically restricted in the predicate position of a sentence, which suggests its adjectival nature. In Cognitive Grammar terms, the profile shifts from a thing to a relation. Once again, this involves a metonymic process, where the base remains the same, and the profile changes.

From a broader perspective, reciprocity can be divided into two types: (i) **simple reciprocity**, inherent in the meaning of a lexical item, as in *John and Sue kissed*, and (ii) **complex reciprocity**, derived from a basic relation, as in *John and Sue criticized each other*. The former involves a single symmetric event, while the latter involves two separate events (Ikawa 2012). Dimitriadis (2008) observes that in many languages, reciprocal constructions where the two participants are split across the subject and a comitative argument (e.g., *John met with Mary*) can express only simple reciprocity. In this respect, the reciprocal uses of RNs in English and Japanese belong to the former category, as they are based on a single symmetric relation.

5. Conceptual Symmetry

As we saw in Section 3, some Japanese relational nouns with seemingly symmetrical meanings resist reciprocal interpretation. Notably, while *raibaru* (‘rival’) allows for the reciprocal usage, *teki* (‘enemy’) does not, unless it is combined with *-dooshi* (as in *teki-dooshi*). I propose that this difference arises from the distinct meanings of these words. The base or background frame of *raibaru* is inherently symmetrical in the way in which *teki* is not. But what exactly is symmetry? The notion of symmetry is often defined in truth-conditional terms, invoking entailment (as we saw in Section 2). But Sadanobu (1990) formulates it in terms of construal. As he says, “symmetry is the extent to which a sentence (or part of

it) construes two elements of a situation as equal entities occupying comparable positions within the situation” (Sadanobu 1990: 7, translation mine).

Let’s return to *raibaru* and *teki*. The former fundamentally involves the idea of competition, a relationship where the participants have equal status, making it highly symmetrical in Sadanobu’s sense. On the other hand, the latter does not necessarily involve participants of equal status. Consider the statement in (11). It does not imply that Yoko herself feels the same way.

- (11) Yoko wa watashi no teki da.
 Yoko TOP I GEN enemy COP
 ‘Yoko is my enemy.’

Thus, a sentence like *Shihon-shugi wa watashitachi no teki da*. (‘Capitalism is our enemy.’) is quite natural. These facts suggest that *teki* is not associated with symmetrical construal. It is noteworthy that *shukuteki* (‘long-standing enemy’), which implies competition, is much more felicitous in reciprocal reading than *teki*.

- (12) Taro to Yoko wa {??teki / ^{OK}shukuteki} da.
 Taro and Yoko TOP {enemy / long-standing enemy} COP
 ‘Taro and Yoko are {enemies / long-standing enemies}.’

Nevertheless, *enemies* can be interpreted reciprocally in English. This suggests that the symmetry requirement for reciprocal usage in English is somewhat weaker than that of Japanese. Alternatively, this may suggest that the meaning of *enemy* in English is not exactly the same as that of *teki* in Japanese. Further research is needed on this point.

6. Conclusion

This paper has explored the reciprocal uses of relational nouns, a phenomenon that has received relatively little attention. While English and Japanese both exhibit reciprocal usage of RNs, they differ notably in the grammatical conditions and the semantic restrictions. Crucially, it is argued that understanding these phenomena requires an appreciation of the background frames, or the ‘base,’ of the nouns. The detailed characterization of symmetry and reciprocity at the conceptual level remains to be investigated in future research.

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NOTES

¹ Staroverov (2007) concludes that an RN permits reciprocal interpretation if and only if the relation R(x, y) Strawson-entails R(y, x). Strawson-entailment is defined as follows: P Strawson-entails Q iff the

conjunction of P and the presupposition of Q entails Q. Given that the gender specifications of nouns like *sister* and *brother* are their presuppositions, these nouns Strawson-entail the inverse relations, he argues.

² The example in (9) was pointed out by Yo Matsumoto.

³ I owe this insight to a discussion with Masayuki Ishizuka.

⁴ Some Japanese RNs seem to resist reciprocal usage for other reasons: *konyakusha* ('fiancé') and *haigusha* ('spouse') cannot be interpreted reciprocally despite their high symmetry. This may be attributed to the Sino-Japanese suffix *-sha*.

REFERENCES

- Barker, Chris (1999) "Temporary Accommodation: I am the Oldest of my Siblings," *Studies in the Linguistic Sciences* 29 (1), 3–13.
- Barker, Chris (2011) "Possessives and Relational Nouns," *Semantics: An International Handbook of Natural Language*, ed. by Claudia Maienborn, Klaus von Heusinger, and Paul Portner, 1109–1130, Mouton de Gruyter, Berlin.
- Dimitriadis, Alexis (2008) "Irreducible Symmetry in Reciprocal Constructions," *Reciprocals and Reflexives: Theoretical and Typological Explorations*, ed. by Ekkehard König and Volker Gast, 375–410, Mouton de Gruyter, Berlin.
- Eschenbach, Carola (1993) "Semantics of Number," *Journal of Semantics* 10, 1–31.
- Hackl, Martin (2002) "The Ingredients of Essentially Plural Predicates," *Proceedings of the 32nd Northeast Linguistic Society Conference*, ed. by Masako Hirotsu, 171–182, GLSA, University of Massachusetts, Amherst.
- Ikawa, Hisako (2012) *Ibento Imiron to Nichieigo no Kobun* (Event Semantics and Constructions in Japanese and English), Kuroshio Publishers, Tokyo.
- Langacker, Ronald W. (1990) *Concept, Image, and Symbol: The Cognitive Basis of Grammar*, Mouton de Gruyter, Berlin.
- Langacker, Ronald W. (2008) *Cognitive Grammar: A Basic Introduction*, Oxford University Press, Oxford.
- Sadanobu, Toshiyuki (1990) "Bun no 'Taisyoosee' to Meeshiku no Soogokookan" ('Symmetry' of Sentence and Noun Phrase Interchange), *Linguistic Research* 9, 1–57.
- Sadanobu, Toshiyuki (2016) *Komyunikēshon eno Gengoteki Sekkin* (A Linguistic Approach to Communication), Hituzi Syobo Publishing, Tokyo.
- Staroverov, Peter (2007) "Relational Nouns and Reciprocal Plurality," *Semantics and Linguistic Theory* 17, 300–316.

P as a Locus of Definiteness in the Extended Projections of the Nominal Domain*

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Keywords : extended projections, definiteness marking, categorial feature

1. Introduction

The more or less standard assumption in the literature regarding definite articles is that definite articles are obligatorily present in a nominal phrase with the definite interpretation in languages with definite articles, such as English. This would follow from Chierchia's (1998) blocking principle, by which presence of a lexicalized semantic operator in a language blocks covert application of the operator at LF (e.g., the iota operator).

In this paper, however, I introduce cases in which definite articles are obligatorily absent in the presence of a preposition despite the definite interpretation in language such as Romanian and Albanian, which is unexpected from the standard view of the definite article noted above. I then propose that P can function as the highest functional element of the extended projections in the nominal domain, *à la* Grimshaw (2000), Baker (2003), and Zanon (2020). In addition, building on Talić (2017), I propose that DP is in fact absent in the case of article drop in PPs in the languages in question. P in the cases in question is responsible for the definite interpretation as the highest functional element in the nominal domain, just as D in the usual cases. In a bigger picture, this work puts forward the possibility to investigate non-prototypical properties of certain categories in a more fine-grained manner under the formal linguistic framework.

2. Data

Mardale (2006) shows that certain PPs, which are typically locative, resist definite articles in Romanian and Albanian, as seen in (1) and (2), respectively. Zwicky (1984) also notes that definite articles are dropped in locative PPs in Yiddish (3) (see also Verschik (2001) for Estonian Yiddish).

(1) Mă îndrept **către** **parc(*-I)**.

me head towards park-the

'I'm heading towards the park.' (Romanian, Mardale (2006:2))

(2) Unë po shkoj **në** **kishë(*-n)**.

I PROG go to church-the

'I'm going to the orthodox church.' (Albanian, Mardale (2006:4))

- (3) in field
 in field
 ‘in the field’ (Yiddish, Zwicky (1984:120))

This appears to be similar to bare singulars in locatives found in languages like English as shown in (4), which are restricted to a narrow lexical class of nouns (the so-called weak definite; see, e.g., Scholten (2010) and Aguilar-Guevara (2014)).

- (4) I went to school.

However, Mardale (2006) reports that article drop in PPs with definite interpretation is more productive and is possible with other types of prepositions in Romanian, such as direct object marking (5) and indirect objects (6).

- (5) L=am văzut **pe** professor.
 him=have seen PE professor
 ‘I saw the professor.’ (Mardale (2006:3))

- (6) Dau cărți **la** copii.
 give books to children
 ‘I give books to the children.’ (Mardale (2006:3))

In addition, Mardale points out that the nouns in the locatives in (1) and (2) necessarily receive a definite interpretation; in other words, an indefinite reading is not allowed (which is also the case with (3)). This is contrasted with the weak definite, which lacks a clear definite interpretation (Scholten (2010), Aguilar-Guevara (2014)). In fact, an indefinite article must be present for an indefinite interpretation in the relevant PP in Romanian, as shown in (7). This indicates that the article omission is associated with definiteness.

- (7) Mă îndrept către ***(un)** parc.
 me head towards a park
 ‘I’m heading towards a park.’ (Romanian, Mardale (2006:2))

Mardale (2006) proposes that D incorporates into P in the case of article drop, whereby D is unpronounced. However, this account cannot explain the difference between (1)-(3) and (8)-(10).

- (8) Mă îndrept către parc***(-l)** **înverzit**.
 me head towards park-the green
 ‘I’m heading towards the park.’ (Romanian, Mardale (2006:2))

- (9) Unë po shkoj në kishë***(-n)** **ortodokse**.
 I PROG go to church-the orthodox

‘I’m going to the orthodox church.’ (Albanian, Mardale (2006: 6))

(10) [inəm] groys m feld
in.the big the field

‘in the big field’ (Yiddish, Zwicky (1984:120))

It is unclear how the adjective (AP), which is located lower than DP, would block this incorporation (i.e., article drop) in (8)-(10), since nothing would intervene between D and P. In fact, Mardale does not offer a satisfactory analysis of (8)-(10). Thus, a more comprehensive account of article drop is warranted.

3. Proposal

In the spirit of Grimshaw (2000), Baker (2003), Zanon (2020), among others, I propose that the prepositions in the cases introduced above can be part of the extended projection of a nominal domain. This can be motivated by the traditional classification of lexical categories proposed by Chomsky (1970), in which N is [+N, -V], A is [+N, +V], V is [-N, +V], and P is [-N, -V]; N and P thus constitute a natural class as [-V] elements. P can then serve as a functional element in the nominal domain as a [-V] element. Based on this, I propose that P can be the highest functional element in the nominal domain in the relevant languages only if its complement is [-V]. It is also worth noting here that the languages mentioned above do not allow P-stranding, as shown (11)-(12) (see Irimia (2005) for Albanian).

(11) *Cine_i ai vorbit [despre t_i?
what you.have talked about (Romanian, Nicolae 2012)

(12) *Vemen_i hot zi [mit t_i] geredt?
who has she with spoken (Yiddish, Merchant 2001:96)

Interestingly, Bošković (2016) proposes that functional heads in general cannot be stranded and that prepositions in non-P-stranding languages are functional elements, whereas those in P-stranding languages are lexical elements (cf. Baker (2003) for the proposal that the functional/lexical distinction is a point of variation with Ps). It is then not implausible to analyze Ps in these languages as functional elements in the extended projection of a nominal domain.

A question that arises here is why omission of D is *forced* in the presence of P in the relevant cases. I suggest that a feature responsible for the definite interpretation, which I dub as Def-feature for ease of exposition, can be realized (together with other relevant features such as ϕ -features) as a definite article, i.e., D, only if it is part of the feature bundle of the highest element in the nominal domain in the relevant languages (cf. Mardale (2006)).¹ In the presence of P as the highest element of the extended projections of the nominal domain, DP would not be the highest projection in the extended projections of the nominal domain in this case.² Note also that the languages that allow article drop in PP are affixal article languages, in which Talić (2017) argues DP can be absent in the absence of the definite article (see also Oda (2022, 2023) and Lewis (2021, 2023) for relevant discussions). Thus, it is not implausible that D is actually absent in such cases, and the presence of PP as the highest functional projection in the nominal domain blocks projection of DP, which needs to be the highest functional projection in the nominal

domain.

The next question to be addressed is why the bare noun in the cases under discussion receives the definite interpretation. As mentioned above, Mardale (2006) observes that the bare nouns in the PP in question necessarily receive the definite interpretation, despite the absence of the definite article, and hence absence of DP. My proposal here is that that P actually contains the Def-feature. Under Bare Phrase Structure (BPS), lexical items that have traditionally been given specific categorial labels are merely bundles of features. Chomsky (1995), building on Borer (1984) and Fukui (1986, 1988), proposes that parameters are reduced to different specifications of formal features in the lexicon, which Baker (2008) calls the Borer-Chomsky Conjecture. It is then logically possible that Ps in question can in principle have the Def-feature in some languages as a parametric option. I suggest that this option is possible only if P serves as the highest functional element in the extended projections of the nominal domain. Otherwise, the definite article is used as the highest functional element in the nominal domain as the locus of the Def-feature. Under this proposal, the P in question and D receive a unified treatment from the perspective of the Def-feature; in both cases, the Def-feature needs to be contained in the highest element of the extended projections in the nominal domain. Note that all this only concerns the Def-feature, hence is irrelevant to the indefinite article; see (7), where the indefinite article is obligatory for the indefinite interpretation.

Let us now turn to the cases where the presence of an adjective forces the presence of the definite article in PPs in question, as seen in (8)-(10). Given that the presence/absence of a definite article correlates with the presence/absence of DP in the relevant PP, the obligatory presence of the definite article in the PPs in question in the presence of an adjective for the definite interpretation indicates that DP is forced to project due to the presence of the adjective. Here I propose that AP projects above NP (cf. Abney (1987)) and “intervenes” between PP and NP in terms of the categorial feature, which forces DP to be the highest functional projection in the nominal domain. Recall that P can be the highest functional projection in the nominal domain because of the P-N affinity, which is calculated based on their categorial features; P is [-N, -V] and N is [+N, -V], so they constitute a natural class as [-V] elements. In other words, the complement of P needs to be [-V] in order for P to be the highest functional projection in the nominal domain. Crucially, under this feature-based classification of lexical categories, A is [+N, +V]. Thus, when an adjective is present and projects AP above NP and below PP, AP “intervenes” between PP and NP in terms of the categorial feature; P, which is [-V], is merged above AP, which is [+V], so that PP does not count as the highest projection of the extended projections in the nominal domain, for which the complement of P needs to be [-V]. This is schematized in (13).

(13) a. [PP_[-V, -N] [NP_[-V, +N]]]

(P functions as an alternative of D as the highest [-V] element)

b. *[PP_[-V, -N] [AP_[±V, +N] [NP_[-V, +N]]]]

(P cannot function as an alternative of D due to the intervention by AP, which has [+V])

c. [PP_[-V, -N] [DP_[-V, +N] [AP_[+V, +N] [NP_[-V, +N]]]]]]

(DP is required for definiteness in the presence of AP)

Since P cannot be the highest functional projection in the nominal domain in this case, D needs to project above AP as the functional projection that carries the definite interpretation, as seen in (13c) (note that D, A, and N are all [+N]). Thus, the definite article, which corresponds to D, must be present in the presence of an adjective for the definite interpretation (see Oda (2022) for relevant arguments).

The current proposal could potentially be extended to capture another case in which the definite article must be present in PP where it is otherwise omitted in the relevant languages. Mardale (2006) observes that in Romanian, when the noun in the relevant PP is marked as plural, it cannot have the definite interpretation, unlike its singular counterpart seen above. This is illustrated in (14). Höhn (2014) observes the same point for Basque, an affixal article language, where the definite form of locative is missing in the context of the linker *-ko* in locatives (15a), but it needs to be present when the noun is plural (15b).

(14) Am pus romane-le **pe rafturi**.

AUX put novels-the on shelves

‘We/I put the novels on shelves. (NOT: on the shelves)’ (Romanian, Mardale (2006:10))

(15) a. lantegi- \emptyset -ko tximini-a
 factory-(LOC.DEF.SG)-KO chimney-the
 ‘the chimney in the factory’

b. lantegi-**eta**-ko tximini-a
 factory-LOC.DEF.PL-KO chimney-the
 ‘the chimney in the factories’ (Basque, Höhn (2014:148))

What is crucial here is that the presence of the plural number marking blocks omission of the definite article/marking, just as the presence of an adjective blocks omission of the definite article. A possible explanation of this can be that NumP projects above NP in the case of plural, and the categorial feature specification of Num is just [+N], with the specification of [\pm V] missing. This is schematized in (16).

(16) a. *[PP_[-V, -N] [NumP_[+N] [NP_[-V, +N]]]]

b. [PP_[-V, -N] [DP_[-V, +N] [NumP_[+N] [NP_[-V, +N]]]]]]

The complement of P would then not be [-V] when NumP projects above NP, as seen in (16a). This would force the presence of the definite article, i.e., D would then have to be present in the presence of a plural marking in these languages, as shown in (16b).

Reviewers of SF asked why the Def-feature, which appears to be typically assigned to [+N] elements, can be assigned to P, which is [-N]. My suggestion here is that this is parallel to insertion of the genitive/linker *-no* in nominal phrases in Japanese. As is well-known, the genitive/linker *-no* in Japanese is inserted between the head noun and its preceding NP or PP, but not AP, as shown in (17).

(17) a. [_{NP} Kyoto]*(-no) keshiki

Kyoto-GEN scenery

- ‘scenery of Kyoto’
- b. [PP Kyoto Daigaku de]*(-no) gakkai
 Kyoto University at-GEN conference
 ‘conference at Kyoto University’
- c. [AP utsukushii]*(-no) machi
 beautiful-GEN city
 ‘beautiful city’

This *-no* could be analyzed as being inserted between the head noun and its preceding [-V] phrase in the same nominal phrase (cf. Kitagawa and Ross (1982), Murasugi (1991)). Note now that the Def-feature of P in the relevant languages and the genitive/linker *-no* in a nominal phrase in Japanese can receive a uniform treatment in an abstract way; they are assigned to [-V] elements, although they appear to be typically used with “nominal” items.³

4. Concluding Remarks

In this paper, I have shown that definite articles are necessarily omitted in certain definite PPs in languages such as Romanian, Albanian, and Yiddish (as well as Basque). In addition, the definite article cannot be dropped when there is an adjective that modifies the noun in the PPs in question. I have proposed that P in such cases serves as the highest functional element in the extended projection in the nominal domain, and it is the locus of the Def-feature that is responsible for the definite interpretation. This is motivated by Chomsky’s (1970) feature-based classification of lexical categories, i.e., both P and N are [-V]. P can be the highest functional element in the nominal domain only if it takes a [-V] element as its complement, i.e., NP. When there is an adjective, which projects AP above NP, the complement of P is [+V] since A is [+N, +V] under Chomsky’s classification, hence P cannot serve as the highest functional projection in the nominal domain. Thus, in the presence of an adjective in the PP in question, the definite article needs to be present and project DP as the highest functional element in the nominal domain.⁴

In a bigger picture, the current proposal offers a more fine-grained view of properties of traditional categories in the formal linguistic framework, accommodating the apparent form-meaning mismatch under BPS and the Borer-Chomsky Conjecture. This opens the door to investigation of non-prototypical properties of Ps such as Direct Object Marking (DOM) in a more comprehensive manner from the formal linguistic perspective. For instance, prepositional elements can function as Direct Object Markers (e.g., Spanish *a*, Romanian *pe*). See Romanian (18), which is repeated from (5).

- (18) L-am văzut **pe** **professor**. (= (5))
 him-have seen PE professor
 ‘I saw the professor.’ (Mardale (2006:3))

Interestingly, as is well-known, DOM tends to be subject to semantic restrictions cross-linguistically, especially definiteness or specificity (see, e.g., Aissen (2003)). Direct Object Markers may, then, be

analyzed in a similar fashion to definite articles and the Ps discussed here; i.e., they may be elements that appear with a feature responsible for definiteness/specificity as the highest element in the nominal domain. It may also be interesting to examine whether and how the NP/DP-language-hood in the sense of Bošković (2012), Talić (2017) and Oda (2022), i.e., (non-)projection of a functional projection such as DP in a nominal domain, correlates with the extent of the definiteness/specificity restriction on DOM cross-linguistically (cf. Turkish, which has DOM that exhibits specificity and lacks some properties of canonical NP-languages although it lacks the definite article).

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NOTES

¹ Under this proposal, all in all the students should be analyzed as adjoined to DP (rather than projecting its own projection, say, QP), as Sportiche (1988), Benmamoun (1999) and Bošković (2004) in fact propose, since the must be the highest element in the nominal domain.

² Potentially related to this is loss of wh-movement. Ledgeway (2012) observes that in Latin, which was a multiple wh-fronting language, multiple wh-fronting showed superiority effects, which are taken as a diagnostic of wh-movement targeting the highest clausal projection in the literature (Rudin (1998), Bošković (2002), Richards (2001)). In contrast, Modern Romance languages (except for Romanian) have lost multiple wh-fronting, and Bošković (2021) argues that Spanish wh-fronting does not target the highest clausal projection, based on the observation that an interrogative pronoun can follow a complementizer in an embedded clause (Uriagereka (1988), Rizzi (2001), Villa-García (2015)). Interestingly, Spanish has also acquired (restricted) wh-in-situ (see, e.g., Reglero (2007), Reglero and Ticio (2013)). Thus, abstractly, the unavailability of the highest position in the C domain for wh-movement has led to (the possibility of) a loss of wh-movement (Bošković (2021)). Notice now that article drop under discussion can be assimilated to this; namely, the unavailability of the highest position in the nominal domain has led to omission of the article.

³ Another possibility would be that the Def-feature need not be assigned to [+N] elements in general, given Bošković and Gajewski’s (2011) argument that neg-raising predicates contain Def in languages with definite articles. In this case, vP would be the relevant highest element in the verbal domain.

⁴ Potentially relevant here is the observation that in some article-less languages, a definiteness/specificity marking appears on an adjective, and it is the only locus of the definiteness/specificity marking in those languages (e.g., Serbo-Croatian, Old English, Lithuanian). The current proposal has a potential to explain this observation. The Def-feature, which is responsible for definiteness/specificity, can in principle be present in those languages, but crucially, cannot project DP, since they lack definite articles hence projection of DP in the nominal domain is impossible in those languages (see chapter 5 for relevant discussion). Since DP cannot project in the nominal domain, the only available option of realization of the Def-feature would be to adjoin the Def-feature to A, without projecting a functional

projection (though the Def-feature would be part of the head amalgam that is the highest element in the A domain). (See also Despić (2011), who proposes that the relevant endings in Serbo-Croatian are essentially pronominal.)

REFERENCES

- Abney, Steven (1987) *The English Noun Phrase in its Sentential Aspect*, Doctoral dissertation, MIT.
- Aissen, Judith (2003) "Differential Object Marking: Iconicity vs. Economy," *Natural Language and Linguistic Theory* 21, 435-483.
- Aguilar-Guevara, Ana (2014) *Weak Definiteness: Semantics, Lexicon, and Pragmatics*, LOT, Utrecht.
- Baker, Mark C. (2003) *Lexical Categories: Verbs, Nouns, and Adjectives*, Cambridge University Press, Cambridge.
- Baker, Mark C. (2008) "The Macroparameters in a Microparametric World," *The Limits of Syntactic Variation*, ed. by Theresa Biberauer, 351-374, John Benjamins, Amsterdam.
- Benmamoun, Elabbas (1999) "The Syntax of Quantifiers and Quantifier Float," *Linguistic Inquiry* 30, 621-642.
- Bošković, Željko (2002) "On Multiple Wh-Fronting," *Linguistic Inquiry* 33, 351-383.
- Bošković, Željko (2004) "Be Careful Where you Float your Quantifiers," *Natural Language and Linguistic Theory* 22, 681-742.
- Bošković, Željko (2012) "On NPs and Clauses," *Discourse and Grammar: From Sentence Types to Lexical Categories*, ed. by Günther Grewendorf and Thomas Ede Zimmermann, 179-242, Mouton de Gruyter, Berlin.
- Bošković, Željko (2016) "On Second Position Clitics Crosslinguistically," *Formal Studies in Slovenian Syntax: In Honor of Janez Orešnik*, ed. by Franc Marušič and Rok Žaucer, 23-54, John Benjamins, Amsterdam.
- Bošković, Željko (2021) "Generalized Asymmetry," Keynotes from the International Conference on Explanation and Prediction in Linguistics (CEP): Formalist and Functionalist Approaches, ed. by Peter Kosta and Katrin Schlund, 15-77, Peter Lang, Frankfurt am Main.
- Bošković, Željko and Jon Gajewski (2011) "Semantic Correlates of the NP/DP Parameter," *NELS* 39, 121-134.
- Chierchia, Gennaro (1998) "Reference to Kinds across Languages," *Natural Language Semantics* 6, 339-405.
- Chomsky, Noam (1970) "Remarks on Nominalization," *Readings in English Transformational Grammar*, ed. by Roderic A. Jacobs and Peter S. Rosenbaum, 184-221. Ginn, Waltham, MA.
- Chomsky, Noam (1995) *The Minimalist Program*, MIT Press, Cambridge, MA.
- Despić, Miloje. (2011) *Syntax in the Absence of Determiner Phrase*, Doctoral Dissertation, University of Connecticut.
- Fukui, Naoki (1986) *A Theory of Category Projection and its Application*, Doctoral dissertation, MIT.
- Fukui, Naoki (1988) "Deriving the Differences between English and Japanese: A Case Study in Parametric Syntax," *English Linguistics* 5, 249-270.
- Grimshaw, Jane (2000) "Locality and Extended Projections," *Lexical specification and insertion*, ed. by

- Hans Bennis, Martin Everaert, and Eric Reuland, 183-207, John Benjamins, Amsterdam.
- Höhn, Georg F. K. (2014) "Contextually Conditioned Allomorphy and the Basque Locative," *ConSOLE* 21, 146-170.
- Irimia, Monica-Alexandrina (2005) "Types of Secondary Predication," *Toronto Working Papers in Linguistics* 25, 20-29.
- Kitagawa, Chisato and Claudia Ross (1982) "Prenominal Modification in Japanese and Chinese," *Linguistic Analysis* 9, 19-53.
- Ledgeway, Adam (2012) *From Latin to Romance: Morphosyntactic Typology and Change*, Oxford University Press, Oxford.
- Lewis, Rebecca (2021) "Associative Plurality and the DP/NP Typology," *Proceedings of the Workshop on Turkic and Languages in Contact with Turkic* 6, 5047.
- Lewis, Rebecca (2023) "What Morphological Form Can Tell us about Syntactic Structure: Two Analyses of Associative Plurals," *University of Pennsylvania Working Papers in Linguistics* 29.1, 109-118.
- Mardale, Alexandru (2006) "On the Use of the Definite Article with Prepositions in Romanian," halshs-00556191.
- Merchant, Jason (2001) *The Syntax of Silence: Sluicing, Islands, and the Theory of Ellipsis*, Oxford University Press, Oxford.
- Murasugi, Keiko (1991) *Noun Phrases in Japanese and English: A Study in Syntax, Learnability and Acquisition*, Doctoral dissertation, University of Connecticut.
- Nicolae, Alexandru (2012) "P-Stranding in a Language without P-Stranding? The Case of Sluicing in Romanian," paper presented at Societas Linguistica Europaea, Stockholm.
- Oda, Hiromune (2022) *The NP/DP-Language Distinction as a Scale and Parameters in Minimalism*, Doctoral dissertation, University of Connecticut.
- Oda, Hiromune (2023) "Generative Typological Investigation of Indefinite Pronouns," *JELS* 40, 154-160.
- Reglero, Lara (2007) "Wh-in-Situ Interrogatives in Spanish," *Probus* 19, 267-297.
- Reglero, Lara and María Emma Ticio (2013) "A Unified Analysis of Wh-in-Situ in Spanish," *The Linguistic Review* 30, 1-47.
- Richards, Norvin (2001) *Movement in Language: Interactions and Architectures*, Oxford University Press, Oxford.
- Rizzi, Luigi (2001) "On the Position "Int(errogative)" in the Left Periphery of the Clause," *Current Studies in Italian Syntax: Essays Offered to Lorenzo Renzi*, ed. by Guglielmo Cinque and Giampaolo Salvi, 267-296, Elsevier, Amsterdam.
- Rudin, Catherine (1998) "On Multiple Questions and Multiple Wh-Fronting," *Natural Language and Linguistic Theory* 6, 445-501.
- Scholten, Jolien (2010) *Weak Definites and Bare Singulars: Their Syntactic Peculiarities*, Master's thesis, Utrecht University.
- Sportiche, Dominique (1988) "A Theory of Floating Quantifiers and its Corollaries for Constituent Structure," *Linguistic Inquiry* 19, 425-449.
- Talić, Aida (2017) *From A to N and Back: Functional and Bare Projections in the Domain of N and A*,

- Doctoral dissertation, University of Connecticut.
- Uriagereka, Juan (1988) *On Government*, Doctoral Dissertation, University of Connecticut.
- Verschik, Anna (2001) “On the Dynamics of Article Use in Estonian Yiddish,” *Folia Linguistica* 35, 337-369.
- Villa-García, Julio (2015) *The Syntax of Multiple-Que Sentences in Spanish*, John Benjamins, Amsterdam.
- Zanon, Ksenia (2020) “Focus Association with ONLY in Russian, Chinese, and English,” paper presented at the Cambridge Linguistics Society, Cambridge.
- Zwicky, Arnold M. (1984) ““Reduced Words” in Highly Modular Theories: Yiddish Anarthrous Locatives Reexamined,” *Ohio State University Working Papers in Linguistics* 29, 117-126.

The Movement Analysis for Temporal Interpretations in Relative Clauses*

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Keywords : temporal interpretation, relative clause, movement analysis, syntax-semantics interface

1. Introduction

This paper seeks to analyze different temporal interpretations seen in (non) restrictive relative clauses and proposes that the difference is derived from movement of the relative clause. This paper also solves an issue faced by Kauf and Zeijlstra (2018), where the different interpretations are assumed to be attributed to the property of (non) restrictive relative clause. What this paper deals with are such data exemplified below as in (1), originally investigated in Kauf and Zeijlstra (2018).

- (1) a. Mary was looking for a woman who was president. (Kauf and Zeijlstra (2018: 10))
b. Mary met a woman who was president. (Kauf and Zeijlstra (2018: 10))

In (1a), the relative clause event *who was president* can be understood to happen past and simultaneous with respect to the matrix clause event time of *Mary was looking for a woman*. In this sentence, however, the relative clause event cannot be understood to occur futurate to the matrix clause event time. On the contrary in (1b), the relative clause event can be interpreted past, simultaneous, and futurate to the matrix clause event time of *Mary was looking for a woman*.

This paper will be organized as follows. Section 2 overviews a previous study due to Kauf and Zeijlstra (2018) (K&Z henceforth). Section 3 provides new data observation and points out the issue of proposals by K&Z. Section 4 shows my proposal and section 5 is the conclusion.

2. Overview of K&Z

Sentences in (2) and (3), which are partially repeated from (1), show different interpretations even though they seemingly have the same construction.

- (2) Mary was looking for a woman who was president. [*de dicto* reading]
a. In 2000, Mary was looking for a woman who was president in 1995.
b. In 2000, Mary was looking for a woman who was president in 2000.
c. * In 2000, Mary was looking for a woman who was president in 2004. (ibid.)

- (3) Mary met a woman who was president. [*de re* reading¹]
- a. In 2000, Mary met a woman who was president in 1995.
 - b. In 2000, Mary met a woman who was president in 2000.
 - c. In 2000, Mary met a woman who was president in 2004. (ibid.)

Once again, as for (2), the relative clause event time of *who was president* can be prior and simultaneous but not futurate to the matrix clause event time. You can notice, in (2c), the relative clause is unacceptable with the adverb *2004* which yields futurate reading with respect to the matrix clause event happening in 2000. In other words, in the case of (2), the relative clause event time cannot be out of (or be futurate to) the matrix scope (in 2000) to be interpreted, which means the sentence only yields *de dicto* reading.

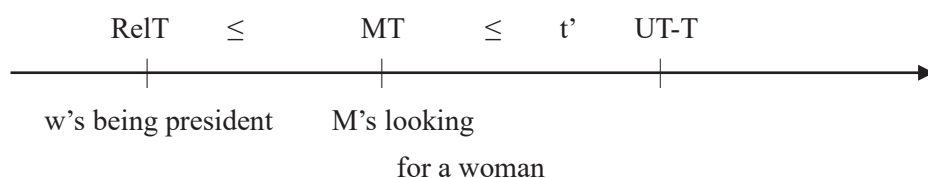
In the case of (3), on the other hand, the relative clause event time can be past, simultaneous and futurate to the matrix clause events time. You can notice (2c) is unacceptable, whereas (3c) is acceptable with futurate adverb *2004*. This means the sentence can yield *de re* reading, since the relative clause events can be interpreted out of matrix clause events time.

In order to analyze the sentences above, K&Z provides the following assumptions in their paper as in (4).

- (4) Summarized proposal by K&Z for relative clause
- a. The *de dicto/de re* distinction applies to the distinction of restrictive relative clause (RRC) and non-restrictive relative clause (NRC). (*de dicto* interpreted relative clause occurs in RRC, and *de re* interpreted one occurs in NRC.)
 - b. RRC is syntactically transparent and dependent on matrix clause for the evaluation time (EvT), while NRC is not (it is opaque) and independent.
 - c. Past tense, \leq (A is prior to or A is equal to), takes as EvT a temporal variable which makes a reference to utterance time (UT-T).
 - d. Tense in RRC makes a reference to matrix event time (MT), while tense in NRC makes a reference to UT-T.

With their proposal, let us look at how they analyze the sentences starting from *de dicto* interpretation.

- (5) Mary was looking for a woman who was president. (*de dicto*: RRC)



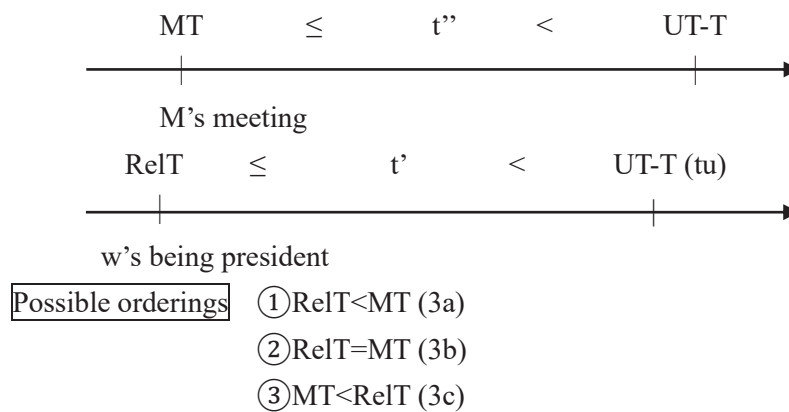
- Possible orderings ① Relative clause event time (RelT) < MT (2a)
 ② RelT=MT (2b)

The sentence (5), repeated from (1a) yields *de dicto* reading. Their proposal, therefore, predicts the

sentence is RRC as in (4a) so the relative clause depends on the matrix clause and its tense refers to MT for the EvT. Then, past tense locates the RelT prior to MT. Eventually, there are two possible readings, ① RelT is prior to MT, and ② RelT is equal to MT as the past tense here is assumed to mean A is prior to or A is equal to.

When a sentence yields a *de re* reading as in (6), repeated from (1b), their proposal expects the sentence to be the case of NRC based on (4a).

(6) Mary met a woman who was president. (*de re*: NRC)



Since the relative clause is independent of the matrix clause, both matrix and relative clause make a reference to UT-T. In this example, MT and RelT are not related, or more precisely, the ordering of them is not fixed. This inevitably leads to three possible readings; ① RelT is prior to MT (3a), ② RelT is equal to MT (3b), ③ RelT is posterior to MT.

Based on the different syntactic status (dependency) of RRC and NRC, the proposal by K&Z correctly analyzes the sentences in (5) and (6). To see its adequacy, the following section seeks to examine their proposal in another environment.

3. New data and examination of K&Z's proposal

This section firstly provides new observations which reflect the characteristics of RRC and NRC. As we saw in the previous section, K&Z assume the sentence is either RRC or NRC depending on the interpretations yielded (*de re/de dicto*). We will then see if their analysis also applies to the sentences which are categorized as “classically” syntactic RRC and NRC. More precisely, we will see the cases where type of a head noun and binding relation play an important role to distinguish RRC and NRC.

Before looking at how K&Z's analysis turns out, let us briefly review criteria to distinguish RRC and NRC. It is well known that RRC takes common nouns (like *a student*), whereas NRC takes proper nouns (like *John*) as a head.

(7) Type of noun

- a. RRC: common noun (I met *a student* who...)
- b. NRC: proper noun (I met *John*, who...)

As another point of distinguishing relative clauses, binding relation can be a good criterion to see. In RRC below, *every Christian* can bind *him* yielding a bound variable reading, whereas in the case of NRC *every Christian* cannot bind *him*.

(8) Binding (Every Christian=*him*)

- a. RRC: Every Christian_{*i*} forgives a man who harms him_{*i*}.
- b. RRC: *Every Christian_{*i*} forgives John, who harms him_{*i*}. (Safir (1986: 672))

We will see if K&Z's proposal works correctly under the classic environment of RRC/NRC just mentioned above. In addition to the classic syntactic cases, the sentences will also be tested under different *tense* environments, since only past-under-past type relative clause sentences are analyzed in K&Z. This time, matrix future environment is introduced for analysis (i.e., past-under-future environment). This environment should also abide by their prediction as in (9) since tense status does not affect their proposal.

(9) Prediction of K&Z under matrix futurate environment.

- a. RRC: Relative clause tense (T_{rel}) (always) refers to the MT.
- b. NRC: T_{rel} (always) refers to UT-T.

Based on K&Z's proposal, in RRC, relative clause tense or T_{rel} always refers to the matrix event time. In NRC, T_{rel} always refers to UT-T. K&Z's analysis can predict correct interpretations of sentences below as in (10a,b).

(10) CONTEXT: At the time of utterance, the students have not submitted their term papers yet.

- a. At the end of next term, I will give automatic As to all students who turned in their term papers on time. (RRC refers to MT)
- b. ???/*At the end of next term, I will give automatic A to John, who turned in his term papers on time. (NRC does not refer to MT (only to UT-T))

In (10a), there is a context that says, "at the time of the utterance, the students have not submitted their term papers yet", and the attested sentence is acceptable under the context. You can notice that even though the relative clause tense is past tense *turned in*, the event time is interpreted to be located to the future with reference to UT-T due to the adverb *on time*, which is construed futurate. After the event, *I* will give a score to students. This is compatible with the prediction where RRC makes a reference to MT for its EvT. Their proposal also correctly predicts the unacceptability seen in (10b). Under the same environment (*turned in* with futurate adverb *on time*) with the proper noun *John* to make the sentence NRC, the sentence becomes unacceptable. This is because even though, as K&Z assume, T_{rel} in NRC always refers to UT-T, locating the event *turning in* to the past w.r.t UT-T, the futurate adverb *on time* requires the event to be located to the future. This mismatch (the event *turning in* being past and the adverb requiring the event to be futurate) causes the unacceptability.

However, their proposal faces the issue of undergeneralization in the case where RRC takes UT-T as EvT as in (11) below.

- (11) a. Tomorrow evening, I will talk with all students who are in grade 9 now.
 b. CONTEXT: At the time of utterance, the students have not submitted their term papers yet.
 Tomorrow evening, I will give As to all students who turned in their term papers the day before yesterday.

In the sentences above, you can see T_{rel} in RRC refers to the UT-T by the deictic adverb *now* (11a), and *the day before yesterday* (11b). Proposal of K&Z would incorrectly predict the sentences are unacceptable (because T_{rel} in RRC always refers to the MT as in (9a)), which is not true. In order to solve the issue and analyze the case in (11), there needs to be some revises.

4. Proposal

In the following, we try to add some rectifications mainly to the analysis of RRC case. Specifically, instead of assuming RRC always depends on the matrix clause, this paper proposes that the entire NP with a relative clause optionally moves to the matrix TP, or you can say T_{rel} can make a reference to UT-T when moved (Cf. Kaneko (2016), (2020) and Newman (2021) for moving analysis in search for a proper EvT). Regarding NRC, we stay almost the same as K&Z; the clause is independent of matrix clause². T_{rel} in NRC, therefore, always refers to UT-T.

(12) Main proposal

- a. RRC: The entire NP with a relative clause optionally moves to TP to refer to UT-T.
 (= T_{rel} can make a reference to UT-T when moved.)
 b. NRC: The clause is independent of matrix clause.
 (= T_{rel} always refers to UT-T.)

In addition to that, I adopt simpler tenses than one in K&Z as in (13).

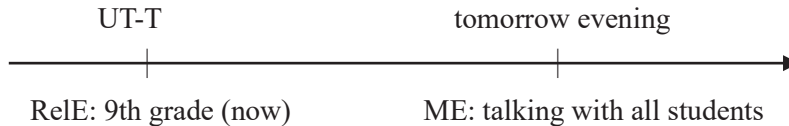
(13) Tense in relative clauses (Slightly adapted from K&Z)

- a. [-ed] = $[\lambda t. \lambda P. \exists t' < t \ \& \ P(t')]$
 b. [-s] = $[\lambda t. \lambda P. \exists t'. t' \ o \ t \ \& \ P(t')]$

The past tense simply locates the event time prior to the EvT. The present tense, on the other hand, locates the event time simultaneous to the EvT. Given those points, let us look at how my proposal can account for the RRC case, which K&Z's proposal struggles to explain.

Firstly, we see the case of (11) where T_{rel} refers to UT-T. Consider (14) repeated from (11a) (due to space constraint, only (11a) is analyzed here. Still, the same analysis can apply to the case of (11b)). In this case, the NP is considered to move to matrix TP.

(14) Tomorrow evening, I will talk with all students who are in grade 9 now.



Matrix event time is located in the future *tomorrow evening*, and due to movement, the RRC event time refers to UT-T and the tense locates the event time at the UT-T. Assuming the optional movement of RRC can deal with the issue faced by K&Z. Then, what about their original data?

Let us now turn to the data from K&Z in (15) and (16) excerpt from (2) and (3).

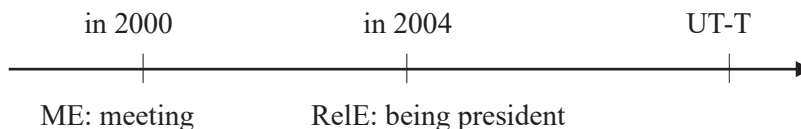
- (15) a. Mary was looking for a woman who was president. (*de dicto*)
 b. * In 2000, Mary was looking for a woman who was president in 2004.

- (16) a. Mary met a woman who was president. (*de re*)
 c. In 2000, Mary met a woman who was president in 2004.

Here, I assume that (15) and (16) are “both” the case of RRC, on the contrary to K&Z. This means, in both cases, the NP can move to matrix TP. For their different grammaticality, I attribute them to the nature of *de re/ de dicto* reading. Let us look at the analysis of sentences in turn, starting from *de re* sentence in (16). Consider (17) below.

As with the previous case in (14), the whole NP moves out of the matrix predicate scope.

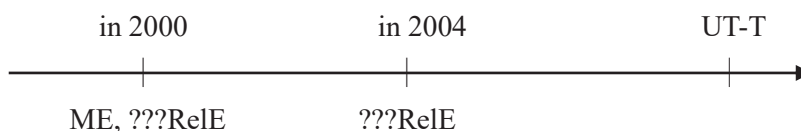
(17) In 2000, Mary met a woman who was president in 2004.



Then T_{rel} can get relative to UT-T or the actual world to obtain *de re* reading. As a result, the RRC event can be placed posterior to the matrix event time.

The *de dicto* reading as in (15), on the other hand, the NP *a woman who was president* needs to be in the scope of the matrix intensional predicate *was looking for* to obtain *de dicto* reading. Consider (18) below.

(18) * In 2000, Mary was looking for a woman who was president in 2004.

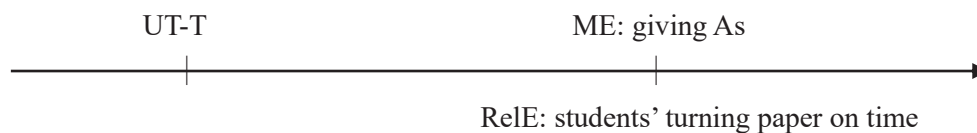


With the futurate adverb *2004*, however, the NP needs to move out of the matrix past predicate to refer to UT-T. With this mismatch between the *de dicto* property (that NP needs to stay in the matrix

intensional predicate scope) and the futurate adverb requirement (that event in the relative clause is located to the future, getting out of matrix predicate scope), the *de dicto* reading fails to occur, causing ungrammaticality.)

In addition to the analysis above, my proposal can also explain sentences which have present tense under future. Consider (19) of RRC case and (20) of NRC case.

(19) At the end of next term, I will give automatic As to all students who turn in their term papers *on time*. (RRC)



In (19), RRC does not move and T_{rel} refers to matrix event time. T_{rel} (present tense ($[\lambda t. \lambda P. \exists t'. t' o t \ \& \ P(t')]$ as in (13))), then, locates the event time at the same time of the matrix event time. Finally, it results in the reading: the matrix event *giving As* and RRC event *students' turning paper* occurs at the same time in the future.

NRC version of a sentence as in (20), however, cannot do the same with (19) since it is NRC, and the clause is always independent of matrix clause and T_{rel} in NRC needs to refer to UT-T.

(20) * At the end of next term, I will give automatic A to John, who turns in his term paper on time. (NRC)



In other words, the mismatch between property of NRC (always referring to UT-T) and the requirement of non-deictic adverb *on time* (trying to locate RelE to the future) causes ungrammaticality (K&Z's proposal may also analyze the NRC case in (20) correctly as long as they assume the same present tense, though).

As we have seen, my proposal correctly and widely covers sentences with RRC/NRC, explaining the reason for different interpretations.

5. Conclusion

K&Z propose that *de dicto* and *de re* distinction is reflected on the distinction of RRC/NRC. T_{rel} in RRC refers to matrix event time and T_{rel} in NRRC refers to UT-T. However, their proposal faces an empirical problem; a case where T_{rel} in RRC makes a reference to UT-T. This paper seeks to solve the issue by claiming that RRC optionally moves to matrix TP, enabling the T_{rel} in RRC to refer to UT-T. Eventually, my proposal succeeds to cover not only the data from K&Z, but the one that they struggle to explain and the one with present-under-future environment.

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NOTES

¹ See also Enç (1987) and Abusch (1988).

² Although what K&Z and we state about NRC seem the same, there is a slight difference: the existence of an operator. K&Z differentiate RRC and NRC by the existence of an operator: NRC has an individual operator inserted, which enables T in NRC to refer to UT-T. RRC, on the other hand, does not have an operator and T in RRC, therefore, needs to refer to MT. We do not assume any existence of operator in this paper and assume the difference of RRC/NRC is derived from syntactic position. This idea can yield further theoretical consequences, but I would like to leave the point open this time.

REFERENCES

- Abusch, Dorit (1988) "Sequence of tense, intensionality and scope," *Proceedings of the 7th West Coast Conference on Formal Linguistics*, 1–14.
- Enç, Mürvet (1987) "Anchoring conditions for tense," *Linguistic Inquiry* 18, 633–657.
- Kaneko, Yoshiaki (2016) "Remarks on Double Access Phenomena in English Finite Complement Clauses," *Explorations in English Linguistics* 30, 33-57.
- Kaneko, Yoshiaki (2020) "Notes on Some Consequences of the CP Movement Analysis of Double Access Phenomena in English," *Bunka* 83, 1-15.
- Kauf, Carina and Hedde Zeijlstra (2018) "Towards a New Explanation of Sequence of Tense," *Semantics and linguistics theory* 28, 59-77.
- Newman, Elise (2021) "On the interpretation of tense in temporal adverbial clauses," *Glossa: a journal of general linguistics* 6, 1–30.
- Safir, Ken (1986) "Relative Clauses in a Theory of Binding and Levels," *Linguistic inquiry* 17, 663-689.

Analyzing English “Only” as “Not Any More/Other Than”*

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Keywords : (anti-)additivity, implicature, NPI licensing, semantics, pragmatics

1. Introduction

In this short paper, I propose a new analysis of English *only*.

According to the canonical analysis (e.g., Horn 1969, Coppock & Beaver 2014, among many others), English *only* essentially means maximality (of informativeness). As illustrated in (1), the prejacent of *only* is the strongest true proposition that can be uttered. Thus, under the canonical analysis (see (2)), the meaning of an *only*-sentence contains a positive component (2a) and a negative component (2b).

(1) Only [Amy and Bill]_F read poems.

Canonical analysis: the prejacent of *only*, “Amy and Bill read poems”, is true, and every stronger alternative to this prejacent (e.g., “Amy, Bill, and Carl read poems”) is false.

(2) The meaning of an *only*-sentence, *only p*:

- a. A positive component: the prejacent *p* is true.
- b. A negative component: for any *q* such that $q \neq p$ and $q \models p$, *q* is false.

As illustrated in (3) and (4), an *only*-sentence and its negation share the same positive inference (see (3a) and (4a)). Thus, the positive component of the meaning of an *only*-sentence (see (2a)) is usually considered a presupposition.

(3) Only [Amy and Bill]_F read poems.

- a. Positive inference: Amy and Bill read poems.
- b. Negative inference: No one else read poems.

(4) Not only [Amy and Bill]_F read poems.

- a. Positive inference: Amy and Bill read poems.
- b. Negating the negative inference (3b): Someone else read poems.

The current paper revisits the view that the positive inference of (3) and (4) is a presupposition and proposes a new, decompositional analysis of *only*. I propose that the meaning of *only* contains three elements: (i) negation, (ii) an additive part similar to *more* or *other*, and (iii) and an NPI (negative

polarity item *any*). Thus *only* essentially means anti-additivity and can be paraphrased as “not any more/other (than)” (see (5)). As a consequence, the positive inference (see (3a) and (4a)) is considered an (obligatory) implicature, rather than a presupposition (see also Van Rooij and Schulz 2007).

(5) The meaning of sentence (1), *Only Amy and Bill read poems*:

New proposal: Not anyone other than Amy and Bill read poems.

Below I start with empirical data that challenge the canonical view that the prejacent of *only* is maximally informative (Section 2). Then I present the new proposal (Section 3) and address its welcome consequences (Section 4). Section 5 briefly compares the current proposal with some recent accounts and concludes.

2. New empirical observations

In this section, I first show the under-generation issue of the classical maximality-based view on *only* (Section 2.1). Then I show two kinds of parallelism between the interpretation of *only*-sentences and implicatures (Sections 2.2 and 2.3). The upshot is that the use of *only* shows a sensitivity to scalarity (of informativeness) (see also e.g., Alxatib 2020) and brings a pragmatic implicature.

2.1. The under-generation issue of the classical “maximality” view

The canonical maximality-based view on *only* can successfully explain the degradedness of data like (6)–(8). Given that *only* has the presuppositional requirement that its prejacent is the maximally informative true one among alternatives, naturally, if $p_1 \models p_2$ (or $p_2 \models p_1$), *only* cannot be felicitously used along with both p_1 and p_2 , and the pattern “only p_1 . In fact, only p_2 ” results in a contradiction.

(6) ?Only [Amy and Bill]_F came. In fact, only [Amy]_F came. (Contradiction)

$p_1 = \text{Amy and Bill came. } p_2 = \text{Amy came. } \therefore p_1 \models p_2, \therefore \text{ they cannot be both the strongest.}$

(7) ?Only [3]_F people came. In fact, only [2]_F people came. (Contradiction)

$p_1 = 3 \text{ people came. } p_2 = 2 \text{ people came. } \therefore p_1 \models p_2, \therefore \text{ they cannot be both the strongest.}$

(8) ?Only [3]_F people came. In fact, only [4]_F people came. (Contradiction)

$p_1 = 3 \text{ people came. } p_2 = 4 \text{ people came. } \therefore p_2 \models p_1, \therefore \text{ they cannot be both the strongest.}$

However, the above maximality-based view under-generates, as illustrated by examples (9) and (10). In (9), the pattern is still “only p_1 . In fact, only p_2 ”, and here p_2 entails p_1 (i.e., in any possible world where the proposition *kids below 14 came to my juice bar* holds true, it follows that the proposition *kids below 18 came to my juice bar* is also true). Thus in (9), p_1 is not maximally informative, but yet both uses of *only* in (9) are felicitous, and there is no contradiction, contrary to the prediction of the maximality-based view. Similarly, in (10), both uses of *only* are felicitous, and there is no contradiction, although in “only p_1 . In fact, only p_2 ”, p_2 entails p_1 .

(9) Context: I have a juice bar. Only kids below 14 came to my juice bar. I told a friend who came to my juice bar:

“Only kids below [18]_F came to my juice bar. In fact, only kids below [14]_F came to my juice bar.”

p_1 = kids below 18 came to my juice bar. p_2 = kids below 14 came to my juice bar. Here $p_2 \models p_1$.

(10) Context: A company only hires people with a PhD degree in linguistics. During an interview, when asked who they hire, they said:

“We only hire [people with a PhD degree]_F. In fact, we only hire [people with a PhD degree in linguistics]_F.”

p_1 = We hire people with a PhD degree. p_2 = We hire people with a PhD degree in linguistics. Here $p_2 \models p_1$.

2.2. Parallelism between *only*-sentences and scalar implicatures: incremental informativeness

It is worth noting that for the above examples (9) and (10), the felicity of the pattern “only p_1 . In fact, only p_2 ” requires an increase of informativeness from “only p_1 ” to “only p_2 ”. Otherwise, there would be degradedness (see (11) vs. (9)).

(11) Context: I have a juice bar. Only kids below 14 came to my juice bar. I told a friend who came to my juice bar:

“Only kids below [14]_F came to my juice bar. #In fact, only kids below [18]_F came to my juice bar.”

The felicity contrast between (9) and (11) is reminiscent of sentences with scalar implicature. As illustrated by (12a) and (12b), the case with an increase of informativeness from the first to the second sentence (i.e., from *I’m 21* to *I’m 40*) is felicitous (see (12a)); otherwise, there would be degradedness (see (12b)). According to Gricean pragmatics, the utterance *I’m 21* implies maximal informativeness, so that the literal meaning “I’m at least 21” is pragmatically strengthened to “I’m at least 21 and it’s not the case that I’m more than 21”. The more informative utterance *I’m 40* cancelled the implied maximal informativeness of *I’m 21*.

(12) Context: At the entrance of a bar, somebody asked me whether I’m 21, and I answered:

a. “(Of course) I’m 21. In fact, I’m 40.”

b. “(Of course) I’m 40. #In fact, I’m 21.”

Obviously, negating the sentences in (12) leads to the opposite pattern, as illustrated by (13).

(13) a. I’m not 40 yet. In fact, I’m not 21 yet.

b. I’m not 21 yet. #In fact, I’m not 40 yet.

Parallel observations can be found for *only*-sentences. For example, negating the *only*-sentences in (10) leads to the opposite pattern shown in (14).

- (14) a. We not only hire people with a PhD degree in linguistics. In fact, we not only hire people with a PhD degree.
 b. We not only hire people with a PhD degree. #In fact, we not only hire people with a PhD degree in linguistics.

The above discussion suggests that the interpretation of *only*-sentences should be similar to scalar implicatures in involving an implied maximal informativeness. Below I provide further data and analysis to show that this implicature amounts to the positive inference of an *only*-sentence (see e.g., (3a)).

2.3. Parallelism between *only*-sentences and plurality implicatures: asymmetry of cancellability

The positive inference of an *only*-sentence is usually difficult to cancel, leading to the impression that it is not a pragmatic implicature. However, naturally occurring examples of *only*-sentences that involve a cancellation of the positive inference do exist, as evidenced by examples (15)—(17):

- (15) How can human beings balance their bodies on only [two]_F legs (sometimes even on one) when it is not possible for other animals and non-living things on only two legs?
 (<https://www.quora.com/How-can-human-beings-balance-their-bodies-on-only-two-legs-sometimes-even-on-one-when-it-is-not-possible-for-other-animals-and-non-living-things-on-only-two-legs>)
- (16) Flower that blooms only [once a year]_F sometimes even once in two years.
 (<https://www.alamy.com/flower-that-blooms-only-once-a-year-sometimes-even-once-in-two-years-flower-in-the-garden-image312105296.html>)
- (17) Flat warts may be round or oval-shaped. They're only [very slightly raised]_F, sometimes not even noticeable.
 (<https://my.clevelandclinic.org/health/diseases/24337-flat-warts>)

Moreover, with regard to the cancellability of this positive inference of *only*, there is an asymmetry between an *only*-sentence and its negation, patterning with some other kinds of scalar implicature in natural language. As illustrated in (18a), the positive inference “kids below 18 came to my juice bar” is weak and cancellable in this *only*-sentence, but, as illustrated in (18b), this positive inference is strong and uncancellable in the negation of (18a) (see also Van Rooij and Schulz 2007, Crnič 2022).

- (18) a. Only kids below 18 came to my juice bar. Perhaps even they didn't.
 b. Not only kids below 18 came to my juice bar. #Perhaps even they didn't.

This asymmetry of cancellability is also observed on the implicature of bare plurals (e.g., Sauerland et al. 2005, Spector 2007). Bare plurals have an “at-least-2” inference, and this inference can be easily canceled in a negative sentence (see (19b)), but seems quite obligatory in a positive sentence (see (19a)).

- (19) a. The kids flew kites in the park. #Actually, they flew exactly one kite.
 b. The kids didn't fly kites in the park. Actually, they didn't fly one kite at all.

3. Proposal

To account for the above empirical observations, I propose a new, decompositional analysis of *only*. As shown in (20), the meaning of *only* contains three elements: (i) negation, (ii) an additive part similar to *more* or *other*, and (iii) and an NPI (negative polarity item *any*). In (20), *x* is the focus associate of *only*. Thus, *only x* can be paraphrased as “not any more/other than *x*”.

- (20) [[only *x*]] = not any more/other than *x*
 (With an additive presupposition: something other/more than *x* exists.)

Under this current analysis, *only x* essentially conveys the meaning opposite to *more/other than x*. Both *only x* and *more/other than x* involve scalarity: *more/other than x* expresses additivity, and *only x* expresses anti-additivity.

According to Beaver and Clark (2009) and Thomas (2011) (see also Zhang & Ling 2021, Zhang & Zhang 2024), the notion of additivity should be understood within the framework of QUD (Question under discussion, Roberts 1996/2012). Additivity addresses an increase anaphoric to a base item that is a partial answer to a relevant Current Question (CQ).

As illustrated by (21a), in addressing the CQ “who came”, the item *Amy* serves as the base for an increase, *another girl*. In (22a), in addressing the CQ “how tall is Lucy”, Mary’s height serves as the base for an increase which is expressed by (*2 inches*) *more* (here the measure phrase *2 inches* specifies the size of the increase). Thus in both domains of entities (see (21)) and scalar values (see (22)), additivity leads to a more informative answer in addressing the CQ.

Anti-additivity still assumes the existence of items or values above the base item (see the presupposition part in (20)), but indicates that this increase part cannot lead to a more informative true answer to the CQ. Thus in addressing the CQ “who came”, (21b) means that any item above the base item *Amy* does not lead to a more informative true answer. In addressing the CQ “how tall is Lucy”, (22b) means that any scalar value above the base value, *5’5”*, does not lead to a more informative true answer.

- (21) Current question (CQ): Who came?
 a. Additivity: (Amy came.) Another girl, Hanako, also came.
 b. Anti-additivity: Only Amy came (i.e., Not anyone other than Amy came).

- (22) Current question (CQ): How tall is Lucy?
 a. Additivity: (Mary is 5 feet tall.) Lucy is (2 inches) taller.
 b. Anti-additivity: Lucy is only 5’5” tall (i.e., Lucy is not any taller than 5 feet 5 inches).

Of course, anti-additivity does not itself guarantee maximal informativeness in addressing the CQ,

which explains why the *only*-sentences in examples (9) and (10) are not infelicitous. In these examples, the overall discourse shows an incremental informativeness in addressing their CQ (see (23) and (24)).

(23) CQ for the context in (9): who came to my juice bar?

“Only kids below [18]_F came to my juice bar. In fact, only kids below [14]_F came to my juice bar.”

I.e., not anyone other than kids below 18 came to my juice bar, and in fact, not anyone other than kids below 14 came to my juice bar.

(24) CQ for the context in (10): who do we hire?

“We only hire [people with a PhD degree]_F. In fact, we only hire [people with a PhD degree in linguistics]_F.”

I.e., we do not hire anyone other than those with a PhD degree, and in fact, we do not hire anyone other than those with a PhD degree in linguistics.

4. Welcome consequences of the current proposal

In this section, I show four welcome consequences of the current proposal.

4.1. The notion of (anti-)additivity is across domains

First, many additive particles (e.g., *more*) as well as *only* can be used in both domains of entities and scalar values, and the current proposal provides a unified perspective on this behavior.

Under the current proposal, (anti-)additivity is about addressing a CQ. A higher informativeness is based on (i) a part-whole relation in a domain of entities and (ii) the ordering between values along a totally ordered scale in a domain of scalar values.

4.2. The positive and negative inference of *only*

Second, the current proposal naturally accounts for our intuition with regard to the positive and negative inference of *only*-sentences.

As illustrated in (25), the positive inference of an *only*-sentence is a scalar implicature, and the negative inference of an *only*-sentence is simply the literal meaning of the sentence:

(25) Deriving the positive inference of an *only*-sentence as a scalar implicature

- | | |
|--|----------------------------------|
| a. Only Amy and Bill bought books. | (in the domain of entities) |
| = Not anyone other than Amy and Bill bought books. | (literal meaning) |
| $\wedge \neg$ [Not anyone other than Amy bought books] | (negating a stronger claim) |
| $\wedge \neg$ [Not anyone other than Bill bought books] | (negating a stronger claim) |
| \therefore Amy and Bill bought books. | (scalar implicature) |
| b. Bill is only 17 years old. | (in the domain of scalar values) |
| = Bill is not any older than 17. | (literal meaning) |
| $\wedge \neg$ [Bill is not any older than n] (here $n < 17$) | (negating a stronger claim) |
| \therefore Bill is 17 years old. | (scalar implicature) |

Obviously, negating anti-additivity results in additivity. As illustrated in (26), the positive inference of these *not-only* sentences (see also (4a)) now becomes the literal meaning, serving as the base of additivity. This explains why this positive inference is strong and cannot be cancelled in a negated *only*-sentence. Then in a *not-only* sentence, the negation of the negative inference of its corresponding *only*-sentence addresses the additive meaning (see also (4b)).

- (26) a. Not only Amy and Bill bought books. (negating (25a))
 = Someone other than Amy and Bill bought books. (negating anti-additivity: additivity)
 ∴ Amy and Bill bought books. (entailed meaning: base for additivity)
- b. Bill is not only 17 years old. (negating (25b))
 = Bill is older than 17. (negating anti-additivity: additivity)
 ∴ Bill is 17 years old. (entailed meaning: base for additivity)

In the literature on *only*, the weakening of the positive inference of a positive *only*-sentence has been much discussed (see e.g., Van Rooij and Schulz 2007, Fintel & Iatridou 2007, Crnić 2022, Alonso-Ovalle & Hirsch 2022). The weakening of the positive inference is most evidently and naturally attested in *only*-sentences with a modal element. The current analysis straightforwardly accounts for the weakening effect (see (27a) and (28a)) and the lack of weakening effect (see (27b) and (28b)) in a principled way.

- (27) Tali has to only dance with Gali
 ... and she doesn't have to dance with her either. (Crnić 2022: (11))
- a. Current analysis: Tali does not need to dance with anyone other than Gali.
 (CQ: who does Tali need to dance with?)
- b. Negating (27): Tali has to not only dance with Gali
 (the meaning "Tali has to dance with Gali" is entailed).

- (28) To get good cheese, you only have to go to the North End. (von Fintel & Iatridou 2007: (11))
- a. Current analysis: To get good cheese, you don't have to go to any places other than the North End.
 (CQ: where do you have to go to get good cheese?)
- b. Negating (28): To get good cheese, you have to go to not only the North End.
 (the meaning "To get good cheese, you have to go to the North End" is entailed).

Van Rooij and Schulz (2007) address the lack of the positive inference in an *only-if*-sentence (see (29)). In interpreting a sentence like (30), our intuition is that "the reviews of a book are good" is a necessary but not sufficient condition for me to read a book. This intuition is also naturally accounted for under the current proposal.

- (29) Only if $[A]_F$, then C. \nexists if $[A]_F$, then C (see Van Rooij and Schulz 2007)
- (30) I will read a book only if its reviews are good.

Current analysis: I won't read a book in any possible worlds where its reviews are not good.

4.3. NPI (non-)licensing

Third, the current proposal also explains the NPI (non-)licensing behavior of *only*.

As illustrated in (31), an *only*-sentence is basically a negative sentence, and the negation component of *only* naturally provides a downward-entailing (DE) environment (see (32)) to license an NPI. There is no need to assume Strawson DE-ness (cf. von Stechow 1999).

(31) Only Mary ate any vegetables.

= Not anyone other than Mary ate any vegetables.

(32) *Only* provides DE-ness:

here $\lambda x.\text{linguistics-book}(x) \subseteq \lambda x.\text{book}(x)$, while (32a) entails (32b). Thus *not anyone other than Mary* is a DE environment, i.e., *only Mary* is a DE environment.

a. Only Mary read books.

= Not anyone other than Mary read books.

b. Only Mary read linguistic books.

= Not anyone other than Mary read linguistics books.

On the other hand, the current proposal also successfully predicts that the focused associate part of *only* cannot license an NPI (see the example in (33) and Xiang 2017). In fact, as shown in (34), the focus associate part of *only* is upward-entailing (UE), not meeting the licensing requirement of NPIs.

(33) a. Only [some kids]_F came.

b. *Only [any kids]_F came.

(34) The focus associate of *only* is an UE environment:

here $\lambda x.\text{poodle}(x) \subseteq \lambda x.\text{dog}(x)$, while (34b) entails (34a). Thus the focus associate of *only* is a UE environment.

a. Only dogs are cute.

= Not anything other than dogs are cute.

b. Only poodles are cute.

= Not anything other than poodles are cute.

4.4. The component *any* and “diminishing” meaning

Finally, by including an NPI within the semantics of *only* (see (20)), the current proposal also explains the “diminishing” meaning in interpreting an *only*-sentence.

As illustrated by (35) and (36), intuitively, there is a subtle difference between the meaning of *only 17 years old* and that of *not older than 17 years old*: the former has a “diminishing” meaning, which the latter lacks. This contrast suggests that the semantics of *only* contains something beyond the meaning of negation and additivity (as expressed by the comparative morpheme *-er* in *older*).

- (35) Bill is only 17 years old.
= Bill is not any older than 17. (“diminishing” meaning)
- (36) Bill is not older than 17 years old. (no “diminishing” meaning)

Presumably, if we consider NPI *any* a minimizer like “(even) slightly”, this “diminishing” meaning can also be accounted for. As shown in (37), the negative comparative sentence *Bill is not any older than 17* entails the negative equative in (37a), which in turn entails the implicit comparison in (37b). According to Sawada (2009)’s analysis, an implicit comparison like (37b) has the pragmatically strengthened meaning that “a value slightly above 17” is already a young age, lower than the regular contextual threshold of being old. This explains the “diminishing” meaning of the *only*-sentence (35).

- (37) Bill is not any older than 17 (negating a comparative)
- a. = Bill is not even as old as a value slightly above 17 (negating an equative)
- b. = Even compared to a value slightly above 17, Bill is not old (implicit comparison)

5. Discussion and conclusion

In this paper, I have decomposed the semantic contribution of *only* into three components: negation, additivity, and an NPI, and based on this proposal, the positive inference of an *only*-sentence is analyzed as a scalar implicature. A lot of details of the current proposal still need to be worked out, but I believe the current proposal is promising and advantageous when compared with some recent works on *only*.

Alonso-Ovalle & Hirsch (2022) maintain the view that an *only*-sentence presupposes the truth of the prejacent and propose the insertion of a silent *at least* to account for the weakening effect (see (27) and (28)). However, this analysis has a further burden to explain why an overt presence of *at least* is never compatible with an *only*-sentence (see (38b)).

- (38) a. Only two people came.
b. *Only at least two people came.

Crnić (2022) proposes that *only* conveys an exceptive/exceptional meaning. However, this view is challenged by examples like (39), in which the percentage 90% cannot be considered exceptional. This issue does not arise in the current proposal.

- (39) Only 90% of the students passed the exam.

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REFERENCES

- Alonso-Ovalle, Luis, and Aron Hirsch. (2022) “Keep only strong,” *Semantics and Pragmatics* 15(6):1–47. <<https://doi.org/10.3765/sp.15.6>>
- Alxatib, Sam. (2020) *Focus, evaluativity, and antonymy: a study in the semantics of only and its interaction with gradable antonyms*. Springer. <<https://doi.org/10.1007/978-3-030-37806-6>>
- Beaver, David I., and Brady Z. Clark. (2009) *Sense and sensitivity: How focus determines meaning*. John Wiley & Sons. <https://doi.org/10.1002/9781444304176open_in_new>
- Coppock, Elizabeth, and David I Beaver. (2014) “Principles of the exclusive muddle”, *Journal of Semantics* 31:371–432. <<https://doi.org/10.1093/jos/fft007>>
- Crnič, Luka. (2022) “A distributed analysis of only.” ms. <<https://ling.auf.net/lingbuzz/006645>>
- von Fintel, Kai. (1999) “NPI licensing, Strawson entailment, and context dependency”, *Journal of semantics* 16:97–148. <<https://doi.org/10.1093/jos/16.2.97>>
- von Fintel, Kai, and Sabine Iatridou. (2007) “Anatomy of a modal construction”, *Linguistic Inquiry* 38:445–483. <<https://www.jstor.org/stable/pdf/40071397.pdf>>
- Horn, Laurence R. (1969) “A presuppositional analysis of *only* and *even*,” *Proceedings from the Annual Meeting of the Chicago Linguistic Society*, volume 5, 98–107. Chicago Linguistic Society. <https://ling.yale.edu/sites/default/files/files/horn/Horn1969_CLS5.pdf>
- Roberts, Craige. (1996/2012) “Information structure: Towards an integrated formal theory of pragmatics”, *Semantics and Pragmatics* 5: 6:1–69. <<https://doi.org/10.3765/sp.5.6>>
- Sauerland, Uli, Jan Anderssen, and Kazuko Yatsushiro. (2005) “The plural is semantically unmarked.” *Linguistic Evidence: Empirical, Theoretical and Computational Perspectives*, 413–434. <<https://semantics.uchicago.edu/kennedy/classes/fl11/na/docs/sauerlandetal05.pdf>>
- Spector, Benjamin. (2007) “Aspects of the pragmatics of plural morphology: On higher-order implicatures.” *Presupposition and Implicature in Compositional Semantics*, 243–281. <https://link.springer.com/chapter/10.1057/9780230210752_9>
- Sawada, Osamu. (2009) “Pragmatic aspects of implicit comparison: an economy-based approach,” *Journal of Pragmatics* 41(6). 1079–1103. <<https://doi.org/10.1016/j.pragma.2008.12.004>>
- Thomas, Guillaume. (2011) “Another additive particle”, *Semantics and Linguistic Theory*, volume 21, 634–651. <<https://doi.org/10.3765/salt.v21i0.2589>>
- Van Rooij, Robert, and Katrin Schulz. (2007) “*Only*: Meaning and Implicatures,” *Questions in dynamic semantics*, 193–223. Brill. <https://doi.org/https://doi.org/10.1163/9780080470993_010>
- Xiang, Yimei. (2017) “ONLY: An NPI-licenser and NPI-unlicenser”, *Journal of Semantics* 34:447–481. <<https://doi.org/10.1093/jos/ffx006>>
- Zhang, Linmin, and Jia Ling. (2021) “The semantics of comparatives: A difference-based approach” *Journal of Semantics* 38:249–303. <<https://doi.org/10.1093/jos/ffab003>>
- Zhang, Linmin, and Florence Zhang. (2024) “Comparative morphemes are additive particles English *er/more* vs. Chinese *gèng*.” ms. <<https://ling.auf.net/lingbuzz/008122>>

Update Semantics with Accessibility Relation *

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1. Introduction

Traditional analyses of epistemic modals within the update semantics framework typically avoid adopting accessibility relations as a technical tool. Instead, there is a prominent tendency to treat epistemic modalities as tests for the feasibility of an update process, an approach known as test semantics (Veltman 1996). A key advantage of this approach is that it easily accounts for epistemic contradictions (Yalcin 2007; see also Goldstein 2019b; Willer 2013), a phenomenon that poses challenges for canonical accessibility-relation-based semantics.

The aim of this study is twofold: (i) I propose four dynamic systems based on accessibility relations and demonstrate that System 4 is equivalent to test semantics (a related idea is also found in Goldstein 2019b, albeit with a different implementation). This serves as an attempt to integrate static and dynamic semantics; and (ii) I apply these systems to two empirical issues. The first concerns epistemic contradictions, the primary motivation for test semantics. I show that a context-sensitive accessibility relation is sufficient to account for this phenomenon. The second issue focuses on the paradox of free choice (e.g., Aloni 2007, 2022; Goldstein 2019a, 2020; Simons 2005; Zimmermann 2000). By combining these systems with the update rule for disjunction (Incurvati & Sbardolini 2023), I offer a novel dynamic perspective to resolve this puzzle. A notable feature of this theory is that the derivation of free choice does not rely on the notion of alternatives (see also Aloni 2022; cf. e.g., Aloni 2007; Simons 2005), but instead hinges on the interaction between these systems and the dynamic update of disjunction.

The remainder of this paper is structured as follows. Section 2 reviews the background, emphasizing why orthodox accessibility-relation-based modal logic struggles with epistemic contradictions and free choice. It also introduces the basic framework of update semantics and test semantics for epistemic modalities. Section 3 presents four systems: System 1 extends traditional update semantics by reintroducing accessibility relations; System 2 addresses epistemic contradictions by incorporating context sensitivity to constrain accessibility relations; System 3 centers on deriving free choice; and System 4 corresponds to test semantics. Finally, Section 4 concludes the paper.

2. Background

2.1. Puzzle 1: Epistemic Contradictions

The following sentences with the logical form $\varphi \wedge \Diamond \neg \varphi$, as shown in (1), seem odd because they are considered epistemically inconsistent. This phenomenon is known as epistemic contradictions (Yalcin 2007; see also Goldstein 2019b; Willer 2013).

- (1) a. # It is raining and it might not be raining. $\varphi \wedge \Diamond \neg \varphi$
 b. # It is not raining and it might be raining. $\neg \varphi \wedge \Diamond \varphi$

Classical accessibility-relation-based modal logic does not predict epistemic contradictions. Let a triple $M = \langle W, R, V \rangle$ be a Kripke model, where W is a non-empty set of possible worlds w , $R \subseteq W \times W$ is an accessibility relation, and V is a valuation function. Here, $R(w) = \{w' \in W \mid wRw'\}$ denotes the set of accessible worlds from w , and $\llbracket \varphi \rrbracket^w$ is shorthand for $V(\varphi, w)$. $V(\varphi, w) = 1$ iff $w \in \llbracket \varphi \rrbracket$. The semantics of the classical system is as follows:

- (2) a. $\llbracket \varphi \rrbracket = \{w \mid \llbracket \varphi \rrbracket^w = 1\}$ c. $\llbracket \varphi \vee \psi \rrbracket = \llbracket \varphi \rrbracket \cup \llbracket \psi \rrbracket$
 b. $\llbracket \neg \varphi \rrbracket = W - \llbracket \varphi \rrbracket$ d. $\llbracket \varphi \wedge \psi \rrbracket = \llbracket \varphi \rrbracket \cap \llbracket \psi \rrbracket$
 (3) a. $\llbracket \Diamond \varphi \rrbracket^w = 1$ iff $\exists w' \in R(w)$ s. t. $w' \in \llbracket \varphi \rrbracket$ b. $\llbracket \Diamond \varphi \rrbracket = \{w \mid \llbracket \varphi \rrbracket \cap R(w) \neq \emptyset\}$
 (4) a. $\llbracket \Box \varphi \rrbracket^w = 1$ iff $\forall w' \in R(w)$ s. t. $w' \in \llbracket \varphi \rrbracket$ b. $\llbracket \Box \varphi \rrbracket = \{w \mid \llbracket \varphi \rrbracket \cap R(w) = R(w)\}$

Next, we assume that the accessibility relation in M is reflexive, as defined in (5). Under this relation, (6) is valid. When (6) holds, we derive (7). This result indicates that $\varphi \wedge \Diamond \neg \varphi$ is perfectly consistent in classical modal logic. In fact, to predict epistemic contradictions, it is necessary to derive $\varphi \models \Box \varphi$. However, this derivation is not possible in the classical system unless the accessibility relation satisfies $\forall w \in W, R(w) = \{w\}$. Under such a relation, $\varphi \models \Box \varphi \models \Diamond \varphi$, meaning modal operators become vacuous in this model.

- (5) Reflexive: R is reflexive in M iff for any $w \in W, w \in R(w)$.
 (6) a. R is reflexive in M iff if $M, w \models \Box \varphi$, then $M, w \models \varphi$.
 b. R is reflexive in M iff if $M, w \models \varphi$, then $M, w \models \Diamond \varphi$.
 (7) a. $\varphi \wedge \Diamond \neg \varphi \models \Diamond \varphi \wedge \Diamond \neg \varphi \neq \perp$ b. $\neg \varphi \wedge \Diamond \varphi \models \Diamond \neg \varphi \wedge \Diamond \varphi \neq \perp$

In contrast, epistemic contradictions are easily explained in update semantics, which is a kind of dynamic semantics. In update semantics, the meaning of a sentence is not interpreted in terms of its truth conditions but in terms of how the sentence potentially updates an initial context, known as the *context change potential* (CCP) (see e.g., Goldstein 2019b; Incurvati & Sbardolini 2023; Rothschild & Yalcin 2016; Veltman 1996; Willer 2013). Let C be a context (or information state), defined as a non-empty subset of W . Similar to $\llbracket \cdot \rrbracket$ in static semantics, we need an interpretation function that assigns a CCP to a sentence in update semantics. Let $[\cdot]$ denote this interpretation function. In this framework, assertion is modeled as an intersection. Thus, asserting a sentence φ in context C means taking the intersection of C and $\llbracket \varphi \rrbracket$. The traditional update semantics is defined as follows in (8):

- (8) a. $C[\varphi] = C \cap \llbracket \varphi \rrbracket$ b. $C[\varphi \wedge \psi] = C[\varphi][\psi]$ c. $C[\neg\varphi] = C \setminus C[\varphi]$

Additionally, in update semantics, epistemic modalities are treated as tests for the feasibility of an update process, as shown in (9). This approach is known as test semantics (Veltman 1996). According to this definition, for any context C , $C[\diamond\varphi] = C$, otherwise $C[\diamond\varphi] = \emptyset$. Hence, asserting a sentence containing epistemic modals does not eliminate any w from C . This means that epistemic modalities do not provide information but instead test whether φ can be updated in C .

- (9) a. $C[\diamond\varphi] = \{w \in C \mid C[\varphi] \neq \emptyset\}$ b. $C[\square\varphi] = \{w \in C \mid C[\varphi] = C\}$

Finally, let us confirm how test semantics handles epistemic contradictions. After updating C with φ , the local context $C[\varphi]$ will be all φ -worlds. Thus, $C[\diamond\neg\varphi] = \emptyset$. Consequently, $C[\varphi \wedge \diamond\neg\varphi] = \emptyset$. Mutatis mutandis, the same explanation applies to $C[\neg\varphi \wedge \diamond\varphi] = \emptyset$.

2.2. Puzzle 2: The Paradox of Free Choice

Disjunctions embedded in the scope of an existential modal operator give rise to the well-known paradoxical phenomenon of free choice inference (e.g., Aloni 2007, 2022; Goldstein 2019a, 2020; Simons 2005; Zimmermann 2000). An example is shown in (10).

- (10) a. Mary might have a dog or a cat. $\diamond(\varphi \vee \psi)$
 b. \rightsquigarrow Mary might have a dog \wedge Mary might have a cat. $\diamond\varphi \wedge \diamond\psi$

As shown in (11), free choice inferences are not predicted in classical modal logic. Moreover, if we add the free choice principle, as stated in (12), to the system, any $\diamond\psi$ can be inferred from any $\diamond\varphi$. Due to the principle of explosion, a system containing free choice is inconsistent.

- (11) $\llbracket \diamond(\varphi \vee \psi) \rrbracket^w = 1$ iff $\exists w' \in R(w)$ s. t. $w' \in \llbracket \varphi \rrbracket \cup \llbracket \psi \rrbracket$
 iff $w \in \{w \mid (\llbracket \varphi \rrbracket \cup \llbracket \psi \rrbracket) \cap R(w) \neq \emptyset\}$
 iff $w \in \{w \mid \llbracket \varphi \rrbracket \cap R(w) \neq \emptyset\} \cup \{w \mid \llbracket \psi \rrbracket \cap R(w) \neq \emptyset\}$
 iff $w \in \llbracket \diamond\varphi \rrbracket \cup \llbracket \diamond\psi \rrbracket$
 iff $\llbracket \diamond\varphi \vee \diamond\psi \rrbracket^w = 1$

- (12) Free choice principle: $\diamond(\varphi \vee \psi) \models \diamond\varphi \wedge \diamond\psi$

(13) Derivation of inconsistency:

- | | | |
|----|---|--------------------------|
| a. | $\diamond\varphi$ | Premise |
| b. | $\diamond\varphi \models \diamond\varphi \vee \diamond\psi$ | Disjunction introduction |
| c. | $(\diamond\varphi \vee \diamond\psi) \Leftrightarrow \diamond(\varphi \vee \psi)$ | From (11) |
| d. | $\diamond(\varphi \vee \psi) \models \diamond\varphi \wedge \diamond\psi$ | Free choice principle |
| e. | $\diamond\varphi \wedge \diamond\psi \models \diamond\psi$ | Conjunction elimination |
| f. | $\diamond\varphi \models \diamond\psi$ | Explosion |

Note that test semantics does not predict free choice inferences either. All it guarantees is that there is a φ -world or a ψ -world in C , which is insufficient to derive free choice.

3. Proposal

3.1. System 1: Surface Dynamic

In the following four subsections, I construct four dynamic systems. I begin with System 1, which is an extension of traditional update semantics by reintroducing accessibility relations. At the implementation level, I build upon and reformulate the system proposed by Incurvati & Sbardolini (2023) to integrate this idea.

In their system, Incurvati & Sbardolini (2023) define a context as a pair $c = (C, \leq)$, where $C \subseteq W$ is a non-empty set of worlds, and \leq is a total pre-order on w within C . For any worlds w and v , $w \leq v$ signifies that w is at least as likely to be the actual world as v (see also van Benthem 2007). In their system, the update process is divided into two stages (see also Farkas & Bruce 2010; Stalnaker 1978). The first stage is proposal *prop*, an operation that rearranges the order of worlds in the initial context. The second stage is execution *exec*, which eliminates less likely worlds from the output of *prop*. Broadly speaking, asserting an atomic proposition φ in context c means that all φ -worlds are more likely to be the actual world than non- φ -worlds. Subsequently, all non- φ -worlds are removed from context c .

Next, assume that for any world w in C , there exists a non-empty set $R(w) = \{w' \in W \mid wRw'\}$. We can then consider w as shorthand for $\langle w, R \rangle$, where $R(w) = \{w_i, \dots, w_{i+n}\}$. This paper allows the *prop* operation to rearrange the order of worlds w in C , based not only on w itself, but also on $w' \in R(w)$. The output is then passed to *exec*. If a proposition does not affect the order of worlds, it indicates that the proposition is completely supported by the context. However, this implies that the proposition lacks informativeness. Therefore, unlike in test semantics, epistemic modals in this framework can introduce new information. Let w' be a variable, and let $\{w_i, w_{i+1}, \dots, w_{i+n}\}$ represent a linearly ordered set of worlds, where w_i and w_{i+n} are the first and last elements, respectively. The update process ends once each w and all elements in its corresponding $R(w)$ have been checked. The semantics of this system is represented as follows:

$$\begin{aligned}
(14) \quad & C[\varphi] = C \cap \{w \in \llbracket \varphi \rrbracket\} \\
& C[\varphi \vee \psi] = C \cap \{w \mid w \in \llbracket p \rrbracket \text{ s.t. } p \in \{\varphi, \psi\}\} \\
& C[\varphi \wedge \psi] = (C \cap \{w \in \llbracket \varphi \rrbracket\}) \cap \{w \in \llbracket \psi \rrbracket\} \\
& C[\diamond \varphi] = C \cap \{w \mid w' \in R(w) = \{w_i, \dots, w_{i+n}\} \text{ s.t. } w' \in \llbracket \varphi \rrbracket\} \\
& C[\Box \varphi] = ((C \cap \{w \mid w_i \in R(w) \text{ s.t. } w_i \in \llbracket \varphi \rrbracket\}) \cap \dots) \cap \{w \mid w_{i+n} \in R(w) \text{ s.t. } w_{i+n} \in \llbracket \varphi \rrbracket\} \\
(15) \quad & c[\varphi] = \text{exec}(\text{prop}_{w \in C}^\varphi(c)) \\
& c[\varphi \vee \psi] = \text{exec}(\text{prop}_{w \in C}^\psi(\text{prop}_{w \in C}^\varphi(c))) \\
& c[\varphi \wedge \psi] = \text{exec}(\text{prop}_{w \in C}^\psi(\text{exec}(\text{prop}_{w \in C}^\varphi(c)))) \\
& c[\diamond \varphi] = \text{exec}(\text{prop}_{w_{i+n} \in R(w)}^\varphi(\dots(\text{prop}_{w_i \in R(w)}^\varphi(c)))) \\
& c[\Box \varphi] = \text{exec}(\text{prop}_{w_{i+n} \in R(w)}^\varphi(\dots(\text{exec}(\text{prop}_{w_i \in R(w)}^\varphi(c))))))
\end{aligned}$$

(16) Proposal:

- a. $prop_{w \in C}^\varphi(c) := (C, \leq^{\varphi, w \in C})$
- b. $prop_{w' \in R(w)}^\varphi(c) := (C, \leq^{\varphi, w' \in R(w)})$

(17) Execution:

- a. $exec(c) := (C \cap min(c), \leq |^{C \cap min(c)})$
- b. $min(c) = \{w \in C \mid \forall v \in C, w \leq v\}$

- (18) a. $\forall w, v \in C, w \leq^{\varphi, w \in C} v$ iff $w \in \llbracket \varphi \rrbracket$ and $v \notin \llbracket \varphi \rrbracket$, or $w \in \llbracket \varphi \rrbracket$ and $v \in \llbracket \varphi \rrbracket$.
- b. $\forall w, v \in C, w' \in R(w)$ and $v' \in R(v), w \leq^{\varphi, w' \in R(w)} v$ iff $w' \in \llbracket \varphi \rrbracket$ and $v' \notin \llbracket \varphi \rrbracket$, or $w' \in \llbracket \varphi \rrbracket$ and $v' \in \llbracket \varphi \rrbracket$.

Consider a situation with four possible worlds: $w_1 = \{\varphi, \psi\}$, $w_2 = \{\varphi\}$, $w_3 = \{\psi\}$, and $w_4 = \emptyset$, all within context C . For simplicity, I will continue to use C to refer to the context when it is unambiguous. The process of updating the context C with the atomic proposition φ , the disjunction $\varphi \vee \psi$, and the conjunction $\varphi \wedge \psi$ is illustrated in Figures 1, 2, and 3, respectively.

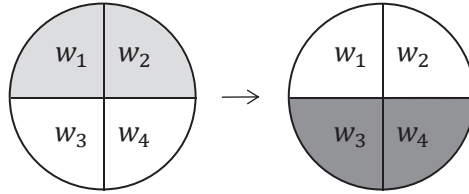


Figure 1: Updating the context with the atomic proposition φ .

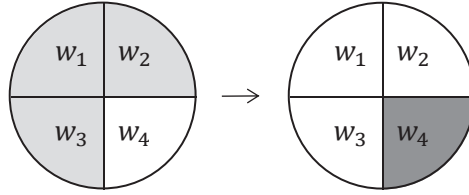


Figure 2: Updating the context with the disjunction $\varphi \vee \psi$.

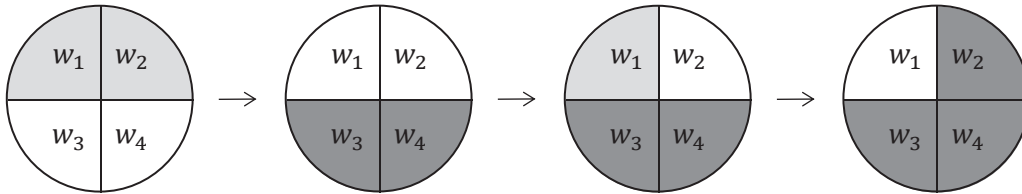


Figure 3: Updating the context with the conjunction $\varphi \wedge \psi$.

Consider another scenario involving three worlds: w_1 , w_2 , and w_3 , where w_1 and w_3 are φ -worlds, while w_2 is a non- φ -world. Assign to each world a non-empty set $R(w)$. Suppose $R(w_1) = \{w_1, w_2, w_3\}$, $R(w_2) = \{w_2, w_3\}$, and $R(w_3) = \{w_1, w_3\}$. Updating the context C with $\diamond\varphi$ means checking whether there exists a φ -world in $R(w)$ for each w . If so, w is proposed, and all other worlds are excluded. In this case, since every world has a φ -world in its $R(w)$, updating $\diamond\varphi$ does not eliminate any world. By contrast, updating C with $\Box\varphi$ involves verifying whether the first world in each $R(w)$ is a φ -world. If it is not, w is removed from C . This process continues iteratively until the last element in $R(w)$ has been checked. Ultimately, for each $w \in C$, all worlds in $R(w)$ must be φ -worlds. In this scenario, the only world remaining in C is w_3 , as illustrated in Figure 4.

$$\begin{array}{ccc}
\langle w_1, R(w_1) = \{w_1, w_2, w_3\} \rangle & & \langle w_1, R(w_1) = \{w_1, w_2, w_3\} \rangle \\
\langle w_2, R(w_2) = \{w_2, w_3\} \rangle & \rightarrow & \langle w_2, R(w_2) = \{w_2, w_3\} \rangle \\
\langle w_3, R(w_3) = \{w_1, w_3\} \rangle & & \langle w_3, R(w_3) = \{w_1, w_3\} \rangle
\end{array}$$

Figure 4: Updating the context with $\Box\varphi$.

Two points need to be emphasized here. First, System 1 is essentially classical modal logic rewritten in a dynamic style. Following the terminology of Rothschild & Yalcin (2016), I refer to this system as surface dynamic. Second, System 1 does not yet predict epistemic contradictions or free choice.

3.2. System 2: Context-Sensitivity

The system described in the previous section does not yield insightful predictions regarding our empirical concerns. To account for epistemic contradictions, we must further clarify the relationship between $R(w)$ and context C , both of which are sets of worlds.

System 2 assumes that the accessibility relation satisfies $\forall w \in C, R(w) \subseteq C$, which corresponds to the relation termed *informational* by Goldstein (2019b). However, as discussed in Section 3.4, when the stricter condition $\forall w \in C, R(w) = C$ is met, modalities in this system can no longer provide new information. An example of this accessibility relation is depicted in Figure 5. In this example, $C = \{w_1, w_2, w_3\}$, $R(w_1) = \{w_2, w_3\}$, $R(w_2) = \{w_2\}$, and $R(w_3) = \{w_2\}$, satisfying $\forall w \in C, R(w) \subseteq C$.

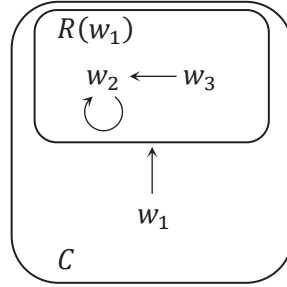


Figure 5: An example of the accessibility relation in System 2.

When updating φ in context C , the resulting context will include only φ -worlds. Since every update process must ensure that $R(w)$ remains a subset of C , all worlds in $R(w)$ must also be φ -worlds. A natural way to maintain this accessibility relation is to eliminate not only all non- φ -worlds from C , but also any worlds in C whose $R(w)$ contains a non- φ -world. This elimination condition can be incorporated into (18) as shown in (19):

- (19) a. $\forall w, v \in C, w \leq^{\varphi, w \in C} v$ iff
- i. $w \in \llbracket \varphi \rrbracket$ and $v \notin \llbracket \varphi \rrbracket$, or $w \in \llbracket \varphi \rrbracket$ and $v \in \llbracket \varphi \rrbracket$.
 - ii. $\forall w' \in R(w), w' \in \llbracket \varphi \rrbracket$ and $\exists v' \in R(v), v' \notin \llbracket \varphi \rrbracket$,
or $\forall w' \in R(w), w' \in \llbracket \varphi \rrbracket$ and $\forall v' \in R(v), v' \in \llbracket \varphi \rrbracket$.
- b. $\forall w, v \in C, w' \in R(w)$ and $v' \in R(v), w \leq^{\varphi, w' \in R(w)} v$ iff
 $w' \in \llbracket \varphi \rrbracket$ and $v' \notin \llbracket \varphi \rrbracket$, or $w' \in \llbracket \varphi \rrbracket$ and $v' \in \llbracket \varphi \rrbracket$.

In this system, updating an extensional proposition φ yields the result $\varphi \models \Box\varphi$. This aligns with our expectations for epistemic contradictions, as $\varphi \wedge \Diamond\neg\varphi \models \perp$. In contrast, updating an intensional proposition such as $\Box\varphi$ or $\Diamond\varphi$ does not entail φ . Consider the example shown in Figure 5. Suppose w_2 and w_3 are both φ -worlds, while w_1 is a non- φ -world. This toy model supports $\Box\varphi$ independently of φ . The entailment relation in this system is $\varphi \models \Box\varphi \models \Diamond\varphi$.

Although the current system is strong enough to derive epistemic contradictions, it may also be overly restrictive. Consider the stricter condition $\forall w \in C, R(w) = C$. Suppose C contains both φ -worlds and non- φ -worlds. When updating C with φ , since for all $w \in C$, there are non- φ -worlds in $R(w)$, the system would eliminate all w from C . To avoid collapsing the context into an empty set, all worlds in C would have to be φ -worlds. This results in an undesirable consequence: not only modal sentences, but all propositions function as tests.

To address this problem, an alternative strategy can be adopted to satisfy the accessibility relation $\forall w \in C, R(w) \subseteq C$. Following Goldstein (2019b), accessibility relations can be constrained relative to a state by introducing *context-sensitivity* (or *information-sensitivity*, as termed in Goldstein 2019b). This is formally defined as $R_C(w) = \{w' \in C \mid wRw'\}$. Under this condition, when updating φ , it is unnecessary to eliminate worlds in C whose $R(w)$ contains a non- φ -world. Instead, the relation $R_{C[\varphi]}(w) = R_C(w) \cap C[\varphi]$ is updated relative to the resulting context $C[\varphi]$. Consequently, all non- φ -worlds are removed from both C and $R_C(w)$.

It is important to note that both strategies ensure the accessibility relation $\forall w \in C, R(w) \subseteq C$ (an empirical difference is that the former strategy, but not the latter, also predicts $\Diamond\varphi \wedge \neg\varphi \models \perp$). The crucial point is that, under this restriction, the entailment relation in System 2 remains $\varphi \models \Box\varphi \models \Diamond\varphi$. When this relation holds, the system successfully predicts epistemic contradictions $\varphi \wedge \Diamond\neg\varphi \models \perp$.

3.3. System 3: Requirement of Proposability

System 3 addresses the paradox of free choice. A significant innovation introduced by Incurvati & Sbardolini (2023) is that their system allows simultaneous updating of multiple propositions, particularly in the case of disjunction. I align myself with this proposal and extend its implications.

First, the compositional interaction between disjunction and the existential modal operator, based on System 1, is shown as follows. For now, the results remain equivalent to those of classical modal logic, namely $\Diamond(\varphi \vee \psi) \Leftrightarrow (\Diamond\varphi \vee \Diamond\psi)$.

$$(20) \text{ a. } C[\Diamond(\varphi \vee \psi)] = C \cap \{w \mid w' \in R(w) = \{w_i, \dots, w_{i+n}\} \text{ s.t. } w' \in \llbracket \varphi \vee \psi \rrbracket\}$$

$$\text{b. } c[\Diamond(\varphi \vee \psi)] = \text{exec}(\text{prop}_{w_{i+n} \in R(w)}^{\varphi \vee \psi}(\dots(\text{prop}_{w_i \in R(w)}^{\varphi \vee \psi}(c))))$$

$$= \text{exec} \left(\left(\begin{array}{c} \text{prop}_{w_i \in R(w)}^{\varphi \vee \psi} \\ \vdots \\ \text{prop}_{w_{i+n} \in R(w)}^{\varphi \vee \psi} \end{array} \right) (c) \right) = \text{exec} \left(\left(\left(\begin{array}{c} \text{prop}_{w_i \in R(w)}^{\varphi} \\ \text{prop}_{w_i \in R(w)}^{\psi} \\ \vdots \\ \text{prop}_{w_{i+n} \in R(w)}^{\varphi} \\ \text{prop}_{w_{i+n} \in R(w)}^{\psi} \end{array} \right) (c) \right) \right)$$

By applying the two-step updating procedure involving *prop* and *exec*, a notable difference emerges between updating conjunctions and disjunctions. For conjunctions, since the update proceeds sequentially, the first *exec* operation generates a local context $c[\varphi]$, and then the second *prop* is processed within this local context. In contrast, disjunctions involve two *prop* operations within the same initial context, making both disjunct-worlds more likely to be the actual world. This is followed by a single *exec*. Consequently, a disjunctive assertion updates both disjuncts simultaneously without generating any local context. The same logic applies to modal operators, as existential and universal operators can be treated as generalized disjunctions and conjunctions, respectively.

This paper introduces a general principle in update semantics: the requirement of proposability, defined in (21). According to this principle, φ can be proposed only if it is consistent with the context. Combined with the assumption of simultaneous processing, a reasonable implication is that two propositions can be proposed in the same context only if each proposition holds true in at least one world within that context. For disjunction, this means that both a φ -world and a ψ -world must exist in the context.

(21) Requirement of proposability: For any proposition φ and context $c = (C, \leq)$, $\text{prop}^\varphi(c)$ can be processed based on $w \in C$ or $w' \in R(w)$, only if $C \cap \llbracket \varphi \rrbracket \neq \emptyset$.

Several related but distinct ideas can be found in existing theories, such as non-emptiness in Aloni (2022) and supercover in Simons (2005). However, the proposability requirement is less direct than homogeneity in Goldstein (2019a) or genuineness in Zimmermann (2000) (see also Goldstein 2020). To derive free choice, further constraints must be imposed on accessibility relations.

System 3 assumes that the accessibility relation satisfies $\forall w \in C, C \subseteq R(w)$. An example of this accessibility relation is illustrated in Figure 6. In this example, $C = \{w_1, w_3\}$, $R(w_1) = \{w_1, w_2, w_3\}$, and $R(w_3) = \{w_1, w_3\}$, where w_2 lies outside C , satisfying $\forall w \in C, C \subseteq R(w)$.

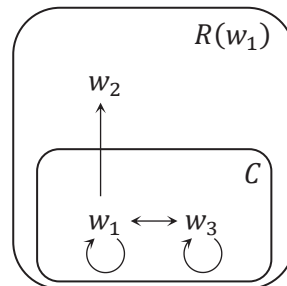


Figure 6: An example of the accessibility relation in System 3.

As discussed in Section 3.2, two strategies can be employed here. First, the accessibility relation can be assumed to be *context-insensitive* (or *information-insensitive*, as termed in Goldstein 2019b). This implies that for all $w \in C$, $R(w)$ remains unchanged relative to any context. Second, we can retain the sensitivity of accessibility relations while assuming that they are not relative to the context C , but rather to a broader state $S = \bigcup_{w \in C} R(w)$. Since $C \subseteq R(w) \subseteq S$ for all $w \in C$, $R(w)$ remains unchanged. Both strategies ensure that $\forall w \in C, C \subseteq R(w)$. Under this accessibility relation, the entailment relation in System 3 is $\Box\varphi \models \varphi \models \Diamond\varphi$.

By combining System 3 with the proposability requirement, when updating $\diamond(\varphi \vee \psi)$, since $C \cap \llbracket \varphi \rrbracket \neq \emptyset$ and $C \cap \llbracket \psi \rrbracket \neq \emptyset$, and $\forall w \in C, C \subseteq R(w)$, we obtain $\forall w \in C, R(w) \cap \llbracket \varphi \rrbracket \neq \emptyset$ and $R(w) \cap \llbracket \psi \rrbracket \neq \emptyset$. This yields the expected free choice inference $\diamond\varphi \wedge \diamond\psi$. In contrast, in Systems 1 and 2, even if the proposability requirement is valid, it does not play a functional role. Consequently, Systems 1 and 2 fail to predict free choice.

3.4. System 4: Back to Test Semantics

Finally, System 4 demonstrates how the proposal returns to test semantics. In System 4, accessibility relations are constrained to $\forall w \in C, R(w) = C$. This condition is referred to as *state-basedness* in Aloni (2022) and *strongly world-insensitive* in Goldstein (2019b). An example of this accessibility relation is depicted in Figure 7. In this example, $C = R(w_1) = R(w_2) = R(w_3) = \{w_1, w_2, w_3\}$.

As discussed in Section 3.2, when accessibility relations are assumed to be insensitive to context, all propositions in this system must function as tests. However, this prediction is overly strong. To address this issue, we introduce context-sensitive relations $R_C(w) = \{w' \in C \mid wRw'\}$ as a theoretical mechanism to exclude w from $R(w)$. Under this restriction, it becomes clear that any update process always satisfies $\forall w \in C, R_C(w) = C$. The entailment relation in System 4 is $\varphi \models \Box\varphi \models \Diamond\varphi$.

Recall that updating $\diamond\varphi$ and $\Box\varphi$ in C results in the sets $\{w \in C \mid \exists w' \in R(w) \text{ s.t. } w' \in \llbracket \varphi \rrbracket\}$ and $\{w \in C \mid \forall w' \in R(w) \text{ s.t. } w' \in \llbracket \varphi \rrbracket\}$, respectively. Since each $R_C(w)$, where $w \in C$, always contains the same worlds as the context C in System 4, it is straightforward to confirm that this system is equivalent to test semantics.

Note that state-basedness imposes stricter conditions than the accessibility relation in System 2, and both Systems 2 and 4 predict epistemic contradictions. Thus, we can conclude that System 4, namely test semantics, is sufficient but not necessary for explaining epistemic contradictions. However, when combined with the proposability requirement introduced in Section 3.3, System 4 also predicts free choice inferences, as there must be both a φ -world and a ψ -world in every $R(w) = C$.

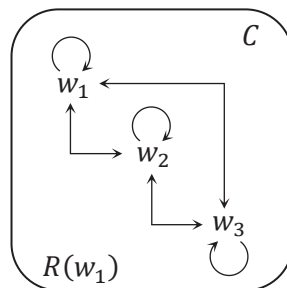


Figure 7: An example of the accessibility relation in System 4.

4. Conclusion

This paper explores the integration of static and dynamic semantics regarding epistemic modals. By reinstating accessibility relations within update semantics, I have tentatively constructed four systems, each defined by specific constraints on the relationship between $R(w)$ and the context C . A related idea can also be found in Goldstein (2019b), but the implementation of this proposal is primarily inspired by Incurvati & Sbardolini (2023). A comparative summary of the four systems is presented in Table 1.

	Relationship between $R(w)$ and C	Entailment	Epistemic contradictions	Free choice principle (with the proposability requirement)
System 1	Unrestricted	$\Box\varphi \models \Diamond\varphi$	\times	\times
System 2	$\forall w \in C, R(w) \subseteq C$	$\varphi \models \Box\varphi \models \Diamond\varphi$	\checkmark	\times
System 3	$\forall w \in C, C \subseteq R(w)$	$\Box\varphi \models \varphi \models \Diamond\varphi$	\times	\checkmark
System 4	$\forall w \in C, R(w) = C$	$\varphi \not\models \Box\varphi \models \Diamond\varphi$	\checkmark	\checkmark

Table 1: A comparison of the four systems.

* I would like to thank the audience at ELSJ ISF17 and express my gratitude to the two anonymous reviewers, as well as Naoko Komoto, Takeo Kurafuji, Osamu Sawada, and Linmin Zhang, for their helpful comments and insightful discussions.

REFERENCES

- Aloni, Maria (2007) “Free Choice, Modals, and Imperatives,” *Natural Language Semantics* 15, 65-94.
- Aloni, Maria (2022) “Logic and Conversation: The Case of Free Choice,” *Semantics and Pragmatics* 15, 1-60.
- van Benthem, Johan (2007) “Dynamic Logic for Belief Revision,” *Journal of Applied Non-Classical Logics* 17, 129-155.
- Farkas, Donka and Kim Bruce (2010) “On Reacting to Assertions and Polar Questions,” *Journal of Semantics* 27, 81-118.
- Goldstein, Simon (2019a) “Free Choice and Homogeneity,” *Semantics and Pragmatics* 12, 1-53.
- Goldstein, Simon (2019b) “Generalized Update Semantics,” *Mind* 128, 795-835.
- Goldstein, Simon (2020) “Free Choice Impossibility Results,” *Journal of Philosophical Logic* 49, 249-282.
- Incurvati, Luca and Giorgio Sbardolini (2023) “Update Rules and Semantic Universals,” *Linguistics and Philosophy* 46, 259-289.
- Kaufmann, Magdalena and Stefan Kaufmann (2015) “Conditionals and Modality,” *The Handbook of Contemporary Semantic Theory*, eds. by Shalom Lappin and Chris Fox, 237-270, John Wiley & Sons.
- Rothschild, Daniel and Seth Yalcin (2016) “Three Notions of Dynamicness in Language,” *Linguistics and Philosophy* 39, 333-355.
- Simons, Mandy (2005) “Dividing Things Up: The Semantics of *or* and the Modal/*or* Interaction,” *Natural Language Semantics* 13, 271-316.
- Stalnaker, Robert (1978) “Assertion,” *Syntax and Semantics 9: Pragmatics*, ed. by Peter Cole, 315-332, New York: Academic Press.
- Veltman, Frank (1996) “Defaults in Update Semantics,” *Journal of Philosophical Logic* 25, 221-261.
- Willer, Malte (2013) “Dynamics of Epistemic Modality,” *The Philosophical Review* 122, 45-92.
- Yalcin, Seth (2007) “Epistemic Modals,” *Mind* 116, 983-1026.
- Zimmermann, Thomas Ede (2000) “Free Choice Disjunction and Epistemic Possibility,” *Natural Language Semantics* 8, 255-290.

Phi-Agreement and the Raising-to-Object Constructions in English and Japanese *

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Keywords : Syntax, ϕ -agreement, Raising-to-Object Constructions, English, Japanese

1. Introduction

This paper aims to show that the movement of accusative arguments in Raising-to-Object constructions (RtO) is optional in Japanese and obligatory in English. Typical data of RtOs in English and Japanese are in (1) and (2), respectively. In (1), *him* is semantically the embedded subject but receives accusative from the matrix verb. Likewise, in (2), *kare* ‘he/him’ is undoubtedly a subject of the predicate *mujitsu-da* ‘be innocent’ in the embedded clause but is marked with an accusative case particle. Much debate has been carried out on the structural position and the syntactic status of the accusative-marked arguments in RtOs both in English and Japanese. Against this background, we argue that the obligatoriness/optionality of RtO hinges on the presence/absence of ϕ -agreement a language.

- (1) John believes him to be innocent. (English)
- (2) John-wa kare-o mujitsu-da to shinji-tei-ru.
John-Top he-Acc innocent-Cop that believe-Asp-Pres
‘John believes him to be innocent.’ (Japanese)

It has been extensively claimed that, in English, the embedded subject undergoes raising to be the matrix object position via A-movement with raising predicates, such as *believe* and *prove*, as illustrated in (1). Three pieces of evidence for this movement are in order. First, in (3b), the raised argument is promoted to the subject position in passives, which indicates that the DP (*Argentina*) is a matrix object in (3a). This is not expected if the DP remains within the embedded clause as a subject. Next, in (4), the matrix adverb can intervene between the raised argument and the embedded clause, which suggests that the DP (*his earnings*) is a matrix object.¹

- (3) a. We expect Argentina to win the World Cup.
b. Argentina was expected (by everyone) to win the World Cup. (Polinsky 2013: 580)
- (4) The chairman expected his earnings foolishly to show increases. (Polinsky 2013: 580)

Finally, Lasnik and Saito (1991: 11) argue that the A-movement in question obligatorily takes place with

raising predicates in English, based on the observations made by Postal (1974: 120). The difference in acceptability in (5) is telling. If *him* raises to the matrix clause and c-commands *Bob* in (5a), the contrast below is naturally explained as a consequence of the Condition C violation in binding (Chomsky 1981).

- (5) a. *Joan believes him_i [[t_i to be a genius] [even more fervently than Bob_i does]].
 b. Joan believes [[he_i is a genius] [even more fervently than Bob_i does]].

Based on these observations, we assume as a premise for discussion in this paper that raising predicates in English induce obligatory movement of the subject from out of the embedded infinitival clause.²

On the other hand, when we look at Japanese counterparts, the situation drastically changes. Whether movement of the embedded subject to the matrix object position is optional or obligatory in Japanese has been controversial in the literature (Hiraiwa 2001; Kobayashi 2013; Takahashi 2021, among others). Under such circumstances, we argue that the movement in Japanese RtO constructions is optional due to its lack of ϕ -agreement. The rest of this paper is organized as follows. In Section 2, we demonstrate that Japanese raising predicates do not force A-movement from the embedded clause to the matrix clause. Section 3 provides a syntactic analysis of the optionality of raising in Japanese and the obligatoriness in English RtO constructions. In Section 4, we attempt to take our analysis one step further: We suggest that the *Symmetrizing Syntax* framework (Narita and Fukui 2022) conforms our analysis of RtOs in Japanese and English to the Strong Minimalist Thesis (Chomsky 2004). Section 5 concludes the paper.

2. Optionality of Raising-to-Object in Japanese

Let us observe several pieces of evidence that Japanese RtO optionally involves movement. We focus on Kobayashi (2013) and Hiraiwa (2001).³ In (6a), a Negative Polarity Item (NPI), *rokuna-gakusei* ‘good-student’, is not licensed by the matrix negation. It has been widely known that NPIs generally require clausemate negation in Japanese, but the NPI in (6a) has no such licenser; hence, the expression is ungrammatical. On the other hand, (6b) is grammatical, which indicates that the argument NPI is raised to the matrix clause and licensed by the matrix negation, which is derivationally clausemate.

- (6) a. *Taro-wa [rokuna-gakusei-ga i-ru to] omow-anakat-ta.
 Taro-Top good-student-Nom be-Pres that think-Neg-Past
 b. Taro-wa rokuna-gakusei_i-o [t_i i-ru to] omow-anakat-ta.
 Taro-top good-student-Acc be-Pres that think-Neg-Past
 ‘Taro didn’t think that there were good students there.’ (Kobayashi 2013: 76)

Conversely, Hiraiwa (2001) demonstrates that embedded subjects in Japanese RtO constructions can also stay in situ. In (7), the adverb *mada* ‘still/only’ modifies the embedded predicate and intervenes between the accusative argument and the matrix subject. This indicates that the accusative argument *Mary-o* remains inside the embedded clause. Moreover, since (7) allows another interpretation that John still thinks that Mary is a child, it is safe to conclude that the raising is optional in Japanese.

- (7) John-ga [mada Mary-o kodomo-da to] omot-tei-ru.
 John-Nom still Mary-Acc child-Cop that think-Asp-Pres
 ‘John thinks that Mary is only a child.’ (Hiraiwa 2001: 72)

The above observations from previous studies indicate that the object can remain in situ within the embedded clause in Japanese RtO constructions. In this context, Takahashi (2021) has recently claimed that RtO in Japanese is obligatory, just like in English. He claims that movement of arguments allows adjuncts to take a free ride (Saito 1994), which makes the data in (7) consistent with the obligatory raising analysis of RtO in Japanese. However, we argue that his argument does not necessarily hold. Let us consider (8), in which two embedded clauses are coordinated. If Takahashi’s (2021) analysis was right, then we would be forced to contend as follows: The accusative argument with an adjunct undergoes A-movement out of each conjunct in (8). However, this movement violates the Coordinate Structure Constraints (Ross 1967). Across-the-Board extraction is not an option here due to the non-identity of the elements; hence, Takahashi’s (2021) analysis predicts that (8) should be ungrammatical. Given that (8) is grammatical, the obligatory raising analysis makes empirically wrong predictions.

- (8) John-to Mary-wa sorezore [&P [CP rippani Bill-o otona-da
 John-and Mary-Top each admirably Bill-Acc adult-Cop
 to] (sosite) [CP mada Tom-o kodomo-da to]] omottei-ru.
 that and still Tom-Acc child-Cop that think-Pres
 ‘John and Mary each think that Bill is a full-grown adult and Tom is only a child.’

An astute reader may say that the obligatory movement analysis is compatible with (8) if the data involves VP-coordination with the matrix predicate *omottei-* ‘think’. However, this is not the case because *sorezore* ‘each/respectively’ is not properly interpreted if *omottei-* is pronounced in the first conjunct. That is, the intended distributive reading is impossible in (9).

- (9) *John-to Mary-wa sorezore [&P [VP [CP rippani Bill-o
 John-and Mary-Top each admirably Bill-Acc
 otona-da to] omotteori] (sosite) [VP [CP mada Tom-o
 adult-Cop that think and still Tom-Acc
 kodomo-da to] omottei]]-ru.
 child-Cop that think-Pres

Intended: ‘John thinks that Bill is a full-grown adult, and Mary thinks that Tom is only a child.’

The data in (10b) is degraded when the argument together with the embedded adjunct undergoes A-movement out of the embedded clause over another adjunct *tsuyoku* ‘strongly’, which belongs to the matrix clause. Note that the structure before movement in (10a) is acceptable. Based on the observations, we conclude that raising is optional in Japanese RtO constructions, contra Takahashi (2021).

- (10) a. John-wa tsuyoku [rippani Bill-o otona-da
 John-Top strongly admirably Bill-Acc adult-Cop
 to] omottei-ru.
 that think-Pres
 ‘John strongly thinks that Bill is a full-grown adult.’
- b. *John-wa [rippani Bill-o]_i tsuyoku [*t*_i otona-da
 John-Top admirably Bill-Acc strongly adult-Cop
 to] omottei-ru.
 that think-Pres

So far, we have observed that raising in RtO constructions in English is obligatory, while it is optional in Japanese. In the next section, we propose a syntactic analysis of the optionality of A-movement in a comparative perspective: the differences in RtO constructions in Japanese and English stem from the presence/absence of ϕ -agreement in these languages. The first question to be considered below is why raising in RtO constructions is obligatory in English.

3. Analysis: ϕ -agreement and the Optionality of RtO

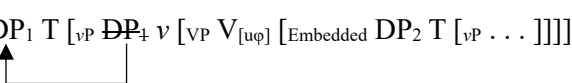
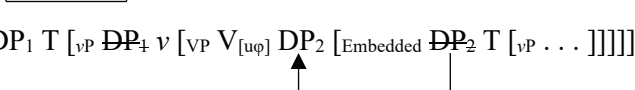
We propose that the existence of ϕ -agreement makes the movement obligatory in English. The raising in English (1) is forced because the embedded subject DP must raise to the matrix clause to satisfy the requirements regarding Agree and Labeling in (11a) and (11b).

- (11) a. Unvalued ϕ -features on the matrix verb must be valued via Agree.
 b. Symmetric {XP, YP} (e.g., {VP, DP} in (1)) is labeled as $\langle \phi, \phi \rangle$ via feature-sharing in the sense of Chomsky (2013).

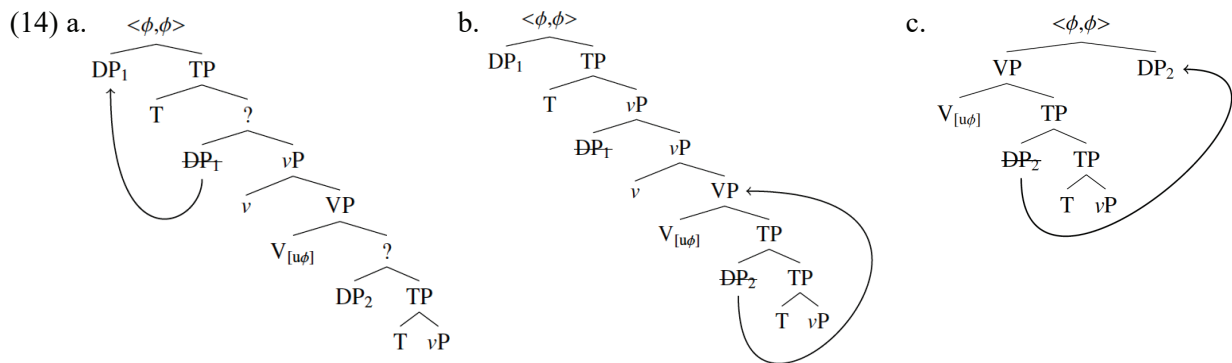
Along with Chomsky (2013, 2015), we dispense with Agree in a *probe-goal* fashion, and instead, we assume the *top-down* Agree in (12):

- (12) Minimal Search applies in a top-down fashion to a Syntactic Object (SO), and Agree occurs when Minimal Search finds [uF] and [vF], one unvalued and the other with an inherent value, of equal depth in the structure.

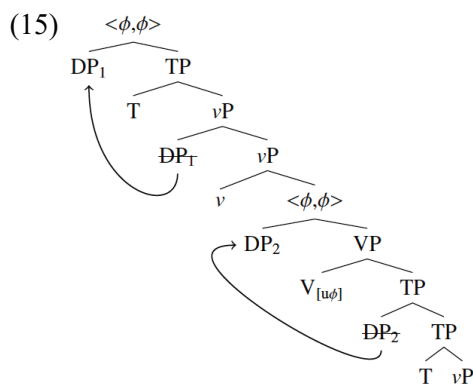
The schematic representations of English RtO constructions are in (13). In (13a), V cannot Agree with DP₂ in the base position since V and D₂ are not of the same structural depth. In order to enter ϕ -agreement with V, DP₂ must internally Merge to the matrix clause to be of the same depth as in (13b).

- (13) a. [Matrix DP₁ T [vP ~~DP~~₁ v [VP V_[u ϕ] [Embedded DP₂ T [vP . . .]]]]]

- b. [Matrix DP₁ T [vP ~~DP~~₁ v [VP V_[u ϕ] DP₂ [Embedded ~~DP~~₂ T [vP . . .]]]]]


Adhering to the Extension Condition (Chomsky 1993, 1995), we assume Epstein et al.'s (2012) two-peaked structure. The vP phasal complement in (13b) is immediately transferred upon Agree of V and D₂; hence, the derivation does not violate any constraints on interpreting the structure at the interfaces. The tree diagrams of (13a,b) are shown in (14a,b). After raising, DP₂ undergoes φ-agreement with the matrix verb, rendering the otherwise unlabelable {VP, DP₂} structure labelable, as in (14c).



Another possibility suggested by Jason Ginsburg (p.c.) can obtain the same result, possibly with no recourse to the two-peaked structure, which requires counter-cyclic Merge. The derivation is depicted in a tree-diagrammatic representation in (15). After completion of the embedded TP, the matrix V is introduced, which is followed by internal Merge of DP₂ to the edge of the VP. This enables D₂ and V to undergo φ-agreement, and {DP₂, VP} is labeled as $\langle \phi, \phi \rangle$ via feature-sharing in (11) (Chomsky 2013).



Turning to Japanese, we argue that RtO in this language is optional because it lacks φ-agreement to begin with (Fukui 1988, 1995; Kobayashi 2022, among others). As long as (internal) Merge is free (Chomsky 2004), the embedded subject may either move (raise) or stay in situ. Thanks to the lack of φ-agreement, the unconstrained Merge is in full force in Japanese (Fukui 2011: 90). Having demonstrated that the difference in optionality of RtOs in Japanese and English is due to the presence/absence of φ-agreement, we will further elaborate our analysis to make it more parsimonious in the next section.⁴

4. RtO in the Framework of *Symmetrizing Syntax* (Narita and Fukui 2022)

In this section, we will go one step further and attempt to eliminate the two assumptions in (11) to refine the current analysis in a more parsimonious manner so that it strictly adheres to the Strong Minimalist

Thesis (Chomsky 2004). To this end, we adopt Narita and Fukui’s (2022) framework of *Symmetrizing Syntax*. They contend that only symmetric SOs are interface-legible, and the SOs need no universal labels for interpretation at interfaces, contra Chomsky (2013, 2015). For an SO to be interface-legible, Narita and Fukui (2022) argue that the SO must be in Feature-Equilibrium (or F-equilibrium) in (16).

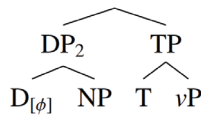
(16) Feature-Equilibrium (Narita and Fukui 2022: 41):

An SO $\Sigma = \{\alpha, \beta\}$ is in an *F-equilibrium* = *def.* α and β share the identical formal feature F that is detectable via the Minimal Search procedure $S^0(\Sigma)$.

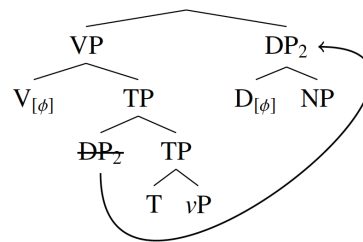
Let us turn back to English RtO in (17). The tree diagram of the embedded clause before raising takes place is in (18a). As Narita and Fukui (2022: 203–207) have already noted, such SO created in the course of derivation in RtO is not interface-legible since it is not in F-equilibrium.⁵ For the SO to satisfy (16), DP₂ in (18a) must undergo obligatory raising to the object position so that it is in F-equilibrium in terms of ϕ -features. The derivation is depicted in the tree diagram in (18b) for ease of exposition.

(17) John believes *him* to be innocent. (=1))

(18) a.



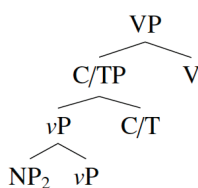
b.



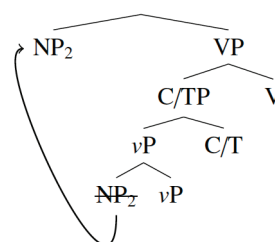
Symmetrizing Syntax enables us to derive the difference in optionality of RtOs in Japanese and English with no recourse to superfluous assumptions in (11a) and (11b).⁶ Narita and Fukui (2022) assume that Japanese lacks formal ϕ -features in its lexicon (Fukui 1988, 1995; Kobayashi 2022, among many others), which consequently means that no syntactic operation is conditioned by ϕ -feature-(a)symmetry in Japanese. In other words, Japanese RtO is optional as long as (internal) Merge is free (Chomsky 2004) since F-equilibrium in (16) can be satisfied regardless of whether RtO takes place; hence, the optionality of RtO in Japanese.⁷ For reference, a typical example of Japanese RtO is repeated here in (19), whose structures with and without raising are in (20a) and (20b), respectively.

(19) John-wa kare-o mijitsu-da to shinji-tei-ru.
 John-Top he-Acc innocent-Cop that believe-Asp-Pres
 ‘John believes him to be innocent.’ (=2))

(20) a.



b.



5. Conclusion

In this paper, we have proposed an analysis that the difference between RtO constructions in Japanese and English stems from the presence/absence of ϕ -agreement in these languages. A-movement in Japanese RtO is optional because the language lacks ϕ -agreement. On the other hand, A-movement in English RtO is obligatory; otherwise, the derivation would crash at the interfaces with ϕ -features left unvalued. We have further demonstrated that *Symmetrizing Syntax* (Narita and Fukui 2022) accounts for the comparative difference between Japanese and English RtOs in a more parsimonious way. Overall, this study has successfully reduced the optionality of certain A-movement to Free Merge and differences of agreement features in Lexicons; hence, the discussions in this paper support Functional Parametrization Hypothesis in the Minimalist Program (Fukui 1988, 1995; Kobayashi 2022).

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NOTES

¹ One empirical observation can be problematic for the obligatory movement analysis of RtO in English regarding subextraction out of the raised argument. For space reasons, we will not discuss it in depth here. Readers are referred to Polinsky (2013) and the references cited therein for discussions.

² Of note here is Lasnik (1999), who observes that English RtO shows reconstruction effects. Based on the assumption that A-movement does not reconstruct, he claims that English RtO is optional. However, it is unclear whether every instance of A-movement lacks reconstruction effects (cf. May 1977; Boeckx 2001, among others). Thus, the observations in Lasnik (1999) do not necessarily indicate that English RtO is optional.

³ See Kuno (1976) and Tanaka (2002), among many others.

⁴ Some may wonder what the label of $\{NP_2, VP\}$ in (19) is. The SO is symmetric, and there is no shared feature(s) (i.e., ϕ -features); hence, the SO remains unlabeled, unlike the English counterpart in (18). We will see in the next section that this apparent problem is no longer a problem if we adopt the framework of *Symmetrizing Syntax* (Narita and Fukui 2022). Note also that the labeling problem in question can be resolved by simply assuming with Saito (2016) that arguments in Japanese are invisible from labeling. However, whichever analysis is correct does not affect our analysis here. Thus, we will not discuss it further in this paper.

⁵ Note that labels in the tree diagrams are just for expository reasons.

⁶ Fukui and Narita (2017) also suggest a similar idea regarding the optional A-movement in Japanese.

⁷ Again, labels are only for expository reasons.

REFERENCES

- Boeckx, Cedric (2001) "Scope Reconstruction and A-movement," *Natural Language & Linguistic Theory* 19, 503–548.
- Chomsky, Noam (1981) *Lectures on Government and Binding*. Dordrecht: Foris Publications.

- Chomsky, Noam (1993) “A Minimalist Program for Linguistic Theory,” *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, ed. by Kenneth Hale and Samuel Jay Keyser, 1–52, MIT Press, Cambridge, MA.
- Chomsky, Noam (1995) *The Minimalist Program*. MIT Press, Cambridge, MA.
- Chomsky, Noam (2004) “Beyond Explanatory Adequacy,” *The Cartography of Syntactic Structures, Vol. 3, Structures and Beyond*, ed. by Adriana Belletti, 103–131, Oxford University Press, Oxford.
- Chomsky, Noam (2013) “Problems of Projection,” *Lingua* 130, 33–49.
- Chomsky, Noam (2015) “Problems of Projection: Extensions,” *Structures, Strategies and Beyond – Studies in Honour of Adriana Belletti*, ed. By Elisa Di Domenico, Cornelia Hamann and Simona Matteini, 3–16, John Benjamins, Amsterdam/Philadelphia.
- Epstein, Samuel, Hisatsugu Kitahara and Daniel Seely (2012) “Structure Building that can’t be,” In *Ways of Structure Building*, ed. by Myriam Uribe-Etxebarria and Vidal Valmala, 253–270, Oxford University Press, Oxford.
- Fukui, Naoki (1988) “Deriving the Differences between English and Japanese: A Case Study in Parametric Syntax,” *English Linguistics* 5, 249–270.
- Fukui, Naoki (1995) “The Principles-and-Parameters Approach: A Comparative Syntax of English and Japanese,” *Approaches to Language Typology*, ed. by Masayoshi Shibatani and Theodora Bynon, 327–372, Oxford University Press, Oxford.
- Fukui, Naoki (2011) “Merge and Bare Phrase Structure,” *The Oxford Handbook of Linguistic Minimalism*, ed. by Cedric Boeckx, 73–95, Oxford University Press, Oxford.
- Fukui, Naoki and Hiroki Narita (2017) “Merge and (A)symmetry.” *Merge in the Mind-Brain: Essays on Theoretical Linguistics and the Neuroscience of Language*, 35–74, Routledge, Abingdon.
- Hiraiwa, Ken (2001) “On Nominative-Genitive Conversion,” *A Few from Building E39, MIT Working Papers in Linguistics* 39, ed. by Elena Guerzoni and Ora Matushansky, 65–123, MIT Working Papers in Linguistics, Cambridge, MA.
- Kobayashi, Ryoichiro (2022) *Functional Parametrization Hypothesis in the Minimalist Program — Case Studies from the Perspective of Comparative Syntax of Japanese and English —*, Kaitakusha, Tokyo.
- Kobayashi, Yukino (2013) *Japanese Case Alternations within Phase Theory*, Doctoral Dissertation, Sophia University.
- Kuno, Susumu (1976) “Subject Raising,” *Syntax and Semantics 5: Japanese Generative Grammar*, 17–49, Academic Press, New York.
- Lasnik, Howard (1999) “Chains of Arguments,” *Working Minimalism*, ed. by Samuel D Epstein and Norbert Hornstein, 189–215, MIT Press, Cambridge, MA.
- Lasnik, Howard and Mamoru Saito (1991) “On the Subject of Infinitives,” *Proceedings of the 27th Annual Meeting of the Chicago Linguistic Society, Vol. 1*, ed. by Lise M. Dobrin, Lynn Nichols and Rosa M. Rodriguez, 324–343, Chicago Linguistic Society, University of Chicago, Chicago, IL.
- May, Robert (1977) *The Grammar of Quantification*, Doctoral dissertation, Massachusetts Institute of Technology.
- Narita, Hiroki and Naoki Fukui (2022) *Symmetrizing Syntax: Merge, Minimality, and Equilibria*,

Routledge, Abingdon.

Polinsky, Maria (2013) "Raising and Control," *The Cambridge Handbook of Generative Syntax*, ed. by Marcel den Dikken, Cambridge University Press, Cambridge.

Postal, Paul (1974) *On Raising: One Rule of English Grammar and its Theoretical Implications*, MIT Press, Cambridge, MA.

Ross, John R. (1967) *Constraints on Variables in Syntax*. Doctoral dissertation, Massachusetts Institute of Technology.

Saito, Mamoru (1994) "Additional-WH Effects and the Adjunction Site Theory," *Journal of East Asian Linguistics* 3, 195–240.

Saito, Mamoru (2016) "Case for Labeling: Labeling in Languages without ϕ -feature Agreement," *The Linguistic Review* 33, 129–175.

Takahashi, Masahiko (2021) "Reconsidering the Optionality of Raising in Japanese Exceptional-Case-Marking Constructions," *Syntax* 24, 224–262.

Tanaka, Hidekazu (2002) "Raising to Object out of CP," *Linguistic Inquiry* 33, 637–652.

The Reflexive-Possessive Rule in Mongolian as Binding Principle A and Its Implications on English¹

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Keywords: reflexive-possessive, binding, Mongolian, English

1. Introduction

In Mongolian, the suffix *-aa*, notated as RX in this paper,² is attached to a non-nominative element and expresses three types of relations between that element and a local subject: anaphoric relation, possessive relation and situational relation (Anisman 2010, Guntsetseg 2011, Janhunen 2012, Kullmann and Tserenpil 2015). This is known as “Ерөнхийлөн Хамаатуулах Нөхцөл” in Mongolian grammar, which literally means “universally relating condition/principle/rule”. This paper argues that this, which translates as “the Reflexive-Possessive Rule” (RPR), is a special type of Binding Principle A by showing that the properties of RX, the hallmark of RPR, resemble those of Principle A. RX and a reflexive marker such as *self* resist a nominative host. Both RX-marked elements and *self* anaphors are licensed/bound by a local subject. RX is blocked by switch reference and *self* anaphors are not subject to rebinding. It is demonstrated that the nature of Principle A is valuation of phi-features, which entails the evoking of a reflexive feature, in a local domain. The relevant features sit on respective D heads, which are bare phrases per se, and undergo clustering. A consequence of the proposed analysis is that *own* in English is a possessive reflexive pronoun (anaphor) and that sentences such as *John loves his pictures*, when coreferentiality is assigned to the subject and the pronoun, involve an implicit *own* and therefore are subject to Principle A, not to Principle B, with no violation of the latter.

2. Outlining Reflexive-Possessive Rule in Mongolian

The hallmark of RPR is RX. RX can be attached to either nominals or clauses excluding those with nominative case. In this paper, we are particularly concerned with accusative marked objects. Objects with RX can be divided into four types: object anaphor, possessive DP, DP containing a relative clause, and object clause. We first discuss object anaphors. As shown below, only the simplex anaphor *öör* can be used as an object, which is attached by RX. A complex form consisting of a personal pronoun and *öör* is disallowed.

- (1) Baatar öör-ig-**öö** šüümjil-sen.
Baatar-NOM self-ACC-**RX** criticize-PST³

‘Baatar criticized himself.’

- (2) *Baatar ter/tüün öör-ig-**öö** šüümjil-sen.
 Baatar-NOM 3SG self-ACC-**RX** criticize-PST
 ‘Baatar criticized himself.’

Possessive DPs marked by RX display the following properties. **First**, the anaphor *öör-in* as the possessor within the DP may or may not be overt. **Second**, *öör-in*, whether overt or covert, must be coindexed with a local subject. **Third**, when *öör-in* is overt, RX is present on either it or the possessed noun; when *öör-in* is covert, RX is present on the noun. These properties are illustrated below.

- (3) Bat (öör-in) üzeg-ø-**ee**⁴ mart-san.
 Bat-NOM self-GEN pen-ACC-**RX** forget-PST
 ‘Bat forgot his own pen.’
- (4) Bat öör-in-**öö** üzeg-ig mart-san.
 Bat-NOM self-GEN-**RX** pen-ACC forget-PST
 ‘Bat forgot his own pen.’

An RX-marked noun can act as the possessor in objects, where the noun must be interpreted as a possessum of the subject, as shown in (5). However, RX must not be present on the head noun of the object phrase, as shown in (6).

- (5) Bi naiz-in-**aa** zahia-ig unš-san.
 1st-NOM friend-GEN-**RX** letter-ACC read-PST
 ‘I read my friend’s letter.’ (Kullmann and Tserenpil 2015: 110)
- (6) *Bi naiz-in zahia-ig-**aa** unš-san.
 1st-NOM friend-GEN letter-ACC-**RX** read-PST
 ‘I read my friend’s letter.’

The properties of RX-marked possessive DPs are summarized in (7).

(7) Distributional paradigm of RX in object NPs

	NOM	GEN	ACC
	NP2 _i	<i>öör_i-in-RX</i>	NP1 _j
	NP2 _i	(<i>öör_i-in</i>)	NP1 _j -RX
	NP2 _i	NP3 _k -in-RX	NP1 _j
*	NP2 _i	NP3 _k	NP1 _j -RX

We now discuss RX-marked NP objects containing an object relative clause. With RX, the relative subject is obligatorily genitive-marked and coreferential with the matrix subject. That is, the relative

subject is the genitive anaphor *öör-in*, which may be either overt or covert, as in (8). When it is overt, *öör-in* can host RX, as in (9). However, it is mostly absent when there is another DP, for example, the ablative *bagš-aas* ‘from teacher’ in the relative clause in (10).

- (8) Bi (öör-in) sur-san hičeel(-ig)-ee mart-san.
 1st-NOM self-GEN learn-PST lesson-ACC-**RX** forget-PST
 ‘I forgot the lesson that I learned.’
- (9) *Bi öör-in-öö sur-san hičeel-ig mart-san.
 1st-NOM self-GEN-**RX** learn-PST lesson-ACC forget-PST
 ‘I forgot the lesson that I learned.’
- (10) Bi bagš-aas-aa sur-san hičeel(-ig)-ee mart-san.
 1st-NOM teacher-ABL-RX learn-PST lesson-ACC-**RX** forget-PST
 ‘I forgot the lesson that I learned from my teacher.’ (Bai and Cao 2024)

If the relative subject is not coreferential with the matrix subject but is possessed by it, then RX is attached to it, as in (11). RX cannot be present on the noun modified by the relative clause, as in (12). The noun modified by the relative clause, which is possessed by the matrix subject, can host RX in the case of subject relative clauses, as in (13).

- (11) Bi bagš-in-aa zaa-san hičeel-ig mart-san.
 1st-NOM teacher-GEN-**RX** teach-PST lesson-ACC forget-PST
 ‘I forgot the lesson that my teacher taught.’
- (12) *Bi bagš-in zaa-san hičeel(-ig)-ee mart-san.
 1st-NOM teacher-GEN teach-PST lesson-ACC-**RX** forget-PST
 ‘I forgot the lesson that my teacher taught.’ (Bai and Cao 2024)
- (13) Bi hičeel zaa-san bagš(-ig)-aa mart-san.
 1st-NOM lesson teach-PST teacher-ACC-**RX** forget-PST
 ‘I forgot my teacher who taught a lesson (to me).’

These properties are summarized in (14).

(14) Distributional paradigm of RX in object NPs with (object) relative clauses

	NOM	GEN	ACC
	NP2 _i	<i>öör_i-in</i> -RX	NP1 _j
	NP2 _i	(<i>öör_i-in</i>)	NP1 _j -RX
	NP2 _i	NP3 _k -in-RX	NP1 _j
*	NP2 _i	NP3 _k	NP1 _j -RX

In the final case in which RX is used in object clauses, similar distributional properties are observed

with RX. The embedded subject *öör-in*, the genitive anaphor coindexed with the matrix subject, may or may not be overt, as exemplified in (15). When it is not overt, RX is hosted by the embedded verb, as exemplified in (16).

(15) Bagš (öör-in) buruud-san-**aa** meder-sen.
 teacher-NOM self-GEN go wrong-PST-**RX** admit-PST
 ‘The teacher admitted that he was wrong.’

(16) Bagš öör-in-**öö** buruud-san-ig meder-sen.
 teacher-NOM self-GEN-**RX** go wrong-PST-ACC admit-PST
 ‘The teacher admitted that he was wrong.’

If the embedded subject is not coindexed with the matrix subject but is possessed by it, RX is present on it, but not on the verb, as shown below.

(17) Bi bagš-in-**aa** buruud-san-ig med-sen.
 1st-NOM teacher-GEN-**RX** go wrong-PST-ACC know-PST
 ‘I realized that my teacher was wrong.’

(18) *Bi bagš-in buruud-san-**aa** med-sen.
 1st-NOM teacher-GEN go wrong-PST-**RX** know-PST
 ‘I realized that my teacher was wrong.’

These properties are summarized in (19).

(19) Distributional paradigm of RX in object clauses

	NOM	GEN	ACC
	NP1 _i	<i>öör_i-in-RX</i>	V
	NP1 _i	(<i>öör_i-in</i>)	V-RX
	NP1 _i	NP2 _j -RX	V
*	NP1 _i	NP2 _j	V-RX

We now arrive at the following conclusion. RX requires coreferentiality between the subject and the object, between the subject and the possessor contained in the object, or between the matrix subject and the subject of the embedded clause (including a relative clause and an object clause). When coreferentiality fails, RX must not be present. That is, RX is incompatible with switch reference (SR) of subjects. Let us formulate this as follows.

- (20) RX requires the coreferentiality between X, X being a subject, and Y, Y being
- an object, or
 - a possessor, or

- c. a subject (other than X), and
- d. c-commanded by X in a local domain.

As indicated by the examples discussed above, the smallest clause that contains both X and Y serves to be a local domain. That is, Y must not be licensed by a non-local subject. In (21) and (22), the RX-marked nouns are obligatorily interpreted as possessed by the embedded subject, not by the matrix subject.

(21) Baatar Bat-in muur-(ig)-**aa** üns-sen-ig har-san.
 Baatar-NOM Bat-GEN cat-ACC-**RX** kiss-PST-ACC see-PST
 ‘Baatar saw that Bat kissed his cat (= Bat’s cat).’

(22) Baatar Bat-in bagš-aas-**aa** zeel-sen nom-ig-ni unš-san.
 Baatar-NOM Bat-GEN teacher-ABL-**RX** borrow-PST book-ACC-PSS[3] read-PST
 ‘Baatar read the book that Bat borrowed from his teacher (= Bat’s teacher).’

As exemplified in (23), the RX-marked *öör* must refer back to the embedded subject.

(23) Baatar_i Dorž_j-ig öör_{i/*j}-ig-**öö** šüümjil-sen-ig har-san.
 Baatar-NOM Dorž-ACC self-ACC-**RX** criticize-PST-ACC see-PST
 ‘Baatar saw that Dorž criticized himself (= Dorž).’

If *öör* refers to the matrix subject, it must not be RX-marked but PSS-marked, as exemplified in (24).

(24) Baatar_i Dorž_j-ig öör_{i/*j}-ig-ni šüümjil-sen-ig med-ne.
 Baatar-NOM Dorž-ACC self-ACC-PSS[3] criticize-PST-ACC know-PRS
 ‘Baatar knows that Dorž criticized him (= Baatar).’

Note that in these examples, the RX-marked element must be coindexed with a local subject. In summary, RPR has the following properties.

(25) Properties of RPR with RX as its hallmark:

- a. RX resists a nominative host;
- b. RX is licensed by a local subject;
- c. RX resists and is blocked by SR.

3. Reflexive-Possessive Rule as Binding Principle A

The three properties of RX discussed above resemble three properties of English *self* in a binding context: *self* is never attached to a nominative pronoun, is combined with pronouns to form anaphors that are bound by a local subject, and cannot be bound for the second time.

- (26) NOM-resisting property: *Chris_i said [_{CP} that himself_i was appealing].
 (27) Local-binding property: John made her_i love herself_i.
 (28) Rebinding-resisting property: [_{CP} Heidi_i believes [_{DP} Martha_j's description of herself_{*i/j}]].

This suggests that RPR in Mongolian is a type of Binding Principle A. The resemblance of the NOM-resisting property and that of local-binding/licensing are quite straightforward. The following description helps to clarify the resemblance between the third property of RPR (the SR-resisting property of RX) and that of Principle A (Rebinding-resisting property of *self*). In (12), for example, SR is obtained between the subject of the relative clause and the matrix subject, which leads to the failure of RPR. This is because *hičeel* ‘lesson’ is first associated with the local subject *bagš* ‘teacher’ before the merger of the matrix verb,⁵ and then it (*hičeel*) enters into an association (possession) relation again, but with the matrix subject this time. That is, RPR applies to the same item twice, leading to ungrammaticality. Similarly in the mono-clausal sentence (6), *zahia* ‘letter’ is possessed by *naiz* ‘friend’, where RX would be licensed by *naiz*. However, after the possessive DP *naiz-in zahia* ‘friend’s letter’ is merged with the verb *unš* ‘read’, *zahia* will enter into a new possessive relation by virtue of being involved in the event of reading, which the subject initiates, and therefore it calls for RX again. However, one RX fails to go for two possessive relations at the same time. That is, *zahia*, the host of RX, fails to be interpreted as a proper possessum; in other words, the two distinct possessive relations involving the same possessum cannot be properly interpreted at LF. Consequently, the derivation crashes. As with this, in (23), *Martha* binds (*her* in) *herself*; therefore, there cannot be another NP, say, *Heidi*, to bind it. If *herself* is bound twice, the derivation crashes.

Given this, it is reasonable to say that Principle A with *self* can be viewed as a type of simplex dependence in the sense that in, for example, *John loves pictures of himself*, the subject *John* and *him* in the anaphor *him-self* are coreferential, where *self* is employed as a marker of the coreferentiality/reflexivity. In contrast, RPR is a complex dependence in the sense that in, for example, (3), *Bat* and the pronoun *öör-in* ‘own’, the genitive form of *öör* ‘self’, are coreferential, where RX is employed as a marker of the coreferentiality/reflexivity. Morphologically, *self* is always present on the pronoun, as in (29), whereas RX is present on either the reflexive pronoun (anaphor) *öör-in*, as in (4), or the possessed noun, as in (3).

- (29) John_i loves pictures of him_i-self.

For Principle A with *self*, the binder and the bindee occur simply as an antecedent, e.g., *John* in (29), and the accusative pronoun in an anaphor, e.g., *him* in *him-self*. In contrast, for RPR, the binder occurs as a nominative subject, e.g., *Bat* in (3) and (4), and the bindee occurs as the genitive pronoun *öör-in*, which is optionally present at PF. Most importantly, both the reflexive markers *self* and RX are attached only to non-nominative elements that resist rebinding and both are licensed by a local subject.

According to Kratzer (2009: 216), phi-features are transmitted from a local verbal head such as *v* to anaphors in a binding context. Reuland (2020), however, argues that binding is feature valuation, not feature transmission, that starts from Spec of TP. On this basis, with a detailed review of them left out,

Baatar_i öör_i-in nom(-ig)-**oo** mart-san.
 Baatar_i tüün_i-ne öör_i-in nom(-ig)-**oo** mart-san.
 Baatar 3SG-GEN self-GEN book-**RX** forget-PST
 ‘Baatar forget his (own) book.’

Importantly, English has what has been called an adjectival pronoun, namely, *own*,⁷ which behaves in the very same way as *öör-in*. As shown in (36), *own* must be coreferential with the preceding possessive personal pronoun and the subject, as is the case with *öör-in*. In addition, *own* can be omitted because the possessive relation can be expressed by the genitive pronoun.

- (36) John_i loves [his_i own_i pictures].
 *John_i loves [his_i own_j pictures].
 *John_i loves [his_j own_j pictures].
 *John_i loves [his_j own_i pictures].
 *John_i loves [his_j own_k pictures].

An important difference between *öör-in* and *own* lies in the fact that *öör-in* can be present in the possessive DP, with a personal pronoun such as *tüün-ne* ‘his’ absent (at PF), whereas *own*, when present, must be preceded by a personal pronoun such as *his*. This difference is arguably attributed to the parametric fact that Mongolian is a zero-determiner language much like Japanese and Chinese, whereas English is not. Importantly, the properties of *öör-in* and *own* as instantiating Principle A are not affected by this difference. The eligible sentence in (36) can be paraphrased by *John_i loves [pictures of him_i-SELF]*, in which *of himself* is functionally equivalent to *his own*, both encoding the meanings of possession and reflexivity.

Tying this with the property shared by *own* and the possessive reflexive pronominal *öör-in*, it is reasonable to say that *one’s own* is a possessive reflexive pronominal with a complex morphology. This is a challenge to a previous claim (Truswell 2014: 226, for example) that English does not have a possessive reflexive pronominal. It then turns out that what does not exist in English as previously claimed is *oneself’s* and what does exist is a possessive reflexive pronominal, namely, *one’s own*. Notice that *one’s own* is not a lexical item stored in the lexicon but a constellation of multiple lexical items.

Consequently, (36) is subject to Principle A, not to Principle B. This accounts for why such sentences give rise to the prima facie violation of Principle B. Specifically, in (37), there is an implicit possessive pronoun *own*, as illustrated in (39), which is not true in (38). In (39), the complex *his own* as a whole behaves as a possessive anaphor.

- (37) John_i loves his_i pictures.
 (38) John_i loves his_j pictures.
 (39) John_i loves his_i *own_i* pictures.

It then follows that the so-called “lexical” ambiguity of the possessive pronouns such as *his* between a

reflexive and a pronoun (Truswell 2014: 224) is in fact a structural ambiguity, as fleshed in (40) and (41). We apply the analysis presented in section 3 to *his own* as follows.

(40) [_{CP} John_i loves [_{DP} his_j [_N pictures]]]

(41) [_{CP} John_i loves [_{DP} his_i [_{DP} own_i [_N pictures]]]]

(42) Initial structure: [_{DP1} D3_[phi] [_{D1'} D2_[ref] [_{D1'} D1_[poss] [_N pictures]]]]]

Unlike the case of *his pictures*, both fusion and the VI rule apply twice throughout (42) and (43). When they apply to D3_[phi] and D1_[poss], *his* spells out their fused outcome, i.e., D_[phi, poss], as in (44), and when they apply to D2_[ref] and D1_[poss], *own* spells out their fused outcome, i.e., D_[ref, poss]. Importantly, after the application of fusion, DP becomes a layered projection, containing two D heads. The higher D takes care of personal possession, and the lower D takes care of reflexive possession.

(43) Fusion applies: [_{DP} D_[phi, poss] [_{DP} D_[ref, poss] [_N pictures]]]

(44) VI applies: [_{DP} his [_{DP} own [_N pictures]]]

Note that the features [ref] and [poss] are bundled on the lower head D, which leads to the possessive reflexive property of *own*. Valuation of [phi] takes place, and [ref] is evoked, as shown below.

(45) [_{TP} [_{vP} sbj_[phi] [_{DP} ... D_[phi, poss] ... D_[ref, poss] ... [_{NP} ...] ...] ...] ...]
↑ ↑
his own

5. Conclusion

This paper argued that RPR in Mongolian is a special kind of Principle A by showing that RPR has three important properties resembling those of Principle A. Regarding the implementation of binding, it was argued that [phi] on the D head is valued by [phi] on the subject within a local domain.

The proposed analysis has four consequences. First, anaphors are not necessarily the hallmark of binding since they can be absent at PF. Second, there are implicit possessive anaphors. Third, English *own* is a reflexive possessive pronoun (possessive anaphor), functionally equivalent to Mongolian *öör-in*, and can be absent at PF. Fourth, English possessive pronouns such as *her* are not lexically ambiguous between non-reflexive and reflexive pronouns.

It is hoped that further exploration will reveal more facts about Principle A both in Altaic languages centering on Mongolian and English-type languages on the one hand and syntactic generalizations of binding on the other hand.

NOTES

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² RX, being subject to vowel harmony, has four allophonic morphemes, *-aa*, *-ee*, *-oo* and *-öö*, which do not differ from each other syntactically and semantically.

³ The abbreviations to use in this paper include ACC: accusative, GEN: genitive, NOM: nominative,

PRS: present, PSS: possessive suffix, PST: past, and RX: reflexive-possessive suffix.

⁴ The accusative marker *-ig* is mostly not overt, without affecting the use of RX. However, for the anaphor *öör*, it must be overt.

⁵ The possessive relation signaled by RX does not necessarily entail a literal ownership; associative possession, situational possession, and alienable/inalienable possession can all be possessive relations in a broader sense.

⁶ *Fusion* here, a term of Distributed Morphology (Halle and Marantz 1993; Embick and Marantz 2008), refers to a syntactic operation that gets two (or more) nodes united into one before the application of the morphological operation VI.

⁷ In Present-Day English, *own* is often labeled “adjective”. However, it differs from stacked adjectives in many respects and displays properties of pronouns or determiners (König and Vezzosi 2008).

REFERENCES

- Anisman, Adar (2010) *Switch reference in Khalkha Mongolian*. MA thesis, SOAS University of London.
- Bai, Chigchi and Cao Rongmei (2024) “Application of the Theory of Generative Grammar in Mongolian Grammar Research,” *Social Sciences in Inner Mongolia* 44, 46-53.
- Chomsky, Noam (1995a) “Bare Phrase Structure,” *Government and Binding Theory and the Minimalist Program* (Generative Syntax 1), ed. by Gert Webelhuth, 383-439, Blackwell, Cambridge, MA.
- Chomsky, Noam (1995b) *The Minimalist Program*, MIT Press, Cambridge, MA.
- Culicover, Peter W. and Ray Jackendoff (2005) *Simpler Syntax*, Oxford University Press, Oxford.
- Davis, Colin P. B (2023) “The Unextractability of English Possessive Pronouns: On Portmanteau Formation and the Syntax-Morphology Interface,” To appear in *Syntax*.
- Embick, David, and Alec Marantz (2008) “Architecture and Blocking,” *Linguistic Inquiry* 39: 1-53.
- Guntsetseg, Dolgor (2011) “The So-called Reflexive (-Possessive) Suffix in Mongolian,” University of Stuttgart. Slides from *Workshop “The World of Reflexives”*.
- Halle, Morris, and Alec Marantz (1993) “Distributed Morphology and the Pieces of Inflection,” *The View From Building 20*, ed. by Ken Hale and Samuel Jay Keyser, 1-52, MIT Press, Cambridge, MA.
- Janhunen, Juha (2012) *Mongolian*, John Benjamins, Amsterdam/Philadelphia.
- König, Ekkehard, and Letizia Vezzosi (2008) “Possessive Adjectives as A Source of Intensifiers,” *Theoretical and Empirical Issues in Grammaticalization*, ed. by Elena Seoane, María José López-Couso and Teresa Fanego, 183-206, John Benjamins, Amsterdam/Philadelphia.
- Kullman, Rita and Dandi-Ydam, Tserenpil (2015) *Mongolian Grammar*, 5th edition, Kullnom Verlag, Switzerland.
- Kratzer, Angelika (2009) “Making a Pronoun: Fake Indexicals as Windows into the Properties of Pronouns,” *Linguistic Inquiry* 40: 187-237.
- Reuland, Eric (2020) “The Roots of Pronouns and Valuation,” https://dspace.library.uu.nl/bitstream/handle/1874/429559/The_roots_of_binding_and_valuation_p_refin_clean_.pdf?sequence=1.
- Truswell, Robert (2014) “Binding Theory,” *The Routledge Handbook of Syntax*, ed. by Andrew Carnie, Yosuke Sato, and Daniel Siddiqi, 214-238, Routledge, New York.

Two Types of Additional *Wh*-Effects and *Wh*-Construals

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1. Introduction

It is well known in the literature that *wh*-argument in Japanese is not subject to the island effects. However, there is only one exception: a *wh*-adverbial *naze* “why” respects them. I will argue that the asymmetry between *wh*-argument and *wh*-adverb *naze* follows from their different feature specification. More concretely, I will demonstrate that *naze* “why” in Japanese lacks a focus feature, while other *wh*-phrases bear *wh*- and focus features. In addition, I demonstrate that this complex feature specification makes the extraction of an ordinary *wh*-phrase from syntactic islands possible.

2. Asymmetry between *Wh*-nominals and *Wh*-adverb *Naze*

It is well known in the literature that Japanese does not exhibit complex NP and adjunct island effects, as illustrated in (1a) and (1b): that is, the *wh*-phrases within the islands can take scope over the matrix clause. The paradigm in (1c), which involves *wh*-island, is not perfect but marginally acceptable.

- (1) a. Kimi-wa [[**dare-ga** kaita] hon]-ga sukina no? (Takita and Yang (2014:214))
you -TOP who-NOM wrote book-NOM like Q
‘Who is the person x such that you like [the book [that x wrote]]?’
- b. [Syatyoo-ga **dare-o** Tookyoo-ni yattara] umaku iku no? (cf. Richards (2000:193))
[president-NOM who-ACC Tokyo-DAT send-if well go Q
‘Who the hell with things go well [if the president sends to Tokyo]?’
- c. ?? John-wa [Mary-ga **nani-o** katta kadooka] Tom-ni tazuneta no?
John-TOP Mary-NOM what-ACC bought whether Tom-DAT asked Q
‘What did John ask Tom whether Mary bought t?’ (Watanabe (1992:270))

However, there is one exception to this generalization: *wh*-questions with *wh*-adverbial *naze* exhibits the island effects. *Naze* “why” placed inside the islands cannot take matrix scope, as in (2).

- (2) a.*John-wa [NP [CP sono hon -o **naze** katta] hito]-o sagasiteru no (Saito (1994:205))
 John-TOP that book-ACC why bought person-ACC looking-for Q
 ‘Q John is looking for [the person [that bought that book why]]’
- b.*Kimi-wa [CP Mary-ga **naze** sono hon-o katta kadooka] siritai no
 you -TOP Mary-NOM why that book-ACC bought whether want-to-know Q
 ‘Q you want to know [whether Mary bought that book why]’ (Saito (1994:205))
- c.*[Syatyoo-ga Taroo-o Tookyoo-ni **naze** yattara] umaku iku no?
 [president-NOM Taroo-ACC Tokyo-DAT why send-if well go Q
 ‘Why will things go well [if the president sends Taroo to Tokyo t]?’ (Richards (2000:203))

In the following, I will attempt to explain the asymmetry we found between *wh*-nominals and *wh*-adverbs with regard to island effects.

3. Feature Specifications for *Wh*-phrases

3.1. A ban on double foci in Japanese

Before going to the main proposal of this presentation, we examine the feature specifications of *naze* and other *wh*-phrases, focusing on the bare binary combination construction and Intervention Effects in Japanese.

It is cross-linguistically observed that the ordinary *wh*-phrase and focus phrase compete for the same position (Giuliano et al. (2018)). Bare binary combination construction in (3) provide empirical evidence for this incompatibility. The right-hand elements (*Taroo*) are focused in this construction.

- (3) a. Naze Taroo? b.* Nani/dare/doko/... Taroo? (Takita and Yang (2014:218))
 why Taroo what/who/where Taroo

In (3), *naze* ‘why’ can appear in the relevant construction, while ordinary *wh*-phrases cannot in Japanese. Based on this fact, Takita and Yang (2014) argue that *naze* does not involve focus feature, while other *wh*-phrases have their own focus feature inherently.

Another argument to show that *naze* may lack the focus feature comes from Intervention Effects in Japanese. In Japanese, focus elements cannot precede a *wh*-phrase, as in (4) (Hoji (1985), Beck (1996, 2006), Tomioka (2007a,b), Giuliano et al. (2018), among others).

- (4) a.*Daremo/?* Ken-sika **nani-o** yom-ana-katta-no? (Tomioka (2007:98))
 Anyone/ Ken-only what-ACC read-NEG-PAST-Q
 ‘What did no one read?’

The source of Intervention Effects in Japanese has been controversial. Giuliano et al. (2018) claim that the intervention effects is a reflection of a more general restriction on double foci. Given this, the unacceptability of (4) would indicate that the ordinary *wh*-phrase have focus feature. However, there is only one exception of the Intervention Effects in Japanese. Unlike the case with *wh*-arguments, the

causal *wh*-phrase *naze* “why” in Japanese immune to the effects. (Miyagawa (1999), Ko (2005, 2006), among others).

- (5) * Hanako-sika [**naze** sono hon-o] kaw-anak-atta no? (Kawamura (2007:206))
 Hanako-only naze that book-ACC buy-neg-pst Q
 ‘Why that book, did Hanako read?’

Given the contrast between (4) and (5), we can conclude that the Intervention Effects disappear or at least be weakened with *naze*-question since the causal *wh naze* “why” in Japanese is not focus and does not compete for a unique position with the preceding focus elements. Taking the above discussion into consideration, I assume the following feature specification for the C and *wh*-phrases in Japanese.

(6) Feature Specification

- a. Interrogative C : [Foc] [Q] [uOp] c. *wh*-arguments : [uFoc] [uwh] [Op]
 b. Interrogative C for *naze* ‘why’ : [Q] [uOp] d. *naze* ‘why’ : [uwh][Op]

Before turning to the main proposal of the current discussion, let us confirm the assumption that our analysis capitalizes on. First, we assume that not only *wh*-adverbs but also *wh*-nominals undergo *wh*-movement to Spec CP where they take scope. I further assume that at least one *wh*-phrase must move to the sentential initial position in overt syntax to type the sentence as *wh*-interrogative. Given these assumptions, turning to the explanation on the peculiar behavior of *why*-question.

4. Proposal

4.1. Adjunct Island

As noted above, *wh*-nominals are not subject to island constraints, while the causal *wh*-adverb *naze* respects them. Let us first consider the case with adjunct island.

- (7) a. * [Syatyoo-ga Taroo-o Tookyoo-ni **naze** yattara] umaku iku no? (=2c)
 b. [Syatyoo-ga **dare**-o Tookyoo-ni yattara] umaku iku no? (=1c)

Notice here that Japanese allows long-distance in-situ *why*-questions, as in (8).

- (8) Hanako-ga [Taroo-ga **naze** kuru to] itta no? (Ko (2006:322))
 Hanako-NOM [Taroo-NOM why come C] said Q
 ‘What is the reason x such that Hanako said that Taroo will come for x?’

In (8), *naze* ‘why’ seems to move successive-cyclically via embedded spec CP to the matrix spec CP to take a wide scope. Then, the question arise here is that why *naze* in (7a) cannot move across the edge of the conditional conjunct clause. To put it another way, the edge of the adjunct clause headed by *-tara* “if” in (7a) is not available as a landing site for the successive-cyclic movement of *naze* despite the edge

Kaplan and Whitman (1995) propose CP analysis for the Japanese relative clause and argue that the relative clause in Japanese involves a relative operator movement. Following their argument, I assume the complex NPs in Japanese contain the relative operator in its specifier position of CP, as in (13).

- (13) * John-wa [NP [CP sono hon-o **naze** katta] hito] -o sagasiteru no ((=12a))
 (14) * [...__C John-wa [NP [CP Op_i C [TP [NP e_i sono hon-o **naze** katta] hito] -o sagasiteru no
 * \uparrow RM violation [Op] [Op]

Since the *wh*-operator on *naze* and the relative operator both involve Op feature, the configuration in (14) induces the RM violation. Again, in (12b), the RM violation would be resolved due to the additional focus feature on *nani* ‘what’. Thus, the sentence in (12b) is regarded as completely grammatical.

4.3. *Wh*-island

As noted above, both *wh*-arguments and *wh*-adverbs are sensitive to *wh*-islands in Japanese.

- (15) a. * Kimi-wa [CP Mary-ga **naze** sono hon-o katta ka dooka] siritai no ((=2b))
 b. ?? John-wa [Mary-ga **nani-o** katta kadooka] Tom-ni tazuneta no? ((=1b))

(15a) is completely unacceptable as a question that asks the reason *x* such that Mary bought that book for that reason *x*. In addition, unlike the case with complex NP and adjunct island, the *wh*-argument *nani-o* “what-acc” also exhibit *wh*-island effects. However, (15b) is still judged more acceptable than (15a). In this presentation, I will take the position that this asymmetry is significant enough to call for an account in this presentation. Let us consider the *wh*-island effects first. As for the *wh*-island effects, I will refer to the Activation Condition of Chomsky (Chomsky (2000, 2001)), according to which an element *X* can participate agreement relation only if it has an uninterpretable feature.

- (16) * What do you wonder [CP t_i C [IP John bought t_i (when)]]

In (16), *wh*-phrase first moves to the embedded Spec CP in order to be consistent with the Phase Impenetrability Condition (PIC) (Chomsky (2000, 2001)). Once the *wh*-phrase moves into the embedded Spec CP, its uninterpretable *wh*-feature is deleted and becomes invisible for further movement. Since the *wh*-phrase cannot move to the matrix Spec CP and check the *wh*-feature on matrix C via a agreement, the derivation in (16) would crash. The same holds for the *wh*-questions in Japanese.

- (17) a* Kimi-wa [CP Mary-ga **naze** sono hon-o katta kadooka] siritaino
 b* [CP ...C...[CP(wh-island) ...**naze** C ...[... **naze**]...]?
 * \uparrow [uWh] [Q] [uWh]
 [Op] [uOp] [uOp]

In (17), *naze* first moves to the embedded Spec CP in order to avoid the PIC violation. The

uninterpretable *wh*-feature on *naze* is checked off, and it gets inactivated. As a result, it cannot take part in a further agree relation.

On the other hand, the ordinary *wh*-phrase within the *wh*-island is marginally accepted, as in (18).

(18) ?? John-wa [Mary-ga **nani-o** katta ka dooka] Tom-ni tazuneta no? (=1c)

As noted above, unlike *naze* in Japanese, ordinary *wh*-phrases inherently bear the uninterpretable focus feature [uFoc] along with the uninterpretable *wh*-feature.

(19)

In (19), the *wh*-phrase moves into the specifier of the embedded interrogative CP, and [uwh] of the *wh*-phrase is checked off by [+Q], which is hosted by a question morpheme in an embedded head C. As a result, the *wh*-feature gets inactivated. However, unlike the case in (16), there remains the other uninterpretable feature, [uFoc], so the *wh*-phrase is still active and can participate further agreement. Therefore, it moves to the matrix Spec CP and types the clause as *wh*-interrogative.

Recall here that the matrix scope reading of *nani* is not perfect but marginal in (18). Given that the *wh*-phrase successfully move to the matrix Spec CP where it takes scope, this marginality calls for explanation. One possible account on this marginality would assume that the *wh*-phrase tends to take its scope in the position where its [uwh] is checked off: that is, the *wh*-phrase in (18) cannot be interpreted with a Q in the higher clause because its [uwh] is checked off in the embedded Spec CP. On the other hand, (21) is never construed as *wh*-interrogative. I assume here that other factor would operate independently rule out this sentence: the failure of Clausal Typing. The question with *naze* in (15a) fails to be typed as a *wh*-question at all since the *wh*-phrase cannot move to the sentential initial position.

5. Additional *wh*-effects

It has been observed that the ungrammatical sentences in (2), improve when an additional higher *wh*-phrases appear within the island.

(20) a. ?? John -wa [NP[CP **nani-o** **naze** katta] hito]-o sagasiteru no (Saito (1994:204))
 John -TOP what-ACC why bought person-ACC looking -for Q
 ‘Q John is looking for [the person [that bought what why]]’

b. ? John -wa [PP[IP Mary-ga **nani-o** **naze** katta] kara] okotteru no
 John-TOP Mary-NOM what-ACC why bought since angry Q
 ‘Q John is angry [because Mary bought what why]’ (Saito (1994:205))

- c. ?? Kimi -wa [_{CP} **dare-ga naze** sonohon- o katta kadooka] siritai no
 you -TOP who-NOM why that book-ACC bought whether want-to-know Q
 ‘Q you want to know [whether who bought that book why]’ (Saito (1994:206))

The additional *wh*-effects with *naze* show some unique properties. For instance, as demonstrated by the contrast between (21a) and (21b), additional *wh*-phrases must be located within the islands.

- (21) a. ?? John -ga [_{NP}[_{CP} **dare-ga naze** hagesiku hihansita] hon] -o sagasiteru no
 -NOM who-NOM why severely criticized book-ACC looking-for Q
 ‘Q John is looking for [the book [that who criticized severely why]]’

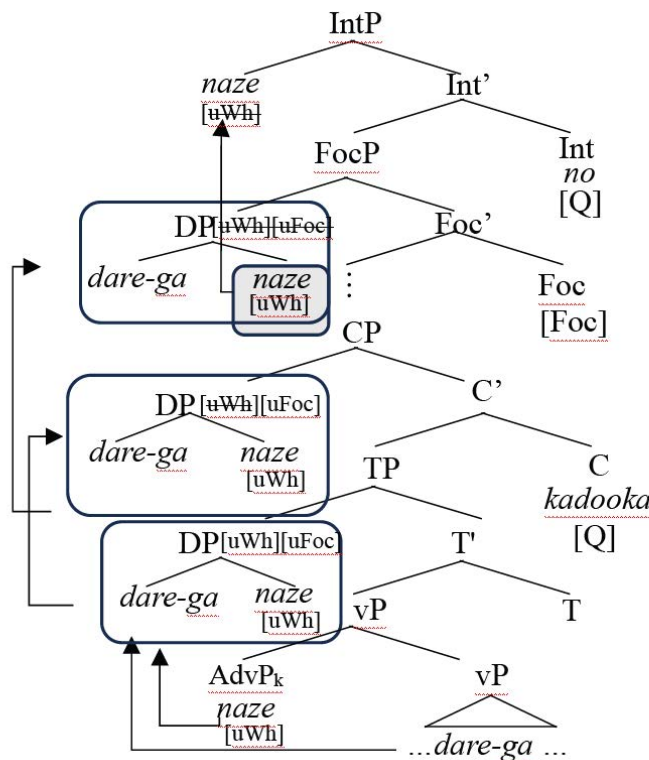
- b. * **Dare** -ga [_{NP}[_{CP} Mary-ga **naze** hagesiku hihansita] hon] -o sagasiteru no
 -NOM -NOM why severely criticized book-ACC looking for Q
 ‘Who is looking for [the book [that Mary criticized severely why]]’

(Saito (1994:236))

Saito (1994) offers the ECP-based account for the island-sensitivity of why-question and additional *wh*-effect. In what follows, I will attempt to explain the additional *wh*-effects with *naze*, relying on the Smuggling of Collins (2005a, b).

Collins propose the operation, which is so-called Smuggling. Suppose that *W* is a barrier, a phrase boundary, an intervener for the Minimal Link Condition or RM. *W* blocks a syntactic relation between *Z* and *XP*. If *YP* moves to a position c-commanding *W*, the movement enables *XP* within *YP* to move across the potential intervener *W*, i.e., *YP* smuggles *XP* past *W*.

- (22) ?? Kimi -wa [_{CP} **dare-ga naze** sono hon- o katta kadooka] siritai no



I suppose here that Japanese has a fine structure of CP and contains two C heads for licensing interrogative: one is Int for *naze* ‘why’, and the other is Foc for other *wh*-phrases.³ The syntactic derivation of (22) is as follows. In (22), a *wh*-adjunct *naze* ‘why’ is base-generated in the vP internal position and undergo covert movement to adjoin to the subject *wh dare-ga* ‘who-NOM.’ After that, this complex *wh*-phrase moves to the embedded Spec CP to avoid PIC violation, and its [uwh] is checked off by [Q] via Spec-Head agreement in this position. Since the complex *wh*-phrase has an additional uninterpretable feature ([uFoc]), it is still visible for further agreements.⁴ Then, it moves to Spec Foc, and the [uFoc] is checked off in the position. Finally, *naze* ‘why’ moves out the complex *wh*-phrase and merges into the Spec Int. As a result, the *wh*-island violation induced by *naze* is obviated via smuggling. Given the syntactic derivation in (22), the properties of the additional *wh*-effect noted above would be a natural consequence. If the additional *wh*-phrase is located outside the islands, *naze* has to move across the island in order to adjoin to the higher *wh*-phrase *dare* in (21b), which causes the island violation.

NOTES

¹ Although there is a consensus that the elements with “something more” can circumvent the RM violation, the opinion on what the “something more” is controversial. For example, Szabolcsi and Zwarts (1997) argue the richness of internal semantic structure is crucial for such a canceling effect, while D-linking is supposed to be “something more” in Cinque (1990).

² Following Rizzi’s (2004) insight, I postulate an operator class for the RM; a more general Op feature is assumed for the elements that create operator-variable relations. In other words, features that trigger operator movement belong to the same class with regard to the RM.

³ Rizzi (2001) proposes the split CP system in Italian and argues that *perché* ‘why’ is externally merged in Spec Int, whereas other *wh*-phrases move to Spec Foc. Contrary to Rizzi (2001), Shlonsky and Soare (2011) propose that why is externally merged into ReasonP, which locates lower than IntP, and moves to Spec Int. The current discussion pursues the idea of Shlonsky and Soare (2011).

⁴ It is worth noting that (22b) is not perfect for some reason. One possible explanation would be that the relevant sentence is degraded due to the anti-superiority effects, which prohibit *naze* ‘why’ to precede another *wh*-phrase in Japanese multiple *wh*-question.

REFERENCES

- Beck, Sigrid (1996) “Quantified Structures as Barriers for LF Movement,” *Natural Language Semantics* 4, 1-56.
- Beck, Sigrid (2006) “Intervention Effects Follow from Focus Interpretation,” *Natural Language Semantics* 14, 1-56.
- Benjamin, Bruening (2007) “*Wh*-in-Situ Does Not Correlate with *Wh*-Indefinites or Question Particles,” *Linguistic Inquiry* 38, 139-166.
- Bocci, Giuliano, Luigi Rizzi, and Mamoru, Saito (2018) “On the Incompatibility of *Wh* and Focus,” *Gengo Kenkyu* 154, 29-51.
- Bolinger, Dwight (1978) “Asking more than one thing at a time,” *Questions*, ed. by Henry Hiz, 107–150. Dordrecht: Springer.

- Cheng, Lisa L.-S (1991) On the typology of *wh*-questions, Doctoral dissertation, MIT Press, Cambridge, MA.
- Chomsky, Noam (1965) *Aspects of the theory of syntax*, MIT Press, Cambridge, MA.
- Chomsky, Noam (2000) “Minimalist Inquiries: The Framework,” *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by in R. Martin, D. Michaels, and J. Uriagereka, 89–156, MIT Press. Cambridge, MA.
- Chomsky, Noam (2001) “Derivation by Phase,” *Ken Hale: A Life in Language*, ed. by Michael Kenstowicz, 1–52, MIT Press, Cambridge, MA.
- Cinque, Guglielmo (1990) Types of A' dependencies, MIT Press, Cambridge, MA.
- Collins, Chris (2005) “A Smuggling Approach to the Passive in English,” *Syntax* 8 (2), 81-120.
- Collins, Chris (2006) “A Smuggling Approach to Raising in English,” *Linguistic Inquiry* 36 (2), 289-298.
- Haegeman, Liliane (2010) “The Internal Syntax of Adverbial Clause,” *Lingua* 120 (3), 628-648.
- Hoji, Hajime. (1985) Logical Form Constraints and Configurational Structures in Japanese, Doctoral dissertation, University of Washington.
- Ishii, Yasuo (1991) *Operators and Empty Categories in Japanese*, Doctoral dissertation, University of Connecticut.
- Irurtzun, Aritz (2021) “Why Questions Break the Residual V2 Restriction (in Basque and Beyond),” *Why is ‘Why’ Unique? Its Syntactic and Semantic Properties* ed. by Gabriela, Soare, 63-113, Mouton De Gruyter.
- Kensuke, Takita, and Barry Chung-Yu Yang (2014) “On Multiple *Wh*-Questions with ‘Why’ in Japanese and Chinese,” *Japanese Syntax in Comparative Perspective*, ed. by Saito, Mamoru, 206-227, Oxford University Press, New York.
- Keplan, Tamar and John B. Whitman (1995) “The Category of Relative Clauses in Japanese, with Reference to Korean,” *Journal of East Asian Linguistics* 4, 29-58.
- Kim, Shin-Sook (2002) “Intervention effects are focus effects,” *Japanese/Korean Linguistics* 10, 615–628.
- Ko, Heejeong (2005) “Syntax of *why*-in-situ: Merge into [Spec, CP] in the overt syntax,” *Natural Language and Linguistic Theory* 23 (4), 867–916.
- Ko, Heejeong (2006) “On the structural height of reason *wh*-adverbials: Acquisition and consequences,” *In Wh-movement moving on*, ed. by Lisa Lai-Shen Cheng and Nobert Corver, 319–349, MIT Press, Cambridge, MA.
- Kuwabara, Kazuki (1998) “Overt *Wh*-movement and Scope-Fixing Scrambling: A Preliminary Study’, *Report (2) Researching and Verifying an Advanced Theory of Human Language*, ed. by K, Inoue, 115–127, Kanda University of International Studies, Chiba.
- Miyagawa, Shigeru (1999) “Reconstruction and “ECP” effects”, ms., MIT, Cambridge, MA.
- Richards, Norvin (2000) “An Island Effect in Japanese,” *Journal of East Asian Linguistics* 9, 187-205.
- Rizzi, Luigi (2001) “On the Position of “Int(errogative)” in the Left Periphery of the Clause,” *Current Studies in Italian Syntax*, ed. by Guglielmo Cinque and Giampaolo Salvi, 287-296, Amsterdam: Elsevier.

- Rizzi, Luigi (2004) "Locality and Left Periphery," *Structures and Beyond: The Cartography of Syntactic Structures*. Vol. 3, ed. by Adriana Belletti, 223–252, Oxford University Press, Oxford.
- Saito, Mamoru (1994) "Additional *Wh*-Effects and the Adjunction Site Theory," *Journal of East Asian Linguistics* 3, 195-240.
- Shimoyama, Junko (1999) "Internally Headed Relative Clauses in Japanese and E-Type Anaphora," *Journal of East Asian Linguistics* 8, 147–182
- Shlonsky, Ur and Gabriela, Soare (2011) "Where's 'Why'," *Linguistic Inquiry*, 42 (4), 651–669.
- Starke, Michal (2001) *Move Dissolves into Merge: A Theory of Locality*, Doctoral dissertation, University of Geneva.
- Szabolcsi, Anna, and Frans Zwarts (1997) "Weak islands and an algebraic semantics for taking scope," *Ways of scope taking*, ed. by Anna Szabolcsi, 217-262, Kluwer Academic Publishers.
- Tomioka, Satoshi (2007a) "Intervention Effects in Focus: From a Japanese Point of View," From a Japanese perspective. In *Potsdam working papers in linguistics: Proceedings from workshop on prosody, syntax, and information 2*, ed. by Shin-ichiro Ishihara, 97–117. Potsdam: Universitätsverlag Potsdam.
- Tomioka, Satoshi (2007b) "Pragmatics of LF Intervention Effects: Japanese and Korean *Wh*-Interrogatives," *Journal of Pragmatics* 39, 1570-1590.
- Watanabe, Akira (1992) "Subjacency and S-structure Movement of *Wh*-in-situ," *Journal of East Asian Linguistics* 1, 255-291.

**Contextually Determined Last Resorts:
A View from English *Do*-Support and French *C'est*-Cleft***

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Keywords : last resort, *do*-support, cleft, focus

1. Introduction

This study revisits the nature of the “last resort (LR)” in natural languages (NL) from the cross-linguistic perspective and attempts to re-define it, by analyzing English *do*-support and French *c'est*-cleft, both of which may or may not be used as an LR strategy, depending on environments where they appear. The term “last resort,” originally coined by Chomsky (1986), states that all transformations must be formally forced (e.g. movement driven by the need for case checking). The emergence of (Early) Minimalist Program (MP; cf. Chomsky (1995)) further reinforced the LR view of syntactic operations. Since the term was coined, many constructions and movements have been stated as LRs or non-LRs. English *wh*-movement, for example, is obligatory, for the Q-feature-valuation (Chomsky (1995)); Japanese scrambling, on the other hand, is basically optional. The non-application of scrambling does not affect the grammaticality of sentences (so that both SOV and OSV orders are acceptable), so one can see no evidence for any grammatical constraint forcing this operation to occur.

The notion of Free Merge (FM), which appeared later (e.g. Chomsky (2004, 2013)), in principle allows “free” applications of the UG-based operation, i.e. Merge. There may be operations without which derivations would crash, but Merge itself is considered to be not motivated by any grammatical requirement. In the FM system, the notion of LR is not easily maintainable, since LR strictly treated in the current system would necessarily state that derivations themselves are forced by certain formal inadequacy (cf. Bošković (2011)), but the spirit of MP disfavors the alleged existence of a superfluous condition in the derivational level.

Given the dilemma stated above, this study revises the notion of LR in the way in which it is evaluated contextually, each morpho-syntactic operation being able to consider the result of its application. This treatment of LR goes relatively well with the current MP, where the “obligatoriness” of a certain operation is nothing more than a “hindsight” (see above). The contextual approach to LR established here is argued to be able to finely capture constructions in various languages which, though identical in form, change meanings depending on environments where they appear. The environment-sensitive semantics instantiated by the phenomena considered in this paper would be hard to capture if LR were defined dichotomously.

2. Theoretical Settings

As Chomsky (1986: 201) puts it, the original effect of LR was that it “bars Case-marked trace.” Chomsky (1995) extended LR to cover all types of movement, which characterizes the framework of the early MP. The notion of LR treated in this way, however, lost its status in the FM framework. Considering the problems of the earlier versions of LR, I (re-)define LR in the following way:

- (1) **Definition:** “Last resort” operations are operations without which derivations would crash and the resulting sentences would be unacceptable.

The novel definition of LR given in (1) is more flexible than previous versions in that it enables us to treat a certain construction to be used as an LR in some cases and not in other cases. Essentially, this means that constructions which change their grammatical status depending on environments where they appear can be analyzed in a unified way, not by the mere stipulation that they are homonymous constructions. A question arises here: given that an identical strategy can be either employed as an LR or as a “free option,” what difference is there between the two cases? In order to answer this question, the current study concerns two grammatical strategies (namely, English *do*-support and French *c’est*-cleft) which may or may not be used as an LR, and establishes the following generalization:

- (2) **Generalization on LR:** A strategy is semantically weaker in relevant senses when used as an LR than when it is not.¹

3. English *Do*-Support

3.1. Basic Observations

English *do*-support is generally considered as an instance of LR. *Do*-insertion in (3a) is widely analyzed as a “repair” strategy forced by the unavailability of affix-hopping (cf. Chomsky (1957)). Importantly, (3b), the *do*-less version of (3a), is ungrammatical in present-day standard English (PDSE), which means that *do*-support is by no means optional in this particular case. On the other hand, the use of *do* is optional in environments like (4).

- (3) a. You **do** not look pale today. b. *You not look pale today. c. *You look not pale today.
- (4) You **do** look pale today, but you should finish the work anyway.

Given (3) and (4), where it is observed that the obligatoriness/optionality of *do*-insertion varies depending on contexts, it can be argued that the (non-)LR-hood of *do*-insertion is not induced by the intrinsic property of *do* but is contextually determined in the environments where it is employed.

Crucially, the LR *do* and optional *do* have different semantic status; while the optional *do* adds some focal meaning (e.g. concessive focus in (4)), the LR *do* (3a) is semantically vacuous. From (3)-(4), one can say that the LR *do* does not convey focal meanings that would be present in non-LR cases. It can then be claimed that *do*-support “loses” its emphatic meanings when it is used as an LR, thus conforming to the generalization given in (2). The observations here amount to the generalization in (5).

(5) **Generalization on *do*-support:** Optional *do* conveys some focal meaning, while LR *do* does not.

3.2. *Don't Be* Puzzle

A potentially controversial example to the generalization in (5) is (6a). Since *do* in (6a) does not convey any focal meaning seen in (6d) and the use thereof is obligatory, one is tempted to state that (6a) is a subcase of the LR use of *do*. Indeed, (6b) and (6c), whose intended meaning is the same as (6a), are both ungrammatical as imperatives in PDSE.

- (6) a. **Don't** be shy. b. *Aren't shy. c. *Be not shy. (Jary & Kissine (2014: 35))
 d. **Do** be ambitious.

Interestingly, the sequences *aren't* and *be not* observed in (6b-c) are not themselves problematic, as (7a-b) show. If PDSE does allow them in principle, what does the obligatoriness of the *do*-insertion in (6a) result from? What is more, the *don't be* pattern is unacceptable in declarative sentences, as in (7c).

- (7) a. You aren't shy. b. I order that you be not shy. c. *You **do** not be shy. (*int*: "You are not shy.")

Notice that, given (7a-b), the *do*-insertion in (6a) is different from that in (3a). *Do*-support in (3a) is generally analyzed as caused by the unavailability of affix-hopping due to the presence of an intervening projection (NegP) between TP and vP (e.g. Pollock (1989)). In other words, *do* is morphologically inserted in (3a) as a "repair" strategy because PDSE does not admit either of (3b-c). The explanation of this kind, however, cannot be directly extended to negative imperative cases (6a). This is so, because infinitive *be* can successfully attach to *not* in non-imperative environments, as shown in (7b). Inflected *be* is generally assumed to be located in T⁰, so affix-hopping should not be needed in the case of inflected copulas, which is the exact reason for the absence of *do*-support in (7a).

Given the discussion above, one cannot attribute the obligatoriness of *do*-insertion in negative imperatives (6a) to the same effect as is assumed for more uncontroversial cases as in (3a). Hereafter, I call this mystery the "*don't be* puzzle (DBP)." In the remainder of this section, I attempt to solve the DBP and argue that it actually does not count as a counterexample to the generalization in (5).

Before examining why the *don't be* pattern is coerced in PDSE, the consideration of other potential possibilities is in order. First, consider the finite form in (6b), which would be acceptable, if the copula underwent V-to-T movement for inflection, *not* being incorporated into it, just as in the minimally different declarative sentence in (7a).

The unavailability of the configuration in (6b) in imperatives can be attributed to the semantic difference between the inflected copulas and the non-finite *be*. Becker (2004) points out that, while the non-finite *be* accompanied by *do(n't)* in (8a) conveys the "inchoative" (or future-oriented) meaning, the finite form in (8b) forces the non-inchoative, habitual interpretation; "*is isn't be*," to borrow Becker's words.

- (8) a. Why **don't** you be my friend? b. Why **aren't** you my friend? (Becker (2004: 404))

As is illustrated above, the use of the form *are* necessarily leads to the non-inchoative, habitual reading. Since imperatives generally demand that an addressee take a specific action at some time in the future, the unavailability of the present form *are* in imperatives (6b) can be attributed to the contradiction in tense interpretation provoked by *are*.

Next, consider the unavailability of non-finite forms without *do* in negative imperatives. The unacceptability of the sequence *be not* in negative imperatives (6c) is unexpected, for the relevant configuration is acceptable in non-imperative contexts (7b). Moreover, unlike in (6b), infinitive *be* does not produce any semantic violation, given that it is future-oriented.

To address this puzzle, some morpho-syntactic considerations are in order. As is pointed out by Potsdam (1998), negative imperatives and negative interrogatives—albeit similar in form—do not always behave in the same way; while in negative imperatives it is impossible to put the subject between *do* and *not* as in (9a), in negative interrogatives it is possible (9b).

- (9) a. *Do somebody not desert me! b. Do you not like dogs? (Potsdam (1998: 372, 358))

The data in (9a-b) suggest that, in imperatives, *not* must be cliticized (or affixed) to *do* and thus must not be “separated” from *do*. Matsumoto (2011) accounts for the data by assuming that there is no NegP in negative imperatives, unlike in negative interrogatives. One can technically implement his idea by adopting Epstein et al.’s (2016) External Pair Merge (EPM). Here, it is proposed that *do* and *not* in negative imperatives are merged by head-to-head adjunction and form the <T, Neg> amalgam without projecting NegP, as in: [_{<T, Neg>} [T do] [_{Neg} not]]. If this operation is necessary to form negative imperatives, it is no longer wonder that *not* is obligatorily affixed to *do* and cannot be separated from it in negative imperatives. Potentially relevant here is Li & Oda (2023)’s account of the grammaticalization of *I mean* by D-to-V head adjunction. Importantly, they argue for the possibility of EPM as a path of grammaticalization in general. Given this, English *don’t* in negative imperatives can also be treated as a grammaticalized form dedicated to expressing the prohibitive meaning, which is realized by EPM.

Interestingly in this context, one can see the parallelism between *don’t* in negative imperatives and *can’t* expressing inability. While *cannot* expresses the inability/impossibility of doing something, *can not* expresses the ability/possibility of not doing something. Importantly, only in the former case is *not* obligatorily affixed to *can* (as is obvious from the orthography). *Don’t* can be analyzed similarly; in declaratives and interrogatives, the affixation of *not* to *do* is optional, but in imperatives it is obligatory. The fact that only certain environments (i.e. negative imperatives) require the affixation follows from the assumption that *don’t* has been reanalyzed as a prohibitive marker in the history of English.

While the proposal developed above, where *don’t* is analyzed as a now inseparable, grammaticalized prohibitive marker, directly accounts for the fact that the occurrence of *don’t* in negative imperatives is mandatory even if the negated verb is *be*, the assumption that *not* must be affixed to some verbal element in negative imperatives redundantly explains the unavailability of *be not* in negative imperatives (6c). Since *be* in PDSE does not have a contracted form like **ben’t*, the affixation of *not* to *be* is morphologically blocked. It can thus be conjectured that, in negative imperatives, where *not* must be affixed to something, *do* is inserted so as to provide a place for *not* to attach to. The elegance of the

account of the obligatoriness of *do*-support in negative imperatives given above lies in the unified treatment of *do*-support in imperative and other environments, both of which being LR operations forced by some morphological requirement. Since *do* in negative imperatives does not convey any focal meaning, the account developed here assures that it falls under the generalization in (5).²

Note that the above account predicts that, where *not* can attach to *be*, there is no need to insert *do* to provide a host of affixation. From a diachronic perspective, this prediction is borne out. See the contracted finite *ben't* (10a) and a *be-not*-type negative imperative (10b), both of which are taken from Jane Austen's (1775-1817) novels (Modern English).

- (10) a. Please, ma'am, master wants to know why he **ben't** to have his dinner? (*The Watsons*)
 b. **Be not** alarmed, Madam, on receiving this letter. (*Pride and Prejudice*)

4. French *C'est*-Cleft

4.1. Basic Observations

In French, as shown below, an answer to a subject *wh*-question must be formed as a cleft sentence (11-A2), if one is to reply to the question in a full sentence. Importantly, this cleft, unlike in other environments, does not express any focal meanings like exhaustivity, so that the second sentence in (11-A2) does not lead to the serious contradiction. In contrast, an object *wh*-question is generally answered by a canonical non-cleft sentence (12-A1); the use of cleft (12-A2) in this situation leads to the conveyance of exhaustivity, just like in English. The exhaustivity-cancelling in the latter part of (12-A2) leads to the contradiction, unlike in (11-A2).

- | | |
|--|--|
| (11) Q: Qui est arrivé ?
who is arrived
"Who arrived?" | A1: #Pierre est arrivé.
Pierre is arrived
"Pierre arrived." |
| A2: C'est Pierre qui est arrivé.
it-is Pierre who is arrived
"It's Pierre who arrived." | ...Et Marie est aussi arrivée.
and Mary is also arrived
"And Mary also arrived." |
| (12) Q: Qu'est-ce que tu as mangé ?
what-is-it that you have eaten
"What did you eat?" | A1: J'ai mangé un gâteau.
I-have eaten a cake
"I ate a cake." |
| A2: C'est un gâteau que j'ai mangé. #...Et j'ai aussi mangé une brioche.
it-is a cake that I-have eaten and I-have also eaten a brioche
"It is a cake that I ate." | "And I also ate a brioche." |

The purposes of the current section are: (i) to give a formal account of the subject/object asymmetry observed in (11)-(12), exploring peculiarities of French subjects and verbs (Section 4.2) and (ii) to argue that French *c'est*-cleft as an answer to a subject *wh*-question (11-A2) is an LR strategy, just like English *do*-support in interrogative environments (Section 4.3).

4.2. Peculiarities of French Subjects and Verbs

First, consider the lack of inverse scope in declaratives. In French, canonical SVO sentences as in (13a) do not permit inverse scope, unlike in English (13b). Note that, in English too, topicalized (13c) and *wh*-fronted (13d) elements do not generally allow lower elements to take a wider scope than them (cf. Mizuguchi (2014)).

- (13) a. Quelqu'un aime tout le monde.
 someone loves all the world
 "Someone loves everyone." (SOME > EVERY, *EVERY > SOME)
- b. Someone loves everyone. (SOME > EVERY, EVERY > SOME)
- c. ?As for someone, he or she loves everyone.³ (SOME > EVERY, *EVERY > SOME)
- d. Who loves everyone? (WHO > EVERY, *EVERY > WHO)

Singlish allows agreement drop. Importantly, sentences with full agreement (14a) permit inverse scope just as Standard English (13b), while agreement-less sentences (14b) do not.

- (14) a. Someone **loves** everyone. (SOME > EVERY, EVERY > SOME)
- b. Someone **love** everyone. (SOME > EVERY, *EVERY > SOME)

Fronted topics (13c) and *wh* (13d) are generally assumed to be in the C-domain. Lee (2022) argues that, in Singlish agreement-less sentences like (14b), subjects serve as topics, which are located in the C-domain. Given these assumptions, a possible generalization is that elements in the C-domain disallow inverse scope over them. Considering this generalization, the unavailability of inverse scope in French canonical sentences (13a) can be taken as indicating that French subjects are in the C-domain.

Next, consider the subject/object asymmetry in clitic left-dislocated (CLLD) constructions. CLLD is basically used as a topicalization device if applied to non-subjects (15a), but it can convey contrastive focus if applied to subjects (15b). Crucially, while the use of an object CLLD (15a) as an answer to an object *wh*-question (e.g. "Who did you see?") is never possible, a subject CLLD (15b) is marginally acceptable as an answer to a subject *wh*-question like "Who left?" in daily conversations (cf. De Cat (2007: 22-23)). The subject/object asymmetry in the behaviors of CLLD follows from the assumption that French subjects serve as topics in their canonical position, which cannot be further topicalized.

- (15) a. Pierre_i, je l_i'ai vu. b. Pierre_i, il_i est parti.
 Pierre I him-have seen Pierre he is left
 "As for Pierre, I saw him." "Pierre (but no one else) left."

Lastly, consider the verb position. Schifano (2018) claims that French finite verbs undergo head movement beyond the verbal domain. As crucial evidence, in French (16a), unlike in other Romance languages like Italian (16b), finite verbs obligatorily precede sentential adverbs. Importantly, the distributional pattern in (16a) is reproduced in subject *wh*-questions (17).

- (16) a. Antoine { confond probablement / *probablement confond } le poème
 Antoine confuses probably probably confuses the poem
 avec un autre. [French] (Schifano (2018: 63))
 with a other
 “Antoine is probably confusing the poem with another.”
- b. Gianni { *confonde probabilmente / probabilmente confonde } questa poesia
 Gianni confuses probably probably confuses this poem
 con un’ altra. [Italian] (*ibid.*: 8)
 with a other
 “Gianni probably confuses this poem with another.”
- (17) Qui { confond probablement / *probablement confond } le poème avec
 who confuses probably probably confuses the poem with
 un autre ? (cf. (16a))
 a other
 “Who is probably confusing the poem with another?”

Given the general assumption that French subject *wh* and its agreeing verb appear in the C-domain, the parallel behavior of declarative (16a) and interrogative (17) verbs regarding the linear order compared to adverbs can be interpreted as evidence that French verbs raise to the C-domain, even in declarative sentences.

Given the arguments that (i) French subjects are topics and that (ii) French subjects and finite verbs are in the C-domain, it can be argued, in cartographic terms, that French subjects are in Spec,Top(ic)P in Rizzi’s (1997) terminology ([_{TopP} Subject [_{Top}’ [_{Top} Verb...]).

4.3. LR Use of *C’est*-Cleft

So far, we have argued that French canonical subjects move into the C-domain and are interpreted as topics. However, topics are unavailable as answers to *wh*-questions, as shown in (18a-d). What is asked in *wh*-questions and the corresponding parts in answers are foci, which sharply contrast with topics. Marking asked elements as topics leads to the violation of Question-Answer Congruence (QAC).

- (18) a. [What]_{Focus} did you eat? —I ate [the apple on the table]_{Focus}.
 b. [What]_{Focus} did you eat? —#As for [the apple on the table]_{Topic}, I ate (it).
 c. Anata-wa donata desu-ka? —Watashi- {**wa**/#ga} Tanaka-desu. [Japanese]
 you-TOP who POL-Q I- {TOP/NOM} Tanaka-POL
 “Who are you?” “I am Tanaka.”
 d. Tanaka-san-wa donata-desu-ka? —Watashi- {#wa/**ga**} Tanaka-desu.
 Tanaka-Mr.-TOP who-POL-Q I- {TOP/NOM} Tanaka-POL
 “Who is Mr. Tanaka?” “I am Tanaka.”

Crucially, in French, just the same kind of implausibility produces, if you use non-cleft sentences as

answers to subject *wh*-questions (11-A1). The oddness of (11-A1) follows from the current assumption that French canonical subjects serve as topics; (11-A1) is barred because it does not satisfy QAC, just as the implausible answers in (18b, d). Note that the usage of cleft in the answer to a subject *wh*-question in French (11-A2) falls under my definition of LR (1), since the non-use of cleft (i.e. the use of a non-cleft sentence (11-A1)) leads to the crucial pragmatic implausibility and the use of cleft (11-A2) is, in this particular case, obligatory. More specifically, the use of cleft in (11-A2) is an LR strategy to satisfy QAC, which, in this case, does not convey strong focal meanings such as exhaustivity, unlike in other environments. Thus, a generalization regarding the uses and meanings of *c'est*-cleft is:

(19) **Generalization on *c'est*-cleft:** LR *c'est*-cleft does not convey strong focus (e.g. exhaustivity), which may be present in environments where their occurrence is optional.

Notice that (19) too falls under the generalization in (2) essentially stating that LR is semantically weak. In this way, French *c'est*-cleft and English *do*-support can be analyzed in a unified way, both of which weaken (or lose) their otherwise present focal meanings in LR environments.

5. LR and “Look Ahead”

It is a common practice to assume that cleft is derived by some other base form undergoing focus movement (e.g. Lambrecht (2001), Belletti (2005) for French). If this is right, the contextual approach to LR established in the previous sections necessarily induces “look-ahead (LA)” in the course of derivation. Let me be clear. Suppose that, in the course of the derivation of an answer to a subject *wh*-question, the following (all-focus-like) configuration is formed: (*C'est que*) *Pierre est arrivé* ((it-is that) P. is arrived), which is plausible, given the agreement pattern observed in French cleft (see Hiraiwa & Ishihara (2012), Akmajian (1970) for hints from other languages). At this stage, there are basically two options: (i) to use a canonical operation, in which case *Pierre* becomes Topic, and (ii) to apply focus movement, in which case *Pierre* serves as Focus. Considering the two options (i)-(ii) and their potential consequences in the course of the derivation reveals that, for the derivation not to crash, (ii) is necessary, since (i) would lead to the QAC-violation. Crucially, in the computation system assumed here, potentially possible operations and their results can be—and must be—taken into account in the course of derivations, LR being treated as an obligatory option for avoiding derivational crashes. LA is generally considered to be problematic, since it does not only considerably increase the computational complexity but also “breaks” the modularity of NL in a sense (cf. Chomsky 2021, 2024). Nevertheless, claims of this kind are only theoretically driven and not empirically grounded. If NL does have the LA property, discarding it because of its theoretical complexity would be absurd, since “[c]hoice of a simplicity measure is [...] an empirical matter” (Chomsky (1965: 38)). Importantly, a form of LA does exist anyway in NL; for example, Bošković (2002) observes LR *wh in situ* for avoiding sequences of homophonous *wh*-words in Serbo-Croatian. If LA-type LR does exist in NL anyway, there is no need to postulate that it does not; after all, No Tampering Condition (e.g. Chomsky (2005)) may itself be a superfluous condition, which is essentially against the spirit of simplicity. That said, if LA could consider potential operations in any level, that would complicate computations in an unbounded way. Therefore,

there needs to be some “limit.” Here, I speculate that LA takes place only in the phase level (and this is true in the cases we have explored), but this must be tested from wider perspectives in future work.

6. Conclusion

This study revisited and revised the notion of LR from crosslinguistic perspectives. In the contextual treatment of LR established in this paper, a given strategy may or may not be used as an LR, depending on environments where they appear, *contra* the traditional, “stative” view of LR. The generalization proposed in this work is that a strategy is semantically weaker when used as an LR than when it is not. As case studies, this study analyzed English *do*-support and French *c’est*-cleft, both of which conform to the above generalization. As a theoretical matter, the contextual treatment of LR implies that LA is actually possible in NL, *contra* the strictly Markovian model suggested in Chomsky (2021, 2024), a.o..

* This study is based on my BA thesis submitted to the University of Tokyo in January 2023. I thank Hiromune Oda, Jiro Inaba and Jun-ya Watanabe for supervising the work. I also thank the audience at Encouraging Workshop on Formal Linguistics 7, the 166th meeting of the Linguistic Society of Japan, and the 17th International Spring Forum of the English Linguistic Society of Japan for useful comments.

NOTES

¹ An anonymous reviewer asked: how “weak” is LR? A short answer is: that depends on strategies. English *do*-support is meaningless in LR environments; French *c’est*-cleft retains weak focus (i.e. focus of new information) in LR cases. From a diachronic perspective, it is speculated that the extent of “weakening” depends on what they are substituted for in the process of grammaticalization; English *do*-support is essentially a repair strategy to “compensate” for the loss of the semantically vacuous V-to-T movement (e.g. Biberauer & Roberts (2008)), while French *c’est*-cleft is linked with the disappearance of flexible phonology expressing strong focus (e.g. Gamillscheg (1957: 563); Wehr (2005: 368-370)).

² Note that the current approach to the DBP can be extended to the perfect *have*, which also exhibits the *don’t be* effect (e.g. *Don’t have eaten all the food before we arrive.* (Jary & Kissine (2014: 35))).

³ (13c) seems to be impossible for some speakers. However, native speakers will agree that, to the extent that (13c) is acceptable, its only interpretation is SOME > EVERY, not EVERY > SOME.

REFERENCES

- Akmajian, Adrian (1970) “On Deriving Cleft Sentences from Pseudo-Cleft Sentences,” *Linguistic Inquiry* 1, 149-168.
- Becker, Misha (2004) “*Is isn’t be*,” *Lingua* 114, 399-418.
- Belletti, Adriana (2005) “Answering with a Cleft: The Role of the Null Subject Parameter and the VP Periphery,” *Proceedings of the XXX Incontro di Grammatica Generativa*, 63-82.
- Biberauer, Theresa and Ian Roberts (2008) “Subjects, Tense and Verb-Movement in Germanic and Romance,” *Cambridge Occasional Papers in Linguistics* 3, 24-43.
- Bošković, Željko (2002) “On multiple *Wh*-Fronting,” *Linguistic Inquiry* 33, 351-383.
- Bošković, Željko (2011) “Last Resort with Move and Agree in Derivations and Representations,” *The Oxford Handbook of Linguistic Minimalism*, ed. by Cedric Boeckx, 327-353, Oxford University

- Press, Oxford.
- Chomsky, Noam (1957) *Syntactic Structures*, Mouton de Gruyter, The Hague.
- Chomsky, Noam (1965) *Aspects of the Theory of Syntax*, MIT Press, Cambridge, Mass..
- Chomsky, Noam (1986) *Knowledge of Language: Its Nature, Origin, and Use*, Praeger, New York.
- Chomsky, Noam (1995) *The Minimalist Program*, MIT Press, Cambridge, Mass..
- Chomsky, Noam (2004) “Beyond Explanatory Adequacy,” *Structures and Beyond: The Cartography of Syntactic Structures* (vol. 3), ed. by Adriana Belletti, 104–131, Oxford University Press, Oxford.
- Chomsky, Noam (2005) “Three Factors in Language Design,” *Linguistic Inquiry* 36, 1-22.
- Chomsky, Noam (2013) “Problems of Projection,” *Lingua* 130, 33-49.
- Chomsky, Noam (2021) “Minimalism: Where Are We Now, and Where Can We Hope to Go,” *Gengo Kenkyu* 160, 1-41.
- Chomsky, Noam (2024) “The Miracle Creed and SMT,” *A Cartesian Dream: A Geometrical Account of Syntax in Honor of Andrea Moro*, ed. by Matteo Greco and Davide Mocci, 17–39, Lingbuzz Press.
- De Cat, Cécile (2007) *French Dislocation: Interpretation, Syntax, Acquisition*, Oxford University Press, Oxford.
- Epstein, Samuel, Hisatsugu Kitahara, and Daniel Seely (2016) “Phase Cancellation by External Pair-Merge of Heads,” *The Linguistic Review* 33, 87-102.
- Gamillscheg, Ernst (1957) *Historische französische Syntax*, Niemeyer, Tübingen.
- Hiraiwa, Ken and Shinichiro Ishihara (2012) “Syntactic Metamorphosis: Clefts, Sluicing, and In-Situ Focus in Japanese,” *Syntax* 15, 142-180.
- Jary, Mark and Mikhail Kissine (2014) *Imperatives*, Cambridge University Press, Cambridge.
- Lambrecht, Knud (2001) “A Framework for the Analysis of Cleft Constructions,” *Linguistics* 39, 462-516.
- Lee, Si Kai (2022) “On Agreement-Drop in Singlish: Topics Never Agree,” *Glossa* 45.
- Li, Siyu and Hiromune Oda (2023) “Structural Reduction of Parenthetical *I Mean* at an Intermediate Stage of Grammaticalization,” *Proceedings of the 166th meeting of the Linguistic Society of Japan*, 192-198.
- Matsumoto, Yosuke (2011) “On the Syntactic Change of Imperatives in the History of English,” *IVY* 44, 59-81.
- Miyagawa, Shigeru (1997) “Against Optional Scrambling,” *Linguistic Inquiry* 28, 1-25.
- Mizuguchi, Manabu (2014) “Phases, Labeling, and *Wh*-Movement of the Subject,” paper presented at the 32nd Conference of the ELSJ.
- Pollock, Jean-Yves (1989) “Verb Movement, Universal Grammar and the Structure of IP,” *Linguistic Inquiry* 20, 365-424.
- Potsdam, Eric (1998) *Syntactic Issues in the English Imperative*, Garland, New York.
- Rizzi, Luigi (1997) “The Fine Structure of the Left Periphery,” *Elements of Grammar: Handbook of Generative Syntax*, ed. by Liliane Haegeman, 281–337, Springer, Dordrecht.
- Schifano, Norma (2018) *Verb Movement in Romance*, Oxford University Press, Oxford.
- Wehr, Barbara (2005) “Focusing Strategies in Old French and Old Irish,” *Opening Windows on Texts and Discourses of the Past*, ed. by Janne Skaffari et al., John Benjamins, Amsterdam, Philadelphia.

A Search-Based Treatment of Adjuncts*

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Keywords : adjuncts, Search, θ -marking as agreement, immediate Transfer

1. Introduction

Chomsky's (2021: 18) Duality of Semantics dictates that "EM is associated with θ -roles and IM with discourse/information-related functions." Furthermore, Chomsky (2023: 7, note 16) "put aside adjuncts and such elements as modals, auxiliaries, left-periphery sites, etc., perhaps properly analyzed as features of C, v, scattered in various ways in Externalization." In this context, we are led to the question of how an adjunct, which has generally been assumed not to be assigned any θ -role, can be analyzed under the current syntactic framework. In this paper, we put forward the following four main hypotheses:

- (1) Adjuncts, which are introduced via FormSet (cf. Chomsky (2023)), have an uninterpretable feature which is related to categorial selection.
- (2) θ -marking is achieved by agreement between a θ -assignor and a syntactic object.
- (3) High adjuncts functioning as a probe can be in principle transferred as soon as their uninterpretable feature is eliminated, thereby identifying their modifiee. (cf. Raposo (2002))
- (4) Non-finite adjuncts in which a PRO exists cannot be immediately transferred to be a target of FormCopy (cf. Chomsky (2021)).

Hypothesis (1), which is the most important one in the present paper, is based on the fact that the category of a modifiee is determined depending on that of a modifier; what adjectives modify is nominals, while what adverbials modify is verbs, sentences, and so on. The hypothesis in (2) is not compatible with Chomsky's (2021) view of θ -roles mentioned above, but there have been proposals along this line (e.g., Kuroda (1988)). How the other two hypotheses work will be described in what follows, but we hasten to add that PRO in (4) does not have any theoretical significance. Rather, it will be revealed that the operation FormCopy or the like plays a key role in the system proposed here. This paper will constitute an argument for the current conception of control.

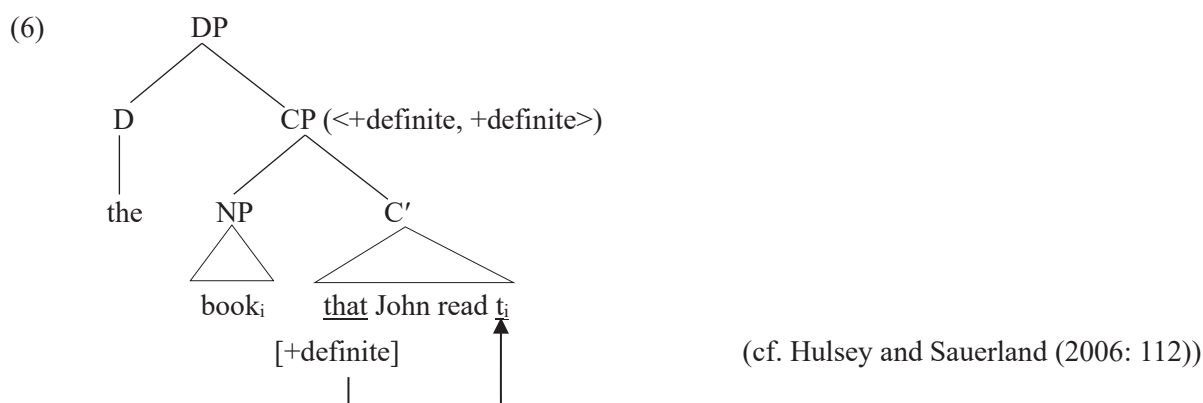
2. Adjuncts as a Probe

Let us take relative clauses as an instance of adjuncts. Perlmutter (1970) observes that the definite

article attached to a head noun crucially depends on the presence of its relative clause:

- (5) a. the Paris that I love (Perlmutter (1970: 241))
 b. In England there was never the problem that there was in America. (ibid.: 243)

Paris in (5a), which is a proper noun, does not cooccur with the definite article in the absence of a relative clause, and without the relative clause in (5b), *the* would be replaced by an indefinite article due to a definiteness effect. The definite article attached to the head nouns is unlikely to be a lexical item selected from the lexicon for syntactic derivation, but it emerges in the course of the derivation of the relative clauses. It is reasonable to interpret *the* in (5) to be realized due to the search relation between the relative clauses and their modifying head noun. To see this more clearly, let us consider the structure of a *that*-relative shown below:



That-relatives have often been analyzed as involving head-raising.¹ In line of hypothesis (1), the C *that* is equipped with an uninterpretable feature (which is named [+definite] for the sake of the discussion here). Prior to the head-raising of *book*, the C Searches into the relative clause and finds the *book* at its base-generated position. After the head-raising, the resulting syntactic object (which is equal to the CP in (6)) is labelled as <+definite, +definite>. *The* in (6), which is syntactically represented as a D head in the tree diagram, can be regarded as a morphophonological realization of the label <+definite, +definite>.²

With the above Search-based analysis of adjuncts in mind, let us now shift our focus to the argument-adjunct asymmetry regarding condition C effects.

- (7) a. * Which claim that John_i likes Mary did he_i deny ?
 b. Which claim that John_i made did he_i later deny ?

Lebeaux (1988) and following literature account for the asymmetry with recourse to Late Merge (LM), which enables a relative clause to be merged with the moved *wh*-element. This account, however, is faced with theoretical and empirical difficulties. Under Chomsky's (2021, et. seq.) framework, Late Merge is unavailable. Moreover, the LM analysis of the asymmetry is undermined by the following

three kinds of data:

- (8) The headway that Mel made was impressive. (Aoun and Li (2003: 98))
 (cf. ?? The headway which Mel made was impressive.) (ibid.: 110)
- (9) The portrait of himself_i that John_i painted is extremely flattering. (ibid.: 98)
 (cf. ?* The portrait of himself_i which John_i painted is extremely flattering.) (ibid.: 111)
- (10) I phoned the two patients that every doctor will examine tomorrow. (ibid.: 98)
 [two > every, every > two]
 (cf. I phoned the two patients who every doctor will examine tomorrow.) (ibid.: 113)
 [two > every]

The data indicate the contrasting characteristics of *that*- and *wh*-relatives with respect to the availability of an idiom interpretation [(8)], the binding of a reflexive pronoun [(9)], and scope ambiguity [(10)]. In the case of *that*-relatives, the head nominal can be interpreted inside the relative clause. From this fact, Aoun and Li (2003) conclude that *that*-relatives, unlike *wh*-relatives, are generated via head-raising. Then, the derivation of sentence (7b), which contains a *that*-relative, involves head-raising. However, for the head *claim* to undergo the operation, its relative clause *that John made* has to be introduced at an earlier stage of the derivation. This situation is a direct conflict with what the LM-based approach assumes. Any adequate analysis of the Lebeaux effect has to take into consideration the fact that there is no difference between relative clauses as in (7b) and appositive clauses as in (7a) with respect to their base-generated position.

We are now in a position to characterize the contrast in (7) as an argument-adjunct asymmetry regarding condition C reconstruction. This asymmetry amounts to the proposition that arguments can be reconstructed to their base-generated position, while adjuncts cannot. The most obvious difference between an argument and an adjunct is whether or not they must receive a θ -role. This paper assumes the hypothesis in (2), according to which θ -marking is mediated by agreement between a θ -assignor and a syntactic object. The fact that reconstructability is controlled by the presence of agreement is collaborated by the following data:

- (11) a. Sono hon o_i John ga [s' Mary ga t_i katta to] omotte iru
 that book ACC John NOM Mary NOM bought COMP think
 (koto)
 fact
 'John thinks that Mary bought that book.' (Saito (1985: 156))
- b. * Riyuu mo naku_i Mary ga [s' John ga t_i sono setsu o
 reason even without Mary NOM John NOM that theory ACC
 shinjite iru to] omotte iru (koto)
 believe COMP think fact
 'Mary thinks that John believes in that theory without any reason.' (ibid.: 175)
- (12) ? Naze Mary ga [CP John ga sono setsu o shinjiteiru ka] shitteiru.

why Mary NOM John NOM that theory ACC believe Q knows
 ‘Mary knows why John believes in that theory.’ (Bošković and Takahashi (1998: 356))

Given the radical reconstruction property of long-distance scrambling (Saito (1989), et. seq.), the scrambled element is to be interpreted in the embedded clause. The (un)acceptability of (11) shows that the argument *sono hon o* can undergo reconstruction, while the adjunct *riyuu mo naku* cannot. In the movement analysis of long-distance scrambling, *sono hon o* in (11a) originally occupies the complement position of the verb in the embedded clause and is agreed with/ θ -marked by the v^* of the clause. In (4b), *riyuu mo naku*, whose scope is over propositions, is located in a higher position than the v^* and the latter cannot establish an agreement relation with the former. The difference in reconstructability observed in (11a, b) is tied to the presence/absence of an agreement relation. In contrast to *riyuu mo naku* in (11b), the adjunct *naze* in (12) can be reconstructed into the embedded clause. Being a *wh*-element, *naze* is endowed with an additional *wh*-feature and enters into an agreement relation with the interrogative C (=ka). It is this agreement relation that makes the reconstruction possible.

Going back to sentence (7b), we are led to its derivational history in which the relative clause *that John made* is not agreed with/ θ -marked by the v^* associated with the transitive verb *deny*. In its original position, the sequence *claim that John made* has a structure of the sort in (6). *That*-relatives are an instance of high adjuncts, in that the C head (=that) functions as a probe searching for a head nominal as the modifiee of a *that*-relative. As an effect of hypothesis (3), *that*-relatives are transferred as soon as their [+definite] feature is eliminated.³ It is after this Transfer that such verbal elements as v^* come in. Then, the sequence *that John made* cannot have any access with the v^* , and in (7b), the relative clause forms no agreement relation with the v^* associated with the verb *deny*. The anti-reconstruction effect observed in (7b) now follows, without any help of LM.

3. The Adjunct Island under This Proposal

3.1. Adjuncts as a Goal

It has been observed in the literature that not all adjuncts are islands. Truswell (2011) presents such an instance of licit extraction from an adjunct clause:

(13) Which book did John design his garden [after reading ___] ? (Truswell (2011: 31))

Truswell further observes that the question in (13) should be answered as indicated in (14) and claims that the Single Event Grouping Condition in (15) captures the contrast:

(14) An introduction to landscape gardening. / # *Finnegans Wake*. (Truswell (2011: 31))

(15) An instance of *Wh*-Movement is legitimate only if the minimal constituent containing the head and the foot of the chain can be construed as describing a single *event grouping*.

(Ibid: 157, emphasis in original)

As is clear from the content of condition (15), Truswell’s approach to licit extraction from an adjunct clause is a semantic one. This paper claims that in such cases as (13), the semantic condition is satisfied in a syntactic way. Narita (2014: 124) argues that adjuncts from which extraction is possible are “low” ones, located within the domain c-commanded by v^* . Hypothesis (2) tempts us to think that a low adjunct can be agreed with/“ θ -marked” by the v^* .⁴ Given the commonplace assumption that an adjunct is introduced in the secondary plane (cf. Chomsky (2004)), however, the inclusion of an adjunct within the search domain of v^* is not a trivial matter. In this paper, we propose that “ θ -marking” of an adjunct by v^* is accomplished in an indirect fashion: First, the v^* θ -marks an internal argument via its Search, and then, the assigned θ -role of the internal argument is shared by an adjunct.⁵ This indirect “ θ -marking” has the effect of elevating the status of adjuncts from an element on the secondary plane to that on the primary plane. As a semantic consequence of this kind of “ θ -marking,” the denotation of an adjunct is interpreted to be a participant of the event described by a verb. In the case of (13), the adjunct in the square brackets is one of the key ingredients for the event of designing John’s garden and the contrast in (14) is naturally accounted for. More generally, the semantic condition in (15) is couched in syntactic terms.

Unlike the sentence in (13), the sentence below is not acceptable:

(16) * Which paper did you read Don Quixote [before filing ___] ?

In this sentence, the sentence-initial *wh*-element *which paper* is not interpretively related to the internal argument of the verb *read*, *Don Quixote*. This leads to the situation in which even though the v^* successfully agrees with/ θ -marks the internal argument, the assigned θ -role cannot be shared by the adjunct in the square brackets. Semantically speaking, the content of the adjunct is not integrated into the event denoted by the verb phrase, and sentence (16) contains a violation of the Single Event Grouping Condition in (15). Syntactically speaking, the failure of “ θ -marking” the adjunct makes it located on the secondary plane, with its uninterpretable feature left intact, and such an adjunct remains as an island.⁶

In addition to the sentence in (16), the following one is also unacceptable:

(17) * Who did they leave [before speaking to ___] ?

The verb *leave* in this sentence is an unergative verb, lacking an internal argument. In the absence of an application of downward Search initiated by the v^* , no indirect “ θ -marking” can occur. As a result, the adjunct remains on the secondary plane and the *wh*-movement from the adjunct ends up with a violation of adjunct condition.

Truswell’s semantic analysis and the proposed syntactic analysis offer a different treatment of the contrast in the sentences in (18):

- (18) a. What did John die [whistling ___] ?
 b. * What did John work [whistling ___] ?

Truswell attributes the difference in acceptability to the aspectual property of the verbs preceding the adjunct clauses; while *die* is an achievement verb, *work* is an activity verb. According to Truswell (2011: 161), the temporal character of achievement verbs facilitates the single-event reading of the whole sentence, satisfying the Single Event Grouping Condition in (15). In contrast, the proposed syntactic analysis reduces the contrast to the fact that while *die* is an unaccusative verb, *work* is an unergative verb. The sentence in (18b) is ruled out for the same reason as that in (17). What is of special interest about unaccusative verbs for our present purpose is that their sole argument is an internal one. Therefore, unlike in (17), a downward Search initiated by the $v^{(*)}$ does happen in (18a). The assigned θ -role of *John* is shared by the adjunct, as a result of which the adjunct comes to be incorporated into the main clause as an element on the primary plane. In the same way as in (13), extraction from this type of adjuncts is impeccable.

Whether or not Truswell's semantic analysis and the syntactic analysis proposed here is totally equivalent is an open issue. Borgonovo (1997: 24) observes that adjuncts headed by gerunds exhibit a weak island effect:

- (19) a. What did he die [whistling __] ?
b. * How quietly did he die [whistling Dixie __] ?

There is a possibility that the ultimate explanation of weak island effects will determine which of the semantic and syntactic analyses is more adequate.

3.2. Search by an Adjunct Probe

Let us move on to the case of higher adjuncts. Due to their structural height, these adjuncts can serve as a probe. Truswell (2011: 29) observes that the sentences below are acceptable:

- (20) a. Whose attention is John waving his arms around [to attract __] ?
b. What did you come round [to work on __] ?
c. Which paper did John travel halfway round the world [to submit __] ?
d. What did Christ die [to save us from __] ?

Adjuncts of a rational clause are structurally higher than ones which are affected by the indirect “ θ -marking” discussed in the last subsection. Consider the following sentences:

- (21) a. John hugged Mary [in order to make himself happier].
b. * John hugged Mary [in order to make herself happier].

(Truswell (2011: 219))

The unacceptability of sentence (21b) shows that the rational clause is structurally higher than the

object, which cannot bind the reflexive pronoun inside the rational clause. On the other hand, the acceptability of sentence (21a) suggests that the rational clause is structurally lower than the subject, with the reflexive pronoun bound by the subject inside the rational clause. Given that the subject is located in Spec-INFL, it is reasonable to assume that the adjunct of a rational clause is as high as the v^*P .

With this in mind, let us analyze the acceptability of the sentences in (20) under the proposed Search-based approach to adjuncts. By hypothesis (1), higher adjuncts, as well as low ones, contain an uninterpretable feature which is related to categorial selection and the derivation cannot converge if the feature remains as it stands. Unlike low adjuncts, such higher adjuncts as rational clauses can carry out a search procedure and find their modifiee by themselves.⁷ In each sentence of (20), the adjunct (i.e., the rational clause) finds the v^* in the matrix clause as its goal. With this relation, an uninterpretable feature of the adjunct is successfully eliminated and at the same time, the verbal constituent in the matrix clause serves as the modifiee of the adjunct. By virtue of this search procedure, the adjunct become transparent to the matrix clause, being on the primary plane. Hypothesis (4) allows the adjunct not to be immediately transferred in the presence of the implicit external argument of the verb in the rational clause. Before FormCopy has applied, the *wh*-element is capable of moving from the adjunct.⁸ This is why no island effects show up in (20).

In contrast to sentences (20), where the high adjuncts are non-finite clauses, extraction out of the finite clausal high adjunct is impossible. Observe the sentence below:

(22) * What did the man criticize Mary [because she failed ___] ?

A crucial difference between finite clauses and non-finite ones is the presence/absence of an overt subject. Because the adjunct in (22) is entirely self-contained, hypothesis (3) forces the adjunct to be transferred as soon as its uninterpretable feature is eliminated. Due to the search procedure conducted by the *because*-clause, the adjunct successfully becomes a part of the primary plane as a modifier and the *wh*-element *what* gets ready to move to the matrix clause. An application of immediate Transfer, however, prevents the *wh*-element from getting out of the adjunct. Sentence (22) cannot be generated in the proposed system.

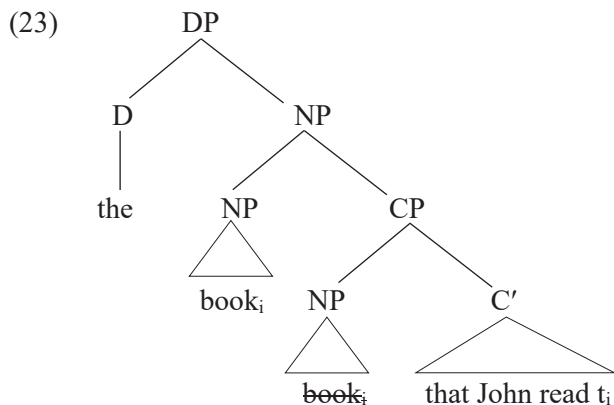
4. Conclusion

As its title indicates, the present paper has claimed that the syntactic treatment of adjuncts requires the mechanism of Search. The requirement is motivated by the main hypothesis that adjuncts have an uninterpretable feature which is related to categorial selection. Unless the uninterpretable feature is somehow removed, the derivation is doomed to crash. Adjuncts can be classified into two types depending on the timing at which they are introduced by FormSet; high and low ones. While high adjuncts can function as a probe, low adjuncts can serve as a goal, affected by an indirect “ θ -marking.” Regardless of the types, an adjunct which undergoes Search is integrated into the matrix clause (i.e., the primary plane) as a modifier. It was also shown that there is an interaction between Transfer and FormCopy (or some copy-formation mechanism), and the timing of Transfer of a high adjunct is

dependent on the presence/absence of an implicit argument in it. The adjunct condition was analyzed as the second-plane status of a low adjunct because of the absence of an indirect “ θ -marking” (with its uninterpretable feature uneliminated) and as the immediate Transfer of a high adjunct.

A theoretical advantage of the proposal is that the ‘Lebeaux effect’ concerning the anti-reconstruction property of *that*-relatives is captured without appeal to Late Merge. As alluded to in section 2, in the pursuit of genuine explanation, such extended versions of Merge as Late Merge have not been regarded as admissible operations. To the extent that the analysis of the ‘Lebeaux effect’ based on our Search-based treatment of adjuncts is on the right track, it constitutes a step forward toward the goal.

As a final note, we would like to consider what the Search-based analysis of adjuncts says about *wh*-relatives. In light of the data in (8)-(10), *wh*-relatives should have a matching structure, in which the head nominal is base-generated outside the relative clause. In capturing the fact that the former is modified by the latter, our analysis has to assume that a *wh*-relative clause is structurally higher than its external head nominal, disallowing the structure like the following:



(cf. Hulsey and Sauerland (2006: 112))

In *wh*-relatives, a search procedure establishing the modification relation between a *wh*-relative clause and its external head nominal has to occur “outside” the relative clause, since the *wh*-relative clause does not include its head nominal at any time. On the other hand, as depicted in (6), a relevant search procedure occurs “inside” the relative clause in the case of *that*-relatives. With regard to the difference between *wh*-relatives and *that*-relatives, Kono (2016: 87) makes an interesting observation that a *wh*-relativizer ties the relative clause to its head nominal less tightly than a *that*-relativizer.⁹ There is a possibility that this fact is reduced to the syntax of *wh*- and *that*-relatives, or the “outside”-“inside” difference.

* An earlier version of this paper was presented at the 17th International Spring Forum of the English Linguistic Society of Japan held at Kyoto University on May 25-26, 2024. I am grateful to the audience for their valuable comments. Needless to say, any remaining errors and inadequacies are the author's responsibility alone. This research is supported by JSPS KAKENHI Grant Numbers JP22K00525.

NOTES

- ¹ See the sentences in (8)-(10) below for empirical support of this analysis.
- ² One of the merits of the proposed derivation is the circumvention of a counter-cyclic application of head-raising.
- ³ In fact, this Transfer has to be later than the movement of the head noun to Spec-C. Otherwise, in (7b), no Search procedure induced by the v^* associated with the transitive verb *deny* can occur, crashing the derivation.
- ⁴ Miyamoto (2012) relates the existence of an agreement relation to the transparency of an adjunct for extraction.
- ⁵ The second process is reminiscent of chain composition in the traditional analysis of the parasitic gap construction. Both play a role of gluing an adjunct into the matrix clause in which its modifiee is present.
- ⁶ Low adjuncts, whose example is the *before*-clause in (16), cannot serve as a probe. Hence, the uninterpretable feature of the *before*-clause ends up being uneliminated.
- ⁷ In a recent term, this search procedure is likely to be identified with Σ_{Label} in the sense of Omune and Komachi (2024). Given the status of adjuncts in general as an element on the secondary plane, a high adjunct does not c-command anything on the primary plane.
- ⁸ Chomsky (2023: 6) no longer considers FormCopy as an operation in syntactic computation, but in any case, some copy-formation mechanism is needed here. If not, the external argument of the verb in the adjunct of (20) cannot be covert.
- ⁹ Kono also observes that the unity is the strongest in zero-relatives among the three types of relative clauses.

REFERENCES

- Aoun, Joseph and Yen-hui Audrey Li (2003) *Essays on the Representational and Derivational Nature of Grammar: The Diversity of Wh-Constructions*, MIT Press, Cambridge, MA.
- Borgonovo, Claudia (1997) "Parasitic Gaps and Participials," *Langues et Linguistique* 23, 21-29.
- Bošković, Željko and Daiko Takahashi (1998) "Scrambling and Last Resort," *Linguistic Inquiry* 29, 347-366.
- Chomsky, Noam (2004) "Beyond Explanatory Adequacy," *Structures and Beyond: The Cartography of Syntactic Structures, Volume 3*, ed. by Adriana Belletti, 104-131, Oxford University Press, New York.
- Chomsky, Noam (2021) "Minimalism: Where Are We Now, and Where Can We Hope to Go," *Gengo Kenkyu* 160, 1-41.
- Chomsky, Noam (2023) "The Miracle Creed and SMT," ms., University of Arizona / MIT. <<http://www.icl.keio.ac.jp/news/2023/Miracle%20Creed-SMT%20FINAL%20%2831%29%201-23.pdf>>
- Hulsey, Sarah and Uli Sauerland (2006) "Sorting out Relative Clauses," *Natural Language Semantics* 14, 111-137.
- Kono, Tsuguyo (2016) "Kankeishi no Sentaku to Gentei Shushoku Ryoku (Relativizers and Their Restrictiveness)," *Eigo Goho Bunpo Kenkyu (The Journal of the Society of English Grammar*

- and Usage*) 23, 86-101.
- Kuroda, Shige-Yuki (1988) “Whether We Agree or Not: A Comparative Syntax of English and Japanese,” *Linguisticae Investigationes* 12, 1-47.
- Lebeaux, David (1988) *Language Acquisition and the Form of Grammar*, Doctoral dissertation, University of Massachusetts, Amherst.
- Miyamoto, Yoichi (2012) “On Transparent Adjuncts in Japanese,” *Ways of Structure Building*, ed. by Myriam Uribe-Etxebarria and Vidal Valmala, 330–365, Oxford University Press, Oxford.
- Narita, Hiroki (2014) *Endocentric Structuring of Projection-free Syntax*, John Benjamins, Amsterdam/Philadelphia.
- Omune, Jun and Masayuki Komachi (2024) “Bokkusu Riron deno Icchi to Sokubaku (Agreement and Binding in Box Theory),” *Kyokusho Shugi ni okeru Setsumei Riron no Chosen: Saiteki Saishosei ga Michibiku Heigo to Kopii Enzan (Pursuing Genuine Explanation: Deriving Merge and Copy Computation through Optimal Minimality)*, ed. by Toru Ishii, Nobu Goto, Masayuki Komachi, and Takashi Munakata, 297-319, Kaitakusha, Tokyo.
- Perlmutter, David M. (1970) “On the Article in English,” *Progress in Linguistics*, ed. by Manfred Bierwisch and Karl E. Heidolph, 233-248, Mouton, The Hague.
- Raposo, Eduardo (2002) “Nominal Gaps with Prepositional Modifiers in Portuguese and Spanish: A Case for Quick Spell-Out,” *Cuadernos de Lingüística del Instituto Universitario Ortega y Gasset* 9, 127-144.
- Saito, Mamoru (1985) *Some Asymmetries in Japanese and Their Theoretical Implications*, Doctoral dissertation, MIT.
- Saito, Mamoru (1989) “Scrambling as Semantically Vacuous A'-movement,” *Alternative Conceptions of Phrase Structure*, ed. by Mark R. Baltin and Anthony S. Kroch, 182-200, University of Chicago Press, Chicago.
- Truswell, Robert (2011) *Events, Phrases, and Questions*, Oxford University Press, Oxford.

A Syntactic Investigation of Conditional Conjunctions*

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Keywords : conditionals, Coordinate Structure Constraint, (a)symmetric coordination, topic-hood

1. Introduction

In English syntax, it is well acknowledged that the extraction of elements from either the first or second conjunct of a coordinate structure linked by *and* is prohibited. Consider the examples provided in (1). When coordinate structures employ the conjunction *and*, the extraction of an argument from only one conjunct results in ungrammaticality. This phenomenon is formalized in the Coordinate Structure Constraint (CSC), as described by Ross (1967). However, exceptions to the CSC have been observed in the literature. Some examples are given in (3).¹

- (1) a. * This is the pizza_i Sam ordered t_i and Mary asked for an orange juice. (Weisser (2015a: 46))
b. * This is the beverage_i Sam ordered a pizza and Mary asked for t_i . (Weisser (2015a: 46))
- (2) Coordinate Structure Constraint (CSC)
In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct. (Ross (1967: 89))
- (3) a. That's the stuff_i the guys in the Caucasus drink t_i and live to be a hundred.
(Lakoff (1986: 157))
a'. If the guys in the Caucasus drink the stuff, they live to be a hundred.
b. ? This is the loot_i that you just identify t_i and we arrest the thief on the spot.
(Culicover and Jackendoff (1997: 206))
b'. If you just identify the loot, we arrest the thief on the spot.

The sentences (3a) and (3b) are paraphrasable to the sentences (3a') and (3b') respectively. Specifically, the first conjunct introduces a condition, while the second conjunct presents its consequence. Sentences of this nature are referred to as *Conditional Conjunctions* (CCs). Regarding the derivation of CCs, this study makes the following three claims.

- (4) a. **Asymmetric Structure:**
CCs exhibit an asymmetric syntactic structure akin to that of a conditional *if*-clause.
b. **Topic Agreement:**

In CCs, the first conjunct is merged into the specifier position of a Topic Phrase (TopP), where it expresses conditionality through agreement with the topic head.

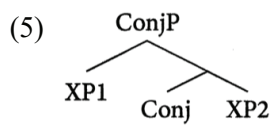
c. Defective CP Phase Structure:

The first conjunct features a defective CP phase structure, lacking ForceP and TopP. However, these projections are activated through Topic Agreement with the TopP of the second conjunct. This activation creates an escape hatch, enabling further displacement of an argument.

These claims together provide a comprehensive explanation of how CCs function within the framework of generative syntax. Following this introduction, section 2 provides a review of key studies on the syntax of coordinate structures. Section 3 introduces original proposals and analyses of CCs. Section 4 extends the analysis to regular conditional *if*-clauses. Finally, section 5 concludes the discussion.

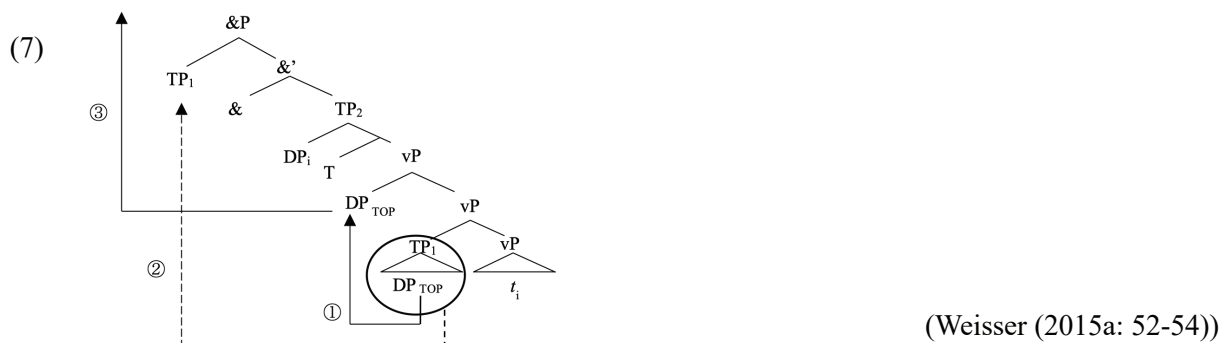
2. Review of Previous Studies on Coordinate Structures

Syntactic approaches to coordinate structures are divided into symmetric and asymmetric analyses. Addressing challenges to symmetric approaches, Munn (1993), Johannessen (1998), Chomsky (2013), and Weisser (2015a, b) argue for asymmetric derivation, as shown in (5). Weisser (2015a, b) suggests that CCs arise from the asymmetric merging of TPs. Evidence for this analysis is presented in (6).



- (6) a. You know, of course, [_{CP} that [_{TP} you drink one more beer] and [_{TP} you get kicked out]].
(Culicover and Jackendoff (1997: 198))
- b. You know, of course, if you drink one more beer, you will get kicked out.
- c. # You know, of course, [_{CP} that you drink one more beer] and [_{CP} that you get kicked out].
(Culicover and Jackendoff (1997: 198))
- d. # You [_{vP} drink one more beer] and [_{vP} leave].
(Weisser (2015a: 43))

In (6a), CCs are embedded under *that*, preserving a conditional reading. However, introducing the complementizer *that* in both conjuncts in (6c) or reducing the clause size to the vP respectively in (6d) eliminates the conditional interpretation. Based on these observations, Weisser proposes the derivation outlined in (7).



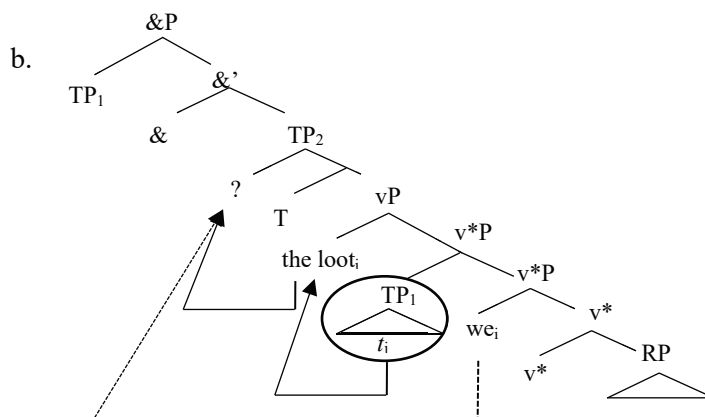
Let us examine the derivation in (7) step by step. Initially, the first conjunct (TP₁) adjoins to the vP of the second conjunct (TP₂), allowing the topic element (DP_{TOP}) within TP₁ to be extracted and moved to the upper specifier of the vP in TP₂. According to Weisser, this extraction is possible because coordination has not yet been established, and TP₁ and TP₂ have not been merged into a structure headed by &. Subsequently, TP₁ moves to the specifier of &P, forming a coordinate structure. At this point, the CSC takes effect, prohibiting further extraction from either conjunct. Therefore, DP_{TOP} must be extracted before TP₁ moves to the specifier of &P. The topicalization of DP_{TOP} occurs after TP₁ merges with &P. Weisser’s analysis explains complex data such as those in (8).

- (8) a. Another picture of himself_i appears in the newspaper and John_i will definitely go and get a lawyer. (Weisser (2015a: 52))
 b. If another picture of John’s appears in the newspaper, he will definitely go and get a lawyer. (Weisser (2015a: 52))

In (8a), the antecedent *John* does not c-command its anaphor *himself* in the surface structure, yet the sentence is grammatical, indicating no violation of Binding Condition A. Weisser explains this by proposing that TP₁ is base-generated in the vP domain of TP₂, where *John* c-commands the copy of *himself* in TP₁. However, his analysis faces two issues.

First, Weisser assumes that DP_{TOP} merges into the specifier of vP in TP₂ for topicalization, but as shown in (9b), this creates a minimality problem. When T₂ is merged, it should select the closest DP, *the loot*, rather than *we*, the intended subject of the second conjunct, leading to incorrect predictions.

- (9) a. ? This is the loot_i that you just identify t_i and we arrest the thief on the spot. (= (3b))



Second, Weisser’s analysis does not address how TP₁, when topicalized and located in the specifier of &P, is interpreted as a conditional clause. The mechanism responsible for the conditional interpretation of TP₁ remains unexplained.

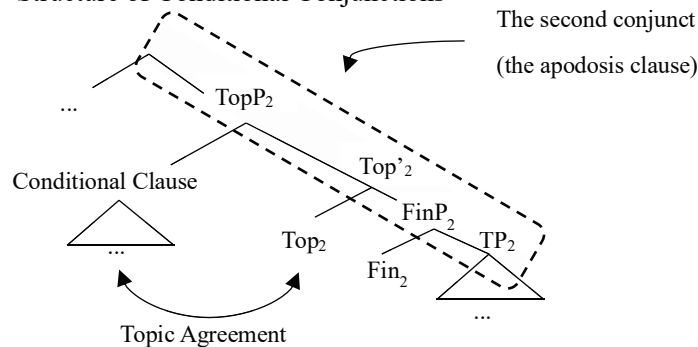
3. Proposal and Analysis

3.1. Syntactic Categories in Conditional Conjunctions

Weisser (2015a, b) argues that the derivation of CCs requires coordination at the TP level. The

specifier of a Topic Phrase (TopP) (Yoshimura (2021)). The basic structure of CCs is shown in (14).

(14) Structure of Conditional Conjunctions



3.3. Two Types of Conditionals

Adopting Haegeman’s (2006, 2012a, 2012b) framework, finite adjuncts are classified into two types.

(15) Central Adverbial Clause

It contains a function of modifying events/states of affairs expressed in the main clause and has no illocutionary force in its own structure. (Haegeman (2006: 29-36))

(16) Peripheral Adverbial Clause

It expresses an independent proposition that serves as the immediate discourse background to the associated clause and possesses its own illocutionary force independent from the main clause. (Haegeman (2006: 29-36))

- (17) a. If your back-supporting muscles tire, you will be at increased risk of lower-back pain.
 b. If we are so short of teachers (‘Jobs crisis grows as new term looms’, August 30), why don’t we send our children to Germany to be educated? (Haegeman (2006: 29))

The example in (17a) features a conditional clause modifying the event in the main clause, referred to as a central conditional clause. This expresses a causal relationship. In contrast, (17b) includes a conditional clause providing background or rationale for the main clause, categorized as the peripheral. The key differences are as follows. Peripheral adverbial clauses have an independent Illocutionary Force, whereas central ones do not. Additionally, peripheral clauses merge at the CP level of the main clause, while central clauses merge at the vP level. Haegeman illustrates these structural differences in (18).

- (18) a. Central Adverbial Clause: [Sub(ordinate) [Mod* [Fin]]]
 b. Peripheral Adverbial Clause: [Force [Top* [Focus [Sub(ordinate) [Mod* [Fin]]]]]] (Haegeman (2006: 36), slightly modified)

Building on these structural differences, and integrating Chomsky’s Phase Theory (2000, 2001), this study proposes that CP structures in adjunct clauses fall into three types.

- (19) a. Full-Fledged Phase: [Force(+)[Top*[Foc [Sub [Mod* [Fin(+)]]]]]]

- b. Defective Phase: [Force(-) [Sub [Mod* [Fin(+)]]]]
 c. Non-Phase: [Sub [Fin(-)]] (Yoshimura (2021), slightly modified)

The structure in (19a) allows argument topicalization or focalization, projecting ForceP (Rizzi (1997)). In contrast, (19b) lacks such movement phenomena due to a defective CP domain, indicating the absence of ForceP projection. Despite this difference, both (19a) and (19b) project FinP in an activated state, suggesting that both are phases. Whether CCs are central or peripheral can be determined by testing the topicalization properties within the conditional clause, as shown in (20).

- (20) a. * If these exams you don't pass, you won't get the degree. <central>
 b. If anemones you don't like, why not plant roses instead? <peripheral>
 (Haegeman (2006: 33))

(20a) serves as an example of the Central, where topicalization within the *if*-clause is prohibited. On the other hand, in the Peripheral examples like (20b), topicalization within the *if*-clause is permitted. This makes it possible to determine whether the CCs in question are the Central or the Peripheral.

- (21) a. * You know, of course, that the stuff_i the guys in the Caucasus drink t_i and live to be a hundred.
 b. * If the stuff_i the guys in the Caucasus drink t_i , they live to be hundred.
 c. * You know, of course, that the loot_i you just identify t_i and we arrest the thief on the spot.
 d. * If the loot you just identify t_i , we arrest the thief on the spot.
 e. ?? You know, of course, that this can of beer_i you drink t_i and you get kicked out.
 f. * You know, of course, if this can of beer_i you drink t_i , you will get kicked out.

In (21), topicalization within the first conjunct is not permitted, suggesting that CCs have a central structure. If it is true, this would predict the impossibility of argument extraction due to the lack of a driving force, yet this contradicts the facts. Interestingly, while CCs disallow topicalization, they still permit CP adverbs associated with ForceP.

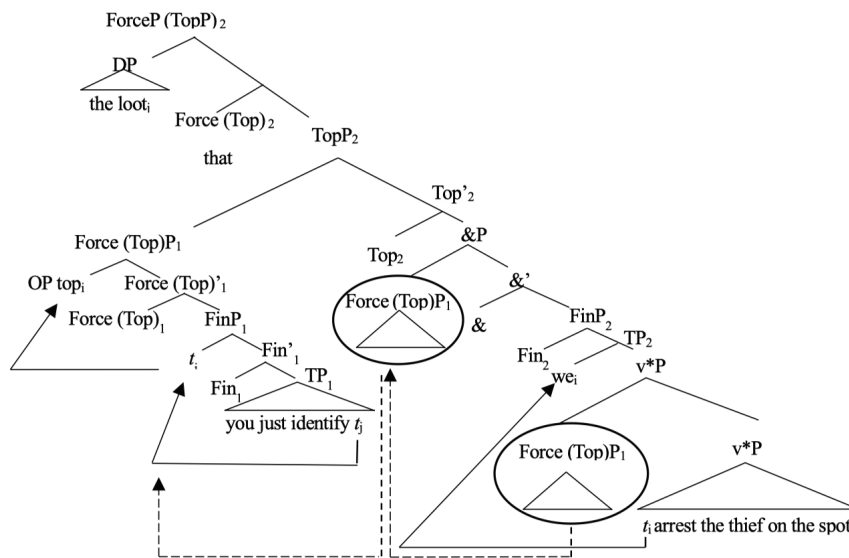
- (22) a. You know, of course, that (fortunately) the guys in the Caucasus drink the stuff and (??fortunately) live to be a hundred.
 b. If fortunately the guys in the Caucasus drink the stuff, they live to be hundred.
 c. You know, of course, that (stupidly) you drink this can of beer and (??stupidly) you get kicked out.
 d. You know, of course, if stupidly you drink this can of beer, you will get kicked out.
 (23) You know (seriously) that you drink this can of beer and (??seriously) you get kicked out.
 (*manner adverb / ^{ok} illocutionary adverb)
 'You know that, speaking seriously, if you drink this can of beer, you will get kicked out.'

In (22) and (23), the CCs exhibit the characteristic of the peripheral by permitting high adverbs in the CP domain within the clause. In addition to this, considering the fact that CCs allow argument extraction from the first conjunct, it is assumed that the emergence of the Force with edge features occurs due to agreement between the topic feature of the first conjunct and the TopP of the main clause.

3.4. Derivation of the Conditional Conjunction

Let us now examine how our proposal captures the derivation of CCs without violating the CSC, as illustrated in the tree diagram in (24).

(24) ? This is the loot_i that you just identify *t_i* and we arrest the thief on the spot. (= (3b))



Similar to Weisser (2015a, b), the base position of the first conjunct (TP₁) lies within the vP domain of the second conjunct (TP₂), aligning with the interpretation of TP₁ as a conditional clause and TP₂ as the main clause. At this stage, the DP subject *we* of TP₂ merges into the specifier of vP, and no extraction of the argument *the loot* occurs, avoiding a minimality problem and ensuring proper subject movement. Next, TP₁ moves to the specifier of &P, forming an A-and-B structure. However, since TP₁ expresses conditionality and links to topichood, it further moves to the specifier of TopP in the main clause, where the Subordinate Phrase and Topic head establish Topic Agreement.³ Although TP₁ exhibits features of central adverbial clauses and forms a defective CP, it permits high adverbs associated with Force projection. To satisfy Topic Agreement, the emergence of ForceP or TopP within TP₁ is triggered by topic operator movement. With an edge feature of ForceP, the topic operator in TP₁ moves to the edge of ForceP, allowing the argument *the loot* in the main clause to associate with the topic operator, thereby legitimizing the sentence.

3.5. Agreement That Motivates Extraction

Data from Tagalog support the importance of agreement in facilitating extraction. In Tagalog, object shift for specific arguments requires agreement between the verb and the shifted argument. Examples in (25) demonstrate that wh-movement is possible only when the verb agrees with the embedded clause.

- (25) a. Kailan_i [sa-sabih-**in** ng sundalo [na Ø-u-uwi ang pangulo t_i]]?
 when ASP-say-ACC CS soldier that NOM-ASP-go.home ANG president
 ‘When will the soldier say that the president will go home?’
- b. * Kailan_i [m-agsa-sabi ang sundalo [na Ø-u-uwi ang pangulo t_i]]?
 when NOM-ASP-say ANG soldier that NOM-ASP-go.home ANG president
 ‘When will the soldier say that the president would go home?’
- c. Kailan_i [i-p-inangako ng sundalo [na Ø-u-uwi ang pangulo t_i]]?
 when OBL-ASP-promise CS soldier that NOM-ASP-go.home ANG president
 ‘When did the soldier promise that the president would go home?’
- d. * Kailan_i [n-angako ang sundalo [na Ø-u-uwi ang pangulo t_i]]?
 when NOM.ASP-promise ANG soldier that NOM-ASP-go.home ANG president
 ‘When did the soldier promise that the president would go home?’
- e. Kailan_i [p-in-aniwala-an ng sundalo [na Ø-u-uwi ang pangulo t_i]]?
 when -ASP-believe-DAT CS soldier that NOM-ASP-go.home ANG president
 ‘When did the soldier believe that the president would go home?’
- f. * Kailan_i [n-aniwala ang sundalo [na Ø-u-uwi ang pangulo t_i]]?
 when NOM.ASP-believe ANG soldier that NOM-ASP-go.home ANG president
 ‘When did the soldier believe that the president would go home?’

(Rackowski and Richards (2005: 586), emphasis added)

4. Argument Extraction out of Central Conditional Clauses

We examine how our analysis captures the derivation of regular conditional *if*-clauses. Notably, our derivation also explains the extraction of elements from clause-initial *if*-clauses. Examples and their characteristics are shown in (26), with derivations outlined in (27).

- (26) a. Rich’s sports car_i, if Michelle buys t_i, her insurance premium will increase.
 (Taylor (2007: 191))
- b. * If Rich’s sports car_i Michelle buys t_i, her insurance premium will increase.
- c. ? If (un)fortunately Michelle buys Rich’s sports car, her insurance premium will increase.

The *if*-clauses in (26) are central adverbial clauses, modifying events in the main clause and disallowing topicalization (26b). However, like CCs, they permit high adverbs, allowing Topic Agreement. This movement of the topic operator to the edge of the *if*-clause validates the topicalization of the argument *Rich’s sports car*.

5. Conclusion

This paper have examined the derivation of CCs within generative syntax, showing that CCs form an asymmetric structure similar to conditional *if*-clauses, with the first conjunct expressing conditionality through Topic Agreement. We also demonstrated how the activation of Force with an edge feature enables their derivation without violating the CSC. Our approach further explains the derivation

of central *if*-clauses, although CCs categorized as Type A (narration) remain for future research.

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NOTES

¹ Lakoff (1986) and Altshuler and Truswell (2022) categorize exceptions into three types: Type A (narration), Type B (violated expectation), and Type C (result). Types B and C typically allow extraction only from the first conjunct, while Type A permits extraction from multiple locations. This paper focuses on Types B and C, leaving Type A for future research.

² Bruening and Khalaf (2020) and Bruening (2023) argue that category mismatches in *and*-coordinate structures, though rare, involve connections between elements of the same category via upercategories like Pred and Mod or null heads. In example (i), the NP and TP/CP are actually of the same category.

(i) One more can of beer and I'm leaving. (Culicover and Jackendoff (1997: 196))

³ Oda (2017) and Bošković (2020, forthcoming) propose separating the CSC into two conditions: (i) extraction out of conjuncts and (ii) extraction of conjuncts. As some languages allow conjunct extraction, Force (Top)P movement from the specifier of &P may be possible or justified by treating CCs as quasi-coordination without a strict A-and-B configuration.

REFERENCES

- Altshuler, Daniel and Robert Truswell (2022) *Coordination and the Syntax: Discourse Interface*, Oxford University Press, Oxford.
- Bošković, Željko (2020) "On Unifying the Coordinate Structure Constraint and the Adjunct Condition," A. Bárány, T. Biberauer, J. Douglas, and S. Vikner (eds.). *Syntactic Architecture and Its Consequences II: Between Syntax and Morphology*, Language Sciences Press, Berlin.
- Bošković, Željko (to appear) "On the Coordinate Structure Constraint, Islandhood, Phases, and Rescue by PF-deletion," G. Fowler, J. Lavine, and R. F. Feldstein (eds.). *A Festschrift for Steven Franks*, Slavica Publishers, Indiana.
- Bruening, Benjamin and Eman Al Khalaf (2020) "Category Mismatches in Coordination Revisited," *Linguistic Inquiry* 51, 1-36.
- Bruening, Benjamin (2023) "Selectional Violations in Coordination (A Response to Patejuk and Przepiorkowski 2023)," *Linguistic Inquiry* 2023, 1-45.
- Chomsky, Noam (1957) *Syntactic Structures*, Mouton & Co., The Hague.
- Chomsky, Noam (2000) "Minimalist Inquiries: The Framework," R. Martin, D. Michaels, J. Uriagereka, and S. J. Keyser (eds.). *Step by Step*, 89-155, MIT Press, Cambridge, MA.
- Chomsky, Noam (2001) "Derivation by Phase," M. Kenstowicz (ed.). *Ken Hale: A Life in Language*, 1-52, MIT Press, Cambridge, MA.
- Chomsky, Noam (2013) "Problems of Projection," *Lingua* 130, 33-49.

- Culicover, Peter and Ray Jackendoff (1997) "Semantic Subordination Despite Syntactic Coordination," *Linguistic Inquiry* 28, 195-217.
- Haegeman, Liliane (2006) "Argument Fronting in English, Romance CLLD, and the Left Periphery," R. Zanuttini, H. Campos, E. Herburger, and P. H. Portner (eds.). *Negation, Tense and Clausal Architecture: Cross-linguistic Investigations*, 27-52, Georgetown University Press, Washington, DC.
- Haegeman, Liliane (2012a) "The Syntax of MCP: Deriving the Truncation Account," L. Aelbrecht, L. Haegeman and R. Nye (eds.). *Main Clause Phenomena: New Horizons*, 113-134, John Benjamins, Amsterdam/Philadelphia.
- Haegeman, Liliane (2012b) *Adverbial Clauses, Main Clause Phenomena, and the Composition of the Left Periphery: The Cartography of Syntactic Structures*, Oxford University Press, Oxford.
- Haiman, John (1978) "Conditionals Are Topics," *Language* 54. 564-589.
- Jespersen, Otto (1909) *A Modern English Grammar on Historical Principles Vol. 5: Syntax (Fourth Volume)*, George Allen & Unwin Ltd, London.
- Johannessen, Janne Bondi (1998) *Coordination*, Oxford University Press, Oxford.
- Keshet, Ezra and Ddavid Medeiros (2019) "Imperatives under Coordination," *Natural Language and Linguistic Theory* 37(3), 869-914.
- Lakoff, George (1986) "Frame Semantic Control of the Coordinate Structure Constraint," *Papers from the Parasession on Pragmatics and Grammatical Theory*, 152-167, Chicago Linguistic Society, Chicago, IL.
- Marchese, Lynell (1977) "Subordinate Clauses as Topics in Godie," *Studies in African Linguistics Supplement* 7, 157-164.
- Munn, Alan (1993) *Topics in the Syntax and Semantics of Coordinate Structures*, Doctoral thesis, University of Maryland.
- Oda, Hiromune (2017) "Two Types of the Coordinate Structure Constraint and Rescue by PF Deletion," *Proceedings of North East Linguistic Society (NELS)* 47, 343-356.
- Rackowski, Andrea and Norvin Richard (2005) "Phase Edge and Extraction: A Tagalog Case Study," *Linguistic Inquiry* 36(4), 565-599.
- Rizzi, Luigi (1997) "The Fine Structure of the Left Periphery," L. Haegeman (ed.). *Elements of Grammar: Handbook of Generative Syntax*, 281-338, Kluwer, Dordrecht.
- Ross, John Robert (1967) *Constraints on Variables in Syntax*, Doctoral thesis, Massachusetts Institute of Technology.
- Taylor, Heather (2007) "Movement from IF-clause Adjuncts," *University of Maryland Working Papers in Linguistics* 15, 192-206.
- Weisser, Philipp (2015a) "The Syntactic Side of Conditional Conjunction," *Lingua* 153, 42-65.
- Weisser, Philipp (2015b) *Derived Coordination: A Minimalist Perspective on Clause Chains, Converbs, and Asymmetric Coordination*. De Gruyter, Berlin.
- Yoshimura, Riichi (2021) "The Structural Asymmetry Between Finite and Non-finite Adjunct Clauses in English," *English Language and Linguistics*, vol. 27-3, 47-80.

Passivization by Voice: A Merge-Based Approach

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Keywords: passivization, voice, subject, argument, merge

1. Introduction

At least two syntactic views on how passive semantics is assigned are available in the generative literature. On the mainstream (Chomskyan) view, passive semantics is configurationally assigned by promoting the patient and suppressing the agent. By contrast, it was recently proposed that passive semantics is assigned by a dedicated Voice head that does not project agents (Embick 2004b, Schäfer 2008b, Bruening 2012, Harley 2013, Legate 2014, Alexiadou et al. 2015, Legate et al. 2020). I label such a head and its equivalents “–D Voice”. –D Voice was postulated in parallel with Kratzer’s (1996) Voice, which introduces the external argument (agent). –D Voice has nothing to do with passivization as a syntactic operation, yet it was assumed to contribute to producing a passive meaning. On the mainstream (Chomskyan) view, however, passivization as a syntactic operation goes hand in hand with producing a passive meaning.

This controversy, as we will see in this paper, is due to the failure to correctly identify passivization as successive-cyclic movement and correctly characterize Voice as a syntactic head introducing (potential) subjects. Ever since Chomsky (1981), it has been assumed that passivization is one-step movement of the patient to the surface subject position. In this paper, I demonstrate that the subject of passives stops over in an intermediate position before reaching the NOM position.

2. Evidence for passivization as a short movement

I use the informal term “short movement” to refer to the object’s movement that targets Spec of a head in the voice domain and “long movement” to refer to its movement that targets Spec of T. In this section, I present evidence that passivization is a short movement, rather than a long movement.

(1) Passivization as a short movement: $[_{TP} [_{VoiceP} DP [_{VP} t_{DP}]]]$

(2) Passivization as a long movement: $[_{TP} DP [_{VoiceP} [_{VP} t_{DP}]]]$

Evidence comes from Japanese causative-of-passive sentences (passive embedded under causative) in which the patient of the verb stem occurs as a causee and is assigned dative case (DAT). Obviously, causative-of-passive sentences such as (3) are derived out of a passive phrase, as discussed by Saito (1982: 92) and Aoyagi (2021: 99).

- (3) Ziroo-ga Hanako-o/ni Taroo-ni sikar-are-sase-ta.
 Ziro-NOM Hanako-ACC/DAT Taro-DAT scold-PS-CS-PST
 ‘Ziro made Hanako be scolded by Taro.’ (Tsujimura 1996: 259)

In (3), the passive phrase is not directly embedded under T, which is spelled out by *-ta*, but by a causative head, which is spelled out by *-sase*. A passive phrase can certainly be embedded under T, as in (4).

- (4) Hanako-ga Taroo-ni sikar-are-ta.
 Hanako-NOM Taro-DAT scold-PS-PST
 ‘Hanako was scolded by Taro.’ (Tsujimura 1996: 258)

Note that the patient *Hanako* in (4) is not base-generated in its surface position since that position is not thematic, but within the thematic domain *vP* as an object.

- (5) ... Hanako_i ... [_{VP} Taroo [_{VP} *t_i* sikar] -are] ...

The same holds true in (3), in which the surface position of *Hanako* cannot be thematic. If it were a theta position, *sikar-are* ‘be scolded’ would be a complex intransitive verb, which assigns a theta role to *Hanako* as a thematic subject, and *-are* would not be a passive morpheme but part of the verb stem. However, as a fact, *sikar-are* is not an intransitive verb but the passive form of the transitive verb *sikar* ‘scold’, as evidenced by its ability to occur with the agentive *by*-phrase *ni yotte*.

- (6) Ziroo-ga Hanako-o/ni Taroo-ni yotte sikar-are-sase-ta.
 Ziro-NOM Hanako-ACC/DAT Taro-to owing scold-PS-CS-PST
 ‘Ziro made Hanako be scolded by Taro.’ (Hoshi 1999: 208)

The surface position of the non-NOM subject *Hanako* is not Spec of a non-finite TP. If it were, *Hanako* would not be differentially marked by DAT (*-ni*) and ACC (*-o*), given that only alternation of NOM (*-ga*) and GEN (*-no*) is possible in Spec of TP in Japanese. In addition, in Japanese, which is an agglutinative language, causatives, syntactic or lexical, do not involve projection of embedded TP (Harley 2008, 2013); a causee always occupies Spec of a non-T head.

To conclude the above discussion, in (3), the non-NOM subject *Hanako* is base-generated

as an object and is promoted to Spec of a head lower than T, which is a NOM-assigner. This leads to the possibility that the surface subject (SBJ) of the sentence is in fact promoted from the same position as that where the embedded *Hanako* in (3) occurs, assuming that uniformity of derivation obtains between the passive phrases in (3) and (4). That is, passivizations of *Hanako* in (3) and (4) are identical operations. The structure of the uniform passive phrase is represented in (7).

(7) [_{XP} Hanako_i [_{VP} Taroo [_{VP} *t_i* sikar]] -are]

When XP, which is not TP, in (7) is selected by a causative head *-sase*, *Hanako* remains in Spec of XP, thereby yielding a causative-of-passive structure as in (3), and when XP is selected by T, *Hanako* further moves into Spec of TP, yielding an unembedded passive structure as in (4). Importantly, passivization is already completed by promoting *Hanako*, regardless of where it ends up in the surface structure. That is, passivization is a short step movement, not a long step one. This is exactly what Baker's (1985) Mirroring Principle (MP) predicts. Affixation of the passive morpheme *-are* and promotion of the patient by the head spelled out by *-are* are linked and mirror each other. The linking and mirroring fail if promotion of the patient targets Spec of TP directly, skipping over Spec of XP, because that promotion is not owing to X, which is spelled out by *-are*. Therefore, treating passivization as a one-step movement (Chomsky 1981 and much subsequent literature) is wrong, as correctly predicted by MP.

In what follows, let us elaborate on the morphology-syntax mirroring of A-to-D raising in causative-of-passive sentences. Notate the passive morpheme *-are* as PS and the causative one *-sase* as CS. Passivization takes place before causativization, which are both syntactic operations, as mirrored by the morphological string PS-CS. This means that promotion of *Hanako* must precede introduction of *Ziroo*.

(8) [Ziroo-ga [Hanako-o/ni [Taroo-ni [Hanako sikar] -are] -sase] ...

Assume that to promote an element is to reintroduce (internally merge) it in a higher position. As predicted by MP, (re)introduction of the patient *Hanako* and the causer *Ziroo* take place hand in hand with affixation of PS *-are* and CS *-sase*, respectively, as shown by the dotted lines. (Re)introduction of *Ziroo* in Spec of TP (left out in (8)), which follows that of *Hanako* in Spec of XP, then takes place hand in hand with affixation of the tense morpheme *-ta*, which follows PS-CS. Obviously, one-to-one correspondences hold between (re)introduction of the arguments as syntactic operations and affixation of the morphemes in order.

Similarly, in (9), affixation of *-are* mirrors and bound with (re)introduction of *Hanako* in Spec of XP, whose head is *-are*. What mirrors (re)introduction of *Hanako* in Spec of XP is not affixation of the tense morpheme *-ta*, since *-ta* is not the exponent of X, but of T. Affixation of *-ta*, however, mirrors and is bound with (re)introduction (further promotion) of *Hanako* in Spec of TP.

(9) [Hanako-ga [Taroo-ni [~~Hanako~~ sikar] -are] ...

On the one-step movement/long movement view of passivization, (re)introduction (further promotion) of *Hanako* would be mirrored and bound by the affixation of *-ta*, not by that of *-are*, rendering *-are* irrelevant with passivization of *Hanako*, contra the fact.

All this holds true of the case in which the causee, the passivized patient *Hanako* or *Dorž* in (10), is assigned ACC.¹ In (10), a Mongolian causative-of-passive sentence, the patient *Dorž* undergoes promotion and precedes the agent *aav*. As represented in (11), affixation of PS *-gd* is bound with reintroduction of *Dorž*, which represents passivization, and affixation of CS *-uul* with introduction of the causer (dropped in this sentence), which represents causativization.

(10) Dorž-ig aav-d-ni tani-gd-uul-h-gui-in tuld sahal naa-san.
 Dorž-ACC father-DAT-RX recognize-PS-CS-INF-NEG-GEN for beard attach-PST
 ‘In order not to make Dorž recognized by his father, I attached beard to his face.’
 (Umetani 2006: 95)

(11) [Causer [Dorž-ig [aav-d-ni [Dorž tani] -gd] -uul] ...

To sum up this section, passivization is created by promoting the patient to a position higher than the agent, which is suppressed (case-downgraded), and, importantly, passivization that involves a NOM subject is successive-cyclic.

3. Introducing passive subjects through Voice

A consequence of the elaboration on the successive-cyclicality of passivization is that the subject of passives is introduced by an argument-introducer much as in active sentences. Given that promotion of the patient and suppression of the agent make up the core property of the passive, which is the voice proper, it is not deniable that a passivizing head can introduce an argument. This means that the passivizing head *X* in (7) is an argument-introducer like Kratzer’s (1996) Voice (or Chomsky’s 1995 *v*). Note that *X*, a passivizing head, internally merges (reintroduces) arguments and Voice, a transitivity (or causativizing) one, externally merges (first-introduces) them. Importantly, then, this yields no difference between the passivizing head *X* and the transitivity head Voice (roughly the same as *v* in (7)) with respect to their ability to introduce arguments. It then follows that the passivizing head *X* is also Voice, following Kratzer’s argumentation that Voice is an argument-introducer. Accordingly, the syntactic difference between actives and passives lies in the difference between external merge (EM) and internal merge (IM) and the height of the positions where EM and IM take place.

However, the passivizing Voice and the transitivity Voice are not the very same head; they are distinct instances of Voice instead. That is, VoiceP splits into two separate projections and the head of each (re)introduces the agent and the patient, respectively. Thus, the voice domain

is in fact a Voice-over-Voice configuration as in (12).

(12) ... [_{VoiceP2} Patient_i [_{VoiceP1} Agent [_{VP} *t_i* ...

To rewrite (7) using (12), we get (13).

(13) [_{VoiceP2} Hanako_i [_{VoiceP1} Taroo [_{VP} *t_i* sikar]] -are]

This leads to Nie's (2020) argumentation that causatives have a Voice-over-Voice structure. Combining Nie (2020) and (7), we arrive at the conclusion that causative-of-passive sentences have a three-layered Voice structure, in which the causer, e.g. *Ziroo* in (3) and the dropped subject in (10), is introduced by Voice3 via EM, as represented below.

(14) [_{VoiceP3} Causer [_{VoiceP2} Patient_i [_{VoiceP1} Agent [_{VP} *t_i* ...

In (14), the passivizing head Voice2 is sandwiched between Voice1 and Voice3, which are both transitivizing heads. Importantly, all the separate heads split out of Voice are argument-introducers. In this sense, VoiceP is a split projection much like CP, which splits into separate projections such as FocP and TopP.

If the Split VoiceP analysis is on the right track, it predicts that it is always the highest argument (the last-merged one) that is promoted to the NOM subject (SBJ), regardless of whether the sentence is active/causative or passive. This is not predicted by the mainstream one-step movement approach to passivization. It then naturally follows that SBJ of both active and passive sentences is a Voice-internal subject. Much as vP-internal (VoiceP1-internal) subjects of actives, subjects of passives are internal to VoiceP2, where they are assigned subjecthood. That is, all arguments are potential subjects (Sbj). In the course of derivation, clauses can have more than one sbj introduced by Voice but only one SBJ. The the last-merged sbj (the highest one) becomes SBJ.

This leads us to the conclusion that Voice is not merely an agent-introducing head; it is instead a sbj-introducing head, sbj being either an agent or a patient. The split property of Voice connects to its ability to derive voice alternants including passives and causatives. That is, Voice is the single engine that syntactically derives voice alternations. This challenges previous approaches that were proposed in favor of division between argument-introducing Voice (+D Voice) and -D Voice.

Since the passive, as one of the voice alternants, does not necessarily realize an overt agent, quite many studies including Embick (2004b), Schäfer (2008b), Bruening (2012), Harley (2013) and Alexiadou et. al. (2015) have assumed agent-less/-D Voice in various flavors. They, however, are explicitly criticized by Collins (2024), who presents empirical evidence for and theoretical reasoning to the position that external arguments, whether overt or implicit, are syntactically projected in passives.² Collins' (2024) theoretical reasoning is based on his

Argument Criterion, which is presented in parallel with Chomsky's (1981: 36; 1986: 97) Theta-Criterion.

(15) Argument Criterion (AC)

- a. Each argument is introduced by a single argument-introducing head.
- b. Each argument-introducing head introduces a single argument. (Collins 2024: 8)

One effect of Argument Criterion is that it prevents an argument-introducing head from introducing no argument because it forces a bijection (one-to-one relation) between argument-introducing heads and arguments (Collins 2024: 9). Incorporating Argument Criterion into the Split VoiceP analysis brings about the following condition.

(16) Anti-Vacuous Condition (AVC)

A morphologically overt Voice head does not project a semantically vacuous Spec.

AVC, being well compatible with AC, predicts that no head with voice semantics (i.g. passive, causative, etc.) exists without introducing *sbj*, contra the –D Voice view. According to the –D Voice view, passive and causative semantics is predetermined by dedicated voice-specifying features like [PASSIVE] and [ACTIVE]/[CAUSE] postulated for a Voice-like head. However, a feature-based creation of passive and causative semantics is in fact a last-resort and not preferred since such features, unlike [CASE], [ϕ] and [FINITE/TENSE], which are all primitive, are not well-motivated. Chomsky's (1981) classic analysis predicts that a passive meaning is produced by a configuration in which the patient is promoted skipping over the agent, but not produced by postulating semantic features on formal heads. Unfortunately, the classic one-step movement analysis, though it is rooted too deep to cast off from sentence syntax and word syntax, faces empirical problems, not regarding passive semantics though.

The crux of the matter in dealing with the dilemma in the classic analysis and the controversy between it and the lately developed –D Voice analysis is to abandon the deep-rooted one-step tradition and to find an alternative way to account for what was intended by Chomsky (1981), without violating the conceptual standards such as the severing of the external argument from the verb and making nominative subjects originate as potential subjects invariably in actives and passives. As to the technical machinery to use for this purpose, –D Voice should be abandoned, too, for the above mentioned reasons.

Taking external and internal arguments to be instances of *sbj* as a conceptual standard, the Split VoiceP analysis accounts for the problems with both the one-step movement approach and the –D Voice approach. On the Split VoiceP view, passive semantics is assigned by the Voice-over-Voice configuration.³ That is, introducing an argument through Voice via IM produces passive semantics.⁴

4. Conclusion

In this paper, I have argued for the claim that arguments are introduced as potential subjects by Voice, which is the single syntactic head endowed with the argument-introducing ability in the universal inventory of functional elements, echoing Kratzer’s (1996: 120) statement that Voice is truly at the heart of a theory of voice. To summarize the discussion in this paper:

- a. Passivization is created by internally merging the patient argument through Voice;
- b. The NOM subject of passives as well as that of actives is a Voice-internal subject in that it is introduced beforehand by Voice to get assigned subjecthood;
- c. The voice domain is a Split VoiceP structure and clauses are built by introducing (a) potential subject(s) through separate Voice heads and promoting a last-merged one to the NOM position, with others being suppressed or demoted;
- d. Voice is not merely an external-argument-introducing head; it is a potential-subject-introducing head;
- e. Voice as a syntactic head is the single engine that manipulates voice alternants such as passives and causatives;
- f. Passive and causative semantics is assigned by the Voice-over-Voice configuration of Split VoiceP;
- g. No dedicated heads such as Passive, Voice_[passive], Voice_[active], Cause, v and their equivalents are necessary, nor are dedicated voice-specifying features;
- h. Introduction of arguments comes down to the simplest operation Free Merge (Chomsky 2013, 2015): (Re)merger of an argument, external or internal, is unconstrained; UG requires just this much for voice phenomena.

NOTES

¹ The differential case-marking of the causee in Japanese causatives, including causative-of-passive sentences, seems to have to do with semantic factors such as affectedness, volition, animacy, and so on; it is not purely syntactic.

² Surprisingly, however, Collins (2024) refutes Kratzer (1996) altogether with those who advocate Inert Voice, by introducing agents through v, a head lower than Voice and stating that “VoiceP has nothing to do with projecting the external argument, but is rather implicated in how the argument DPs are realized in A-positions” (Collins 2024: 109). However, Collins’ (2024) separation of Voice from its argument-introducing ability remains problematic because if agents were introduced by v, not by Voice, they would not be argument severed from the verb. Note that Voice, in Kratzer’s (1996) theory, is the lowest head that can sever the external argument from the verb.

³ This paper adopts the following definition of passive subject.

- (i) If DP instantiates DP(λy (P y, x, t_y)), where y is lower than x , x being non-nominative, in the thematic hierarchy with respect to the predicate P, then P is passive and DP is subject of P.

“Passive semantics” then refers to the meaning interpreted for such a configuration. On a –D Voice view, it would be the case that what solely contributes to producing the passive meaning

is the agent-suppressing property of the –D voice head, or a dedicated voice-specifying feature like [passive/non-act] on it. That is, syntax is not truly autonomous in producing the passive meaning on a –D Voice view, which would not specify a configuration such as “(P x, y)”, appealing only to non-nominative y, for deriving passives.

⁴ Introducing an argument via EM produces causative semantics. Also see Nie (2020: 105, 115), who demonstrates that causative semantics is assigned configurationally.

REFERENCES

- Aoyagi, Hiroshi (2021) “On the Causative and Passive Morphology in Japanese and Korean,” *Open Linguistics* 7: 87-110.
- Alexiadou, Artemis, Elena Anagnostopoulou and Florian Schäfer (2015) *External Arguments in Transitivity Alternations: A Layering Approach*, Oxford University Press, Oxford.
- Baker, Marc (1985) “The Mirror Principle and Morphosyntactic Explanation,” *Linguistic Inquiry* 16: 373-415.
- Bruening, Benjamin (2012) “By-phrases in Passives and Nominal,” *Syntax* 16: 1-41.
- Chomsky, Noam (1981) *Lectures on Government and Binding*, Foris, Dordrecht, The Netherlands.
- Chomsky, Noam (1986) *Knowledge of Language: Its Nature, Origin, and Use*, Praeger, New York, NY.
- Chomsky, Noam (1995) *The Minimalist Program*, MIT Press, Cambridge, MA.
- Chomsky, Noam (2013) “Problems of Projection,” *Lingua* 130: 33-49.
- Chomsky, Noam (2015) “Problems of Projection: Extensions,” *Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti*, ed. by Elisa Di Domenico, Cornelia Hamann and Simona Matteini, 3-16, John Benjamins, Amsterdam.
- Collins, Chris (2024) *Principles of Argument Structure: A Merge-Based Approach*, MIT Press, Cambridge, MA.
- Embick, David (2004b) “On the Structure of Resultative Participles in English,” *Linguistic Inquiry* 35: 355-92.
- Harley, Heidi (2008) “On the Causative Construction,” *Handbook of Japanese Linguistics*, ed. by Miyagawa, S. and Saito, M., 20-53, Oxford University Press, Oxford.
- Harley, Heidi (2013) “External Arguments and the Mirror Principle: On the Distinctness of Voice and v,” *Lingua* 125: 34-57.
- Hoshi, Hiroto (1999) “Passives,” *The Handbook of Japanese Linguistics*, ed. by Natsuko Tsujimura, 191-235, Blackwell, Malden MA.
- Kratzer, Angelika (1996) “Severing the External Argument from Its Verb,” *Phrase Structure and the Lexicon*, ed. by J. Rooryck and L. Zaring, 109-137, Kluwer, Dordrecht.
- Legate, Julie A (2012) “The Size of Phases,” *Phases: Developing the Framework*, ed. by Ángel J. Gallego, 233-250, Mouton de Gruyter, Boston, MA.
- Legate, Julie A (2014) “Voice and v: Lessons from Acehnese,” MIT Press, Cambridge, MA.
- Legate Julie A., Faruk Akkuş, Milena Šereikaitė, Don Ringe (2020) “On Passives of Passives,”

Language 96: 771-818.

Nie, Yining (2020) “Morphological Causatives are Voice over Voice,” *Word Structure* 13: 102-126.

Saito, Mamoru (1982) *Case Marking in Japanese*. Unpublished manuscript, MIT Press, Cambridge, MA.

Schäfer, Florian (2008b) *The Syntax of (Anti-)Causatives: External Arguments in Change-of-state Contexts*, John Benjamins, Amsterdam.

Shibatani, Masayoshi (1976) “The Grammar of Causative Constructions: A Conspectus,” *Syntax and Semantics: The Grammar of Causative Constructions*, ed. by Masayoshi Shibatani, 1-39, Academic Press, London.

Tsujimura, Natsuko (1996) *An Introduction to Japanese Linguistics*, Blackwell, Malden, MA.

Umetani, Hiroyuki (2006) “Serial Use of the Passive and Causative Suffixes in Mongolian,” *Gengo kenkyuu no shyatei*, ed. by Kato Shigehiro and Yoshida Hiromi, 83-102, Sanbi Insatu, Tokyo.

Question-Response Pairs with Subjective Predicates*

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Keywords : focus, question-answer congruence, subjective predicates

1. Introduction

The goal of this article is to show that subjective predicates can disrupt the question-answer congruence. The discussion centers around one of the important observations by Kuroda (2005).

The question-answer congruence is illustrated in (1).

- (1) Q: Who stole the cookie?
A: *John* stole the cookie.

As is well known (Krifka and Musan (2012), Rooth (1992), Velleman & Beaver (2016)), in an answer required by a wh-question, the phrase that corresponds to the wh-phrase must be focus marked. In (1A), for example, *John* is phonologically prominent, fulfilling this requirement. When examining this point, it is important to distinguish answers from responses (Belnap (1982)). Though (1Q) can be followed by (2), it is clear that (2) does not count as an answer.

- (2) I don't know.

It is just one of the possible responses. This article points to the existence of more subtle types of responses.

Now, Kuroda takes up the status of Japanese *wa*-marking in a response to a wh-question. His claim is that the particle *wa* cannot be the topic marker, as is usually thought, because it can be attached to the focused phrase in an answer to a wh-question. Curiously, Kuroda uses the term “response” instead of “answer” in the relevant cases, but since responses do not bring question-answer congruence into play, I assume that Kuroda meant “answers” in the technical sense of the term.

2. Kuroda's Argument

Let us examine the case that concerns us. Kuroda observes that the exchange in (3) is not odd, despite the fact that *Natsume Soseki*, which corresponds to the wh-phrase, is marked by the particle *wa*, usually regarded as the topic marker (Tomioka 2016).

- (3) a. Dare-ga nihon-ichi-no sakka-desu-ka?
 who-Nom Japan-one-Link writer-be.Polite-Q
 ‘Who is the greatest writer of Japan?’
- b. Natsume Soseki-wa, dare-ga nan-to itte-mo, nihon-ichi-no sakka-desu.
 Natsume Soseki-Top who-Nom what-Quot say-MO Japan-one-Link writer-be.Polite
 ‘Natsume Soseki is the greatest writer of Japan, no matter who says what.’

If (3b) counts as an answer to (3a), it is not correct to characterize *wa* as the topic marker, assuming that the topic marker cannot be attached to a focused phrase. Kuroda concludes, in view of other examples as well, that *wa* is something other than the topic marker.

Notice that this is not a general phenomenon in Japanese. As an answer to the Japanese version of (1Q), (4) is clearly odd, whether the parenthesized material is present or not.

- (4) #John-wa (dare-ga nan-to itte-mo) kukkii-o nusunda.
 John-Top who-Nom what-Quot say-MO cookie-Acc stole
 ‘John stole the cookie (no matter who says what).’

Of course, replacing *wa* with the nominative case particle removes the oddness, putting aside the problematic nature of the parenthesized material. What makes the difference between these two cases, then?

I would like to suggest that research results accumulated since 2005 enable us to identify what lies behind the difference. Once this is done, Kuroda’s argument about the particle *wa* based on cases like (3) will lose its force, though this is not our major concern here.

3. Faultless Disagreement and Answerhood

This section reviews the behavior of subjective predicates in the discourse context. The idea is that problematic cases like (3) feature subjective predicates, which readily allow a response to a wh-question that does not match the information structure configuration required by question-answer congruence. This is why responses like (3b) are possible. Let me proceed step by step.

Kölbel (2002) and Lasersohn (2005) point out that predicates of personal taste including *tasty* and *fun* exhibit the phenomenon of faultless disagreement. In (5), it is not the case that either John or Mary is wrong, even though they are disagreeing.

- (5) John: The chili is tasty.
 Mary: No, the chili is not tasty.

The situation is radically different in (6), which involves an objective predicate. Here, either John or Mary is wrong.

(6) John: Bill stole the cookie.

Mary: No, he didn't.

It has since been recognized that subjective predicates give rise to faultless disagreement in dialogues like (5).

Turning to Japanese, we find that the predicate used in (3) also gives rise to faultless disagreement, as in (7), which is to follow the wh-question given in (3a).

(7) A: Kawabata Yasunari-desu.

Kawabata Yasunari-be.Polite

'It's Kawabata Yasunari.'

B: Iya, chigau.

no differ

'No, it's not.'

Since the predicate in question is a kind of superlative, let me make sure that faultless disagreement arises in the case of superlatives. As noted by Kennedy (2013), this is indeed the case.

(8) A: Skiing is the most fun.

B: No, skating is the most fun.

(8) contrasts sharply with (9).

(9) A: Skiing is the most expensive.

B: No, skating is the most expensive.

At this point, it is worth mentioning that the phrase *dare-ga nan-to itte-mo* 'no matter who says what' in (3b) is an expression that presupposes a possible disagreement of this sort. (3b) anticipates that other people may have a different opinion. One wonders whether an answer to a wh-question can be accompanied by such hedging. It is very odd to add *dare-ga nan-to itte-mo* to an answer in the case of objective predicates. The nominative subject version of (4) above is ok as an answer only when the parenthesized material is absent. Perhaps opinions must be distinguished from answers when one tries to understand what is going on in (3).

Note also that faultless disagreement is a discourse phenomenon. Beltrama (2018) takes up the discourse profile of subjective predicates from a more general perspective of Common Ground update. The discussion is based on two experiments, one assessing the effects of a silent response and the other how a denial is handled.

Both experiments start with three types of utterances, a subjective assertion, an object assertion, and a polar question. In the first experiment, the interlocutor responds by silence, and the subjects are asked to evaluate whether the mutual knowledge of the interlocutors has changed with the addition of a new

proposition. (10) gives a rough outline.

(10) Experiment 1

Greg: The movie was awesome. [Subjective Assertion]
The movie was set in 1995. [Objective Assertion]
Was the movie set in 1995? [Polar Question]

Mary: **Silence**

Statement to assess: “It is now part of Greg and Mary’s mutual knowledge that *p*.”

The silence following a polar question, of course, does not lead to an update, whereas the content of an objective assertion is added to the Common Ground to a significant degree. A subjective assertion comes in between, leading to an update to some extent but not as dramatically as an objective assertion.

The second experiment examines how denial of an assertion is treated as a conversational move. Two types of reactions to a denial, welcoming and insisting ones, are contrasted, as in (11).

(11) Experiment 2

Greg: The movie was awesome. [Subjective Assertion]
The movie was set in 1995. [Objective Assertion]
Was the movie set in 1995? [Polar Question]

Mary: No, it was not!

Greg: Aha, interesting to hear. [**Welcoming**]
No way! That can’t be true. [**Insisting**]

Q: How natural does Greg’s response sound?

The task for the subjects is to judge the naturalness of the welcoming and insisting responses to the denial.

Note that this experiment helps measure reactions to faultless disagreement when a subjective assertion is denied. The results indicate that the insisting response is less natural in the case of subjective assertions than in the case of objective assertions, but more natural than in the case of polar questions. The welcoming response displays the opposite pattern.

Beltrama interpret the results of these two experiments as showing that the Common Ground is not updated in the case of subjective assertions unless all discourse participants share the same evaluation. It is therefore not so disruptive to deny a subjective assertion, faultlessness of disagreement being a straightforward consequence of the discourse properties of subjective predicates. See also Wolf (2016) for a similar idea.

In view of this information structure status of subjective predicates, let us now return to question-answer congruence. Wh-questions are usually thought to be requests to update the Common Ground. Answers are added to the Common Ground, if not contested. Question-answer congruence helps make sure that the proposition represented by the answer is indeed chosen from the set of alternatives specified by the question. Notice that most of the job is done once the skeletal form of the proposition is identified.

If asked “Who stole the cookie?”, for example, one only needs to check whether the answer is a proposition of the form *x stole the cookie*, which is easily obtained from the answer by ignoring details about the focused phrase. One does not have to run through all the alternative propositions to see whether any one of them matches the answer. In other words, focus marking is used to monitor the Common Ground update. See Krifka and Musan’s (2012: 9–10) discussion.

Things are different in the case of subjective predicates, though. If a subjective assertion does not lead to updating of the Common Ground as straightforwardly as an objective assertion, *wh*-questions cease to function as requests to update the Common Ground. A variety of responses, then, become available as natural options, for a subjective assertion can simply be thrown into conversation for other interlocutors to evaluate. One possibility is to use a version with an overt expression of the judge, as in (12a). Another is (3b), repeated here as (12b).

- (12) a. *Watashi-nitotte-wa, Natsume Soseki-ga nihon-ichi-no sakka-desu.*
 I-for-Top Natsume Soseki-Nom Japan-one-Link writer-be.Polite
 ‘Natsume Soseki is the greatest writer of Japan for me.’
- b. *Natsume Soseki-wa, dare-ga nan-to itte-mo, nihon-ichi-no sakka-desu.*
 Natsume Soseki-Top who-Nom what-Quot say-MO Japan-one-Link writer-be.Polite
 ‘Natsume Soseki is the greatest writer of Japan, no matter who says what.’

As discussed in detail by Stephenson (2007), many predicates of personal taste can take an overt judge argument in the form of PP. And in the presence of such an argument, disagreement is not faultless any longer, as shown in (13).

- (13) Mary: How was the party?
 Sam: It was fun for me.
 Sue: #No, it wasn’t.

Likewise, the presence of a judge argument in (12a) makes it impossible to disagree with it faultlessly. You cannot respond to (12a) with a denial such as (7B).

The possibility of mentioning an overt judge suggests that subjective assertions are inherently opinions entertained by specific individuals. Though Lasersohn (2005: 644) is hesitant about using the term on the grounds that one can have opinions about anything, a subjective assertion is necessarily accompanied by the holder of the view in question that is not yet shared by other speakers. (12a) makes this opinion holder explicit. See Bylinina (2017) for some discussion of explicit judge expressions in Japanese, though I do not agree with her take on *nitotte* ‘for’.

(12b) = (3b) is a response ignoring question-answer congruence. Since the Common Ground update is not a default option in the case of subjective assertions, there is no need to focus the phrase that corresponds to the *wh*-phrase. As far as this example is concerned, we can maintain the hypothesis that *wa* is a topic marker.

Note also that Kuroda (2005: 9) observes that (12b) = (3b) might be odd if *dare-ga nan-to itte-mo*

‘no matter who says what’ is absent. This hedge serves to indicate that the opinion expressed is none other than the speaker’s. Perhaps a response to a wh-question with a subjective predicate needs to make explicit the view holder for it to be relevant in the context. Apparently, an opinion cannot be put on the table without an indication of who holds that view when question-answer congruence does not hold. Interestingly, (12a) remains natural even if the judge expression is removed. In (12a), the nominative subject can function as a focused phrase, maintaining the link to the question through question-answer congruence.

From this perspective, it is interesting to see what will happen in the case of subjective predicates that do not take an overt judge expression.

4. Acquaintance Inferences

– Let us discuss another characteristic property of subjective predicates. It has been observed (Ninan (2014), Pearson (2013), Willer and Kennedy (2022)) that subjective assertions are accompanied by acquaintance inferences, as illustrated in (14), cited from Willer and Kennedy (2022: 822).

- (14) a. Sea urchin is tasty, ^{??}but I’ve never tried it.
 a’. Apparently, sea urchin is tasty, but I’ve never tried it.
 b. The Eiffel tower is beautiful, ^{??}but I’ve never seen it.

The proper treatment of the phenomenon is a matter of debate, but an unmistakable feature of it is the fact that the deviance of the continuation in (14a) is obviated by expressions like *apparently*, as in (14a’). The deviance itself is due to a violation of the first-hand experience requirement. You cannot form an opinion about taste etc. without such an experience. Objective assertions are not subject to requirements of this sort, as can be seen from (15).

- (15) Bryan’s new car is blue, though I’ve never laid eyes on it. (Klecha (2014: 451))

The Japanese predicate that has been our focus of attention behaves in a similar way. The deviance of the continuation in (16a) disappears once a hedge indicating the indirectness of the information is added, as in (16b).

- (16) a. Natsume Soseki-wa Nihon-ichi-no sakka-da. ^{??}Watashi-wa yonda-koto nai-kedo.
 Natsume Soseki-Top Japan-one-Link writer-be I-Top read-C Neg-though
 ‘Natsume Soseki is the greatest writer of Japan. I haven’t read his works, though.’
 b. Natsume Soseki-wa Nihon-ichi-no sakka-da-sooda. Watashi-wa yonda-koto
 Natsume Soseki-Top Japan-one-Link writer-be-hearsay I-Top read-C
 nai-kedo.
 Neg-though
 ‘It’s said that Natsume Soseki is the greatest writer of Japan. I haven’t read his works, though.’

We can safely conclude that in Kuroda's crucial example, we are dealing with a subjective assertion.

5. Uncertainty about the Standard

Let me briefly go over two more cases of unusual *wa*-marking discussed by Kuroda (2005). In this section, I will take up a case where subjectivity of the standard plays a role.

Kuroda points to the obligatory *wa*-marking in (17A) in his attempt to refute the hypothesis that the particle is a topic marker.

(17) Q: Dare-ga oo-ganemochi-desu-ka?

Who-Nom big-rich-be.Polite-Q

'Who is very rich?'

A: Maikurosofuto-no shachoo-no Geitsu-san-wa/#-ga oo-ganemochi-desu.

Microsoft-Gen president-Link Gates-Mr-Top/-Nom big-rich-be.Polite

'Mr. Gates, the president of Microsoft, is very rich.'

Kuroda remarks (p. 7) that *ga*-marking leads to an implausible exhaustive listing implicature, resulting in infelicity. This much may be correct, but the information structure status of the subject as focused may not hold here.

To approach the problem, we first need to ask what kind of situation prompts questions like (17Q). One is where you are supposed to pick very rich people out of a specified group. But in this situation, Kuroda's comments do not necessarily hold true. There may be only one very rich person in a particular group, in which case *ga*-marking should be perfectly all right.

A more plausible scenario for the existence of multiple very rich people is the one in which you are asked about the standard of affluence and are expected to give a famous example. In this case, what is focused is the degree of wealth. An unambiguous way to ensure the intended interpretation is (18), to which the *wa*-marking version of (17A) can be a legitimate answer.

(18) Dore-kurai-da-to oo-ganemochi-desu-ka?

Which-extent-be-Cond big-rich-be.Polite-Q

'How rich is very rich?'

I should add that before drawing any conclusion from (17), one needs to elucidate the contribution of a conditional in (18).

The use of gradable predicates to give the standard is discussed by Barker (2013), who points to the following exchange:

(19) Q: I'm new around here. What counts as tall?

A: [pointing] John is tall.

Barker points out that (19A) helps clarify the standard of tallness. (17A) can be used for the same

purpose, except that the size modifier *oo-* acts as an intensifier, pushing up the standard. See Watanabe (2021) on this prefix.

Kennedy (2013: 274) claims that the standard value of vague predicates also belongs to the domain of subjectivity and that it can give rise to faultless disagreement. How the Common Ground update works in this type of subjectivity has not been addressed, as far as I am aware. Given the particle *wa*, Japanese may provide informative testing grounds.

6. More on Answerhood

As our last example, let us turn to an example that does not involve subjectivity. Kuroda (p. 42) points out that (20A) has a flavor of incompleteness.

- (20) Q: Dare-ga Toyota-no zimuin-desu-ka?
Who-Nom Toyota-Gen office.worker-be.Polite-Q
'Who are office-workers of Toyota?'
A: Moita-san-wa Toyota-no zimuin-desu.
Morita-Mr.-Top Toyota-Gen office.worker-be.Polite
'Mr. Morita is an office-worker of Toyota.'

We cannot appeal to subjectivity to account for why the subject is marked with *wa*. What is going on?

Tomioka (2010) discusses a similar example, which is treated as an example of contrastive topicalization. Consider (21).

- (21) Q: Dare-ga shaken-ni ukatta-no?
Who-Nom exam-Dat passed-Q
'Who passed the exam?'
A: Ken-wa ukatta.
Ken-Top passed
'(At least) Ken passed.'

As the translation indicates, (21A) is a nuanced answer. That nuance is due to the incomplete nature of the answer. In other words, (21A) is a partial answer in the sense of Groenendijk and Stokhof (1984).

(20A) is essentially the same. (21A) may generate more subtleties because one may not want to talk about other people's failures, as detailed by Tomioka. But these differences do not matter. Contrastive topicalization is something one needs to factor out when question-answer congruence is examined. Answers to multiple *wh*-questions demonstrate the point straightforwardly, because contrastive topicalization is the norm in that case, as illustrated in (22).

- (22) Q: Dare-ga nani-o katta-no?
Who-Nom what-Acc bought-Q
'Who bought what?'

A: Taro-wa biiru-o, Hanako-wa wain-o, Tomu-wa chiizu-o katta.
Taro-Top beer-Acc Hanako-Top wine-Acc Tom-Top cheese-Acc bought
'Taro bought beer, Hanako bought wine, and Tom bought cheese.'

See Buring (2016) on contrastive topics in general, and Tomioka (2010) on various aspects of contrastive topics in Japanese.

6. Conclusion

I hope to have shown that it is important to pay close attention to predicate types when investigating discourse involving wh-questions. Subjective assertions do not lead to immediate updating of the Common Ground, with the result that question-answer congruence ceases to be in effect. It is quite remarkable that Kuroda (2005) concentrates on stative predicates in his discussion of topicalized subjects. Such skewed data coverage may be an indication that we are missing something.

Delimiting the range of subjective predicates is on the current research agenda (Stojanovic and Kaiser (2022)). This paper has picked up only one such predicate in the superlative. Quite interestingly, the gradable predicate used is phonologically null. Judging from Kuroda's translation, it is reasonable to posit *idai-na* 'great'. It is a topic for future research to figure out what licenses such a null subjective predicate after superlative expressions like *Nihon-ichi*.

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REFERENCES

- Barker, Chris (2013) "Negotiating Taste," *Inquiry* 56, 240-257.
- Belnap, Nuel D. Jr. (1982) "Questions and Answers in Montague Grammar," *Processes, Beliefs, and Questions*, ed. by Stanley Peters and Esa Saarinen, 165-198, Reidel, Dordrecht.
- Beltrama, Andrea (2018) "Subjective Assertions Are Weak," *Sinn und Bedeutung* 22, 161-174.
- Buring, Daniel (2016) "(Contrastive) Topic," *The Oxford Handbook of Information Structure*, ed. by Caroline Féry and Shinichiro Ishihara, 64-85, Oxford University Press, Oxford.
- Bylinina, Lisa (2017) "Judge-Dependence in Degree Constructions," *Journal of Semantics* 34, 291-331.
- Groenendijk, Jeroen and Martin Stokhof (1984) "On the Semantics of Questions and the Pragmatics of Answers," *Varieties of Formal Semantics*, ed. by Fred Landman and Frank Veltman, 143-170, Foris, Dordrecht.
- Kennedy, Christopher (2013) "Two sources of subjectivity," *Inquiry* 56, 258-277.
- Klecha, Peter (2014) "Diagnosing Modality in Predictive Expressions," *Journal of Semantics* 31: 443-455.
- Kölbel, Max (2002) *Truth without Objectivity*, Routledge, London.
- Krifka, Manfred and Renate Musan (2012) "Information Structure: Overview and Linguistic Issues," *The Expression of Information Structure*, ed. by Manfred Krifka and Renate Musan, 1-43, De

Gruyter Mouton, Berlin.

- Kuroda, S.-Y. (2005) "Focusing on the Matter of Topic," *Journal of East Asian Linguistics* 14, 1-58.
- Lasnik, Peter (2005) "Context Dependence, Disagreement, and Predicates of Personal Taste," *Linguistics and Philosophy* 28, 643-686.
- Ninan, Dilip (2014) "Taste Predicates and the Acquaintance Inference," *SALT* 24, 290-309.
- Pearson, Hazel (2013) "A Judge-Free Semantics for Predicates of Personal Taste," *Journal of Semantics* 30, 103-154.
- Rooth, Mats (1992) "A Theory of Focus Interpretation," *Natural Language Semantics* 1, 75-116.
- Stephenson, Tamia (2007) "Judge Dependence, Epistemic Modals, and Predicates of Personal Taste," *Linguistics and Philosophy* 30, 487-525.
- Stojanovic, Isidora and Elsi Kaiser (2022) "Exploring Valence in Judgments of Taste," *Perspectives on Taste*, ed. by Jeremy Wyatt, Julia Zakkou, and Dan Zeman, 231-259. Routledge, London.
- Tomioka, Satoshi (2010) "Contrastive Topics Operate on Speech Acts," *Information Structure*, ed. by Malte Zimmermann and Caroline Féry, 115-138, Oxford University Press, Oxford.
- Tomioka, Satoshi (2016) "Information Structure in Japanese," *The Oxford Handbook of Information Structure*, ed. by Caroline Féry and Shinichiro Ishihara, 753-773, Oxford University Press, Oxford.
- Velleman, Leah and David Beaver (2016) "Question-Based Models of Information Structure," *The Oxford Handbook of Information Structure*, ed. by Caroline Féry and Shinichiro Ishihara, 86-107, Oxford University Press, Oxford.
- Watanabe, Akira (2021) "Saizu Shushoku no Keitai Tokusei (Morphological Properties of Size Modification)," *Rekishikon Kenkyu no Gendaiteki Kadai* (Current Issues in the Study of Lexicon), ed. by Hideki Kishimoto, 107-133, Kurosio Shuppan, Tokyo.
- Willer, Malte and Christopher Kennedy (2022) "Assertion, Expression, Experience," *Inquiry* 65, 821-857.
- Wolf, Lavi (2016) "Predicates of Personal Taste and the Evidential Step," *Subjective Meaning*, ed. by Cécile Meier and Janneke van Wijnbergen-Huitink, 69-89, De Gruyter, Berlin.

Toward a Fuller Symbolic View of Grammar: The Theoretical Orientation of Cognitive Phonology and Its Application to Japanese Prosody

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Keywords: cognitive phonology, subjectification, voice onset time

"Cognitive phonology is to be seen as an integral part of cognitive grammar. As such, it assumes that phonology, like the rest of language makes use of general cognitive mechanisms, such as cross-dimensional correlations." George Lakoff (1993:118)

1. Introduction

This paper proposes a case study of how cognitive linguistics can be utilized to analyze phonological phenomena. We shall demonstrate that the notion of subjectification (Langacker 2008), which has often been employed in cognitive grammar to analyze grammar and meaning, can also capture the phonologization process observed in phonological development from voiced/voiceless sound opposition to tonal differences (Hyman 1984; Ohala 1993). Demonstrating the parallelism between the grammaticalization process led by subjectification and phonologization, we suggest that the gradual shifts of voice onset time (VOT) observed in Japanese word-initial stop consonants (Takada 2011) can be reframed as a grammatical phenomenon that is in the early stage of subjectification. In Section 2, we first review the essential theoretical tenet of cognitive grammar, which has been called the "symbolic view of grammar" to clarify why the theory requires the accumulation of analyses of phonological phenomena. With this theoretical background, in Section 3, we show that phonological analysis with cognitive-grammar concepts is feasible through a case study of the Japanese VOT shift.

2. Theoretical Background

When Ronald Langacker launched cognitive grammar as a new paradigm of linguistic theory in the 1980's, the phonological description, including the relationship between phonetics and phonology, was in its descriptive range and progress was expected, as was that of semantic description, including the relationship between conceptualization and semantics. As shown in Figure 1, which may be a good illustration of how phonology fits into the overall theory, cognitive grammar is based on the symbolic view of grammar, in which the relationship between phonological units and the vocalization (i.e., phonetics) is assumed to be parallel to that of semantic units and conceptualization.

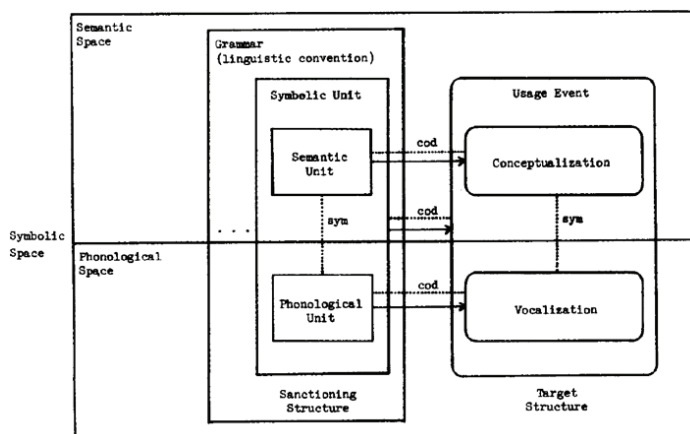


Figure 1 (Langacker 1987:77)

Langacker's (1987) most significant proposal on phonology was that phonological phenomena can be described utilizing the same theoretical notions (general cognitive abilities) as semantic phenomena when the former are regarded, much like the latter, as a conceptual organization schematized/abstracted from actual usage events (i.e., phonetic experience), the idea of which is shared by another founder of cognitive linguistics, George Lakoff, as shown in the quote at the beginning of this article.

More than 30 years after its inception, cognitive linguistics has grown into a major linguistic theory with many related conferences and journals. However, as many researchers have noticed, its success primarily resulted from the vigorous linguistic analyses of the relationship between conceptualization and semantic units, that is, the upper part of Figure 1, including construction-grammar analyses; however since there is little accumulated research on the relationship between vocalization and phonological units, this is not due to the phonological analyses found in the bottom part of Figure 1. Nevertheless, Bybee's series of studies (e.g., Bybee 2001) might be considered an exception though her description does not actively incorporate the general cognitive mechanisms into an explanation of phonological phenomena, placing more emphasis on the frequency effect on phonological structures. I, therefore, believe that more research is needed on the bottom part of Figure 1 to prove our thesis that general cognitive abilities shape not only meaning but also the language as a whole.

3. Subjectification and the Japanese Voice Onset Time

With the characteristics of Japanese VOT, our goal is to provide a case study in which phonologization can be explained in parallel with semanticization and grammaticalization. In this section, we will first review a classic example of the semantic extension that accompanies the process of subjectification, English *be going to* (Langacker 2008). Then, based on Ohala (1993) and Hyman (1984), we observe the phonological process of how the tonal distinction could historically develop out of the prevocalic voiced/voiceless sound opposition. After pointing out that these two linguistic phenomena can be captured in an integrated way, we proceed to the issue of how the subtle historical VOT shift observed in the Japanese word-initial stop consonants is characterized with regard to subjectification.

Let us start our discussion by outlining how the notion of subjectification is characterized. Langacker

(2008) considers subjectification phenomena as ubiquitous in language, and he provides the following characterization for the notion: "[M]ental operations inherent in a certain kind of experience are applied to situations with respect to which their occurrence is extrinsic (p. 528, the underlines are added)." Examining the ambiguous interpretations in (1), let us see how well this subjectification process captures the polysemy of the English *be going to* between the physical motion and future interpretation.

- (1) Tom is going to mail a letter.
- a. Tom's spatial motion toward a goal with the intent of mailing a letter upon reaching it.
 - b. Tom will mail a letter (perhaps just by clicking a mouse). (Langacker 2008:538)

Following Langacker (2008:538), the reason why the future interpretation (1b) can be derived from the original sense of physical motion (1a) is characterized as follows: in the original sense of (1a), "the conceptualizer scans through time by way of tracking the subject's movement through space", and in the derived future sense of (1b), "this subjective temporal scanning occurs independently of any conception of spatial motion. It is merely a way of mentally accessing an event's location in time."

The essence of the subjectification process that derives the polysemous semantic structure lies in the point that a certain semantic element that is considered intrinsic but incidental in the original meaning is brought into focus and interpreted externally as an independent meaning. While Bybee et al. (1994: 267) point out the fact that the verb 'go' cross-linguistically tends to be recruited as a future tense marker, the grammaticalization path of English *be going to* with subjectification can be schematized as follows:

(A) Stage I (intrinsic but incidental meaning) → Stage II (extrinsic and independent meaning (polysemous difference)) → Stage III (future tense (grammatical difference)).

With this characterization of the subjectification process that derives the polysemous semantic structures, let us now consider the well-known phonologization process of the tonal development from prevocalic consonantal voiced/voiceless distinction. Ohala (1995:239-240) suggests that "[I]n East and Southeast Asian languages certain tonal distinctions developed out of former (subsequently neutralized) voiced vs. voiceless contrasts on prevocalic consonants; a higher tone developing after what had been the voiceless consonant and a lower tone after the voiced." Table 1 shows that in a Kammu language, the original contrast between voiceless and voiced stop consonants (i.e. *k* and *g* here as shown in the Southern dialect)) has been shifted to that of tone in the Northern dialect (i.e. *á* (high) vs. *à* (low)) losing the original voice/voiceless distinction (i.e. *k* and *g* are neutralized as *k*).

Southern Kammu	Northern Kammu	Translation
klaaŋ	kláaŋ	eagle
glaaŋ	klàaŋ	stone

Table 1 (Ohala 1993:240)

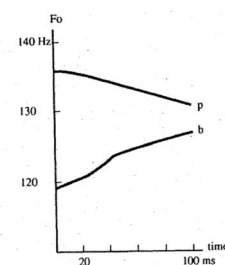


Diagram 1 (Ohala 1993: 214)

Ohala (1993) claims that the replacement of voiceless sounds with a high tone and voiced sounds with a lower tone, not vice versa, should be motivated by a strong phonetic tendency: when vowels are pronounced with voiceless stop consonants, they sound higher than when pronounced with voiced counterparts. Diagram 1 indicates that when [pa] and [ba] are pronounced, the former syllable tends to be higher in pitch than the latter. In other words, the tonal difference between á (high) and à (low) in the Northern dialect is not brought about from somewhere else but is the result of the original pronunciation of voiced and voiceless consonants.

This phonologization process can be considered essentially the same as the process of subjectification we saw earlier when subjectification is defined as a grammatical process in which the elements that are intrinsic but incidental in the original domain are brought into focus (i.e. foregrounded) and as a result, interpreted externally as an independent element. Hyman (1984) schematizes the phonological development from the voiced/voiceless contrast to tonal distinction as in Table 2.

(B)	Stage I	>	Stage II	>	Stage III	
	pá [—]		pá [—]		pá [—]	(´) = high tone
	bá [↘]		bǎ [↘]		pǎ [↘]	(˘) = rising tone
	‘intrinsic’		‘extrinsic’		‘phonemic’	

Table 2 (Hyman 1984: 69)

Table 2 indicates that the high tone /á/ and rising tone /ǎ/ in Stage III originate the same /á/ in Stage I, in which the rising part is attributed to the initial /b/ and it is considered as "an INTRINSIC by-product of a neighboring segment and not part of the phonological tone" (p. 70). In Stage II, "the low part of the tone has become an EXTRINSIC part of the signal" (p. 70). Thus, it has become an allophone of /á/. And finally, in Stage III, /á/ has split into two distinct phonemes /á/ and /ǎ/ with different tones.

With this parallel characterization of the phonologization with semantic subjectification, let us consider why the voiced/voiceless distinction observed in Japanese word-initial stop consonants can be regarded as being in the early stage of subjectification.

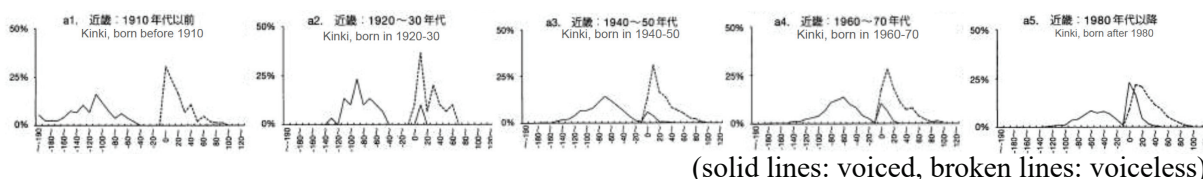


Table 3 (Takada 2011:145)

Takada (2011) examines how the VOT in Japanese word-initial stop consonants has changed over a 100-year period. Though Table 3 shows the change in VOT observed in speakers in the Kinki region, the same trend can also be observed nationwide. As shown in Table 3, the distinction of VOT between voiced and voiceless stop consonants was very clear around 100 years ago (a1), but the overlap between them has progressed with the times (a2 to a4), and for speakers born after 1980 (a5), the phoneme distinction is hardly functional for word-initial VOTs, indicating that the current Japanese speakers rely

considerably on the initial frequency of F0 (the pitch) and its transition to the following vowels, when it comes to the word-initial voiced/voiceless consonantal differentiation (Takada (2011:194)).

The distinction between voiced and voiceless sounds in Japanese can be placed between Stage I and Stage II in (A) and (B) above. While relying on the initial frequency of F0 and its transition to the following vowels for the voiced/voiceless distinction, as suggested in Takada (2011:193-194), Japanese speakers rarely have communicative discrepancies such as mishearing /b/ and /p/ in Japanese conversation, which indicates that the Japanese voiced/voiceless consonantal distinction have not reached Stage III in (A) and (B). Furthermore, Japanese speakers seem to be unaware of the pitch difference that occurs when voiced/voiceless stops are used, implying that the distinction is not regarded as having reached Stage II in (A) and (B) above, showing an allophonic/polysemous relationship.

4. Conclusion

This paper attempted to propose a case study of how cognitive linguistics can be utilized to analyze phonological phenomena. After suggesting that the accumulation of analyses of phonological phenomena is indispensable for cognitive linguistics to become a comprehensive linguistic theory, we showed that subjectification can capture the phonologization process observed in the development from voiced/voiceless sound opposition to tonal differences. Showing the parallelism between the grammaticalization process led by subjectification and phonologization, we suggest that the gradual shifts of VOT observed in Japanese word-initial stop consonants can be reframed as a grammatical phenomenon that is in the early stage of subjectification.

REFERENCES

- Bybee, Joan (2001) *Phonology and Language Use*, Cambridge University Press, Cambridge.
- Bybee, Joan, Revere Perkins, and William Pagliuca (1994) *The Evolution of Grammar: Tense, Aspect and Modality in the Languages of the World*, University of Chicago Press, Chicago.
- Hyman, Larry M. (1984) "Form and Substance in Language Universals," *Explanations of Language Universals*, ed. by Brian Butterworth, Bernard Comrie and Östen Dahl, 67-85, Mouton, Berlin.
- Lakoff, George (1993) "Cognitive Phonology," *The Last Phonological Rules: Reflections on Constraints and Derivations*, ed. by John Goldsmith, 117-145, Chicago University Press, Chicago.
- Langacker, Ronald W. (1987) *Foundations of Cognitive Grammar I: Theoretical Prerequisites*, Stanford University Press, Stanford.
- Langacker Ronald W. (2008) *Cognitive Grammar: A Basic Introduction*, Oxford University Press, Oxford.
- Ohala, John (1993) "The phonetics of sound change," *Historical Linguistics: Problems and Perspectives*, ed. by Charles Jones, 237-278, Routledge, London and New York.
- Takada, Mieko (2011) *Nihongo no Gotoheisaon no Kenkyu: VOT no Kyojitekibunpu to Tsujiteki henka* (A study on the Japanese Word-Initial Stop Consonants: the VOT's Synchronic Distribution and Diachronic Change), Kuroshio, Tokyo.

The English Verbal Prefix *out-* and the Relationship between its Spatial and Differential Types*

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Keywords: West Germanic linguistics, preverb, separable/inseparable complex verbs, grammaticalization

1. Introduction

The synchrony and diachrony of preverbs is a traditional research topic in West Germanic linguistics. “Preverb” is a cover term that refers to “morphemes that appear in front of a verb, and which form a close semantic unit with that verb” (Los et al. 2012: 7). In Dutch, *be-* in *be+spreken* ‘talk about, discuss’ is always bound to the following verb, so it is a prefix, and the combination is called an ICV (Inseparable Complex Verb). On the other hand, *op-* in *op+belden* ‘phone up’ is separable from the verb, so it constitutes an independent syntactic head, i.e. particle, and the combination is called a SCV (Separable Complex Verb). In German, *be-* in *be+freien* ‘free’ and *mit-* in *mit+kommen* exhibit the same behavioral difference. SCV existed in Old and early Middle English, but as a consequence of the subsequent word-order change, the type gave way to verb particle combinations. English also differs from Dutch and German in the development of ICV. The latter languages maintain early Germanic prefixes, including *be-* in the examples cited above. In some examples, such prefixes still compete with particles; thus, *be-lópen* [prefix-verb] and *áf-lopen* [particle-verb] ‘to walk down’ coexist in Present-Day Dutch (see Los et al. (2012: 6) for more doublets). However, English is said to have almost completely lost the cognate Germanic prefixes. Although some scholars suggest that the emergence of verb particle combinations pushed them away, this view is under criticism (Thim (2012)).

Clearly, the intricate distribution of the preverb + verb combination in the contemporary West Germanic languages requires further elucidation. Los et al.’s (2012) comparative study does not thoroughly examine English data with the same level of rigor applied to Dutch data. Regarding English, the authors revert to the traditional stance, asserting that “the vast majority of English particles are resultatives, or have developed from resultatives” (Los et al. (2012: 69)). The authors’ conservatism is further observed in the following passage: “It is very striking that the first type of prefix was highly productive in OE and early Middle English (eME) and subsequently lost, and that *the second type never developed in English*” (Los et al. (2012:13); italics added). This invited lecture utilizes an ongoing research project to challenge these assumptions and demonstrate the commonality between English and Dutch in the synchrony and diachrony of the preverb + verb combination.

2. The Framework

According to Los et al. (2012), the grammar and history of the preverb + verb combination can be explained by means of three theoretical tools: incorporation, lexical semantic decomposition, and grammaticalization. First, SCVs exhibit paradoxical behaviors with respect to the syntax-lexicon divide because the preverb is an optionally projecting syntactic head that is morphologically incorporated in another head. The structure of an SCV is as follows:

- (1) $[_{V_0/V'} X^0 V^0]$ where $X^0 = P, Adv, A$ or N (Los et al. (2012: 67); slightly modified)

As suggested in (1), particle is an incorporated preposition, adverb, adjective, or noun.

Secondly, employing the methodology of lexical semantic decomposition, the authors demonstrate that SCVs allow a broader range of semantic structures than previously suggested by their predecessors. As indicated by the following semantic classification, Dutch particles do not always correspond to the resultative predicate component (Los et al. (2012: 69)):

(2) *Semantic classification of particles*

a. Resultative particles:

–Particles conceptualized as resultative predicates, licensing a Figure participant.

b. Non-resultative particles:

–Particles conceptualized as modifiers, not licensing any participant.

–Particles conceptualized as relators, licensing a Ground participant.

–Particles conceptualized as pure Aktionsart markers, blocking the presence of participants (other than the AGENT).

The detailed study of these classes is the core of Los et al.'s theory. From this, they argue against the numerous attempts in the literature that posit a one-to-one mapping between the syntax and the semantics of SCVs. Indeed, while the classes in (2) have different Lexical Conceptual Structures, they are all mapped to the single syntactic structure in (1).

Thirdly, ICVs are diachronic developments of SCVs. Contrary to the prediction based on traditional views, it has been found that adposition-based particles resist further grammaticalization into prefixes when their semantic function is resultative. Instead, prefixation is prompted when such particles materialize a relator function. Thus, early Germanic prefixes such as *be-*, *ver-* and *ont-* are grammaticalized resultative predicates (see the list in Los et al. (2012: 177)); however, newer prefixes such as *over-*, *door-*, and *om-* are grammaticalized paths. For instance, the resultative SCV *óver-brengen* 'to carry over' does not have a corresponding ICV. The diachronic source of the prefixal *over-* is the homophonous relator particle, as evidenced by the parallelism between the following two structures (Los et al. (2012: 189)):

- (3) a. SCV: *de brief óver-lezen* (lit. the letter over-read) 'to read over/through the letter'
b. ICV: *de situatie over-zien* (lit. the situation over-see) 'to survey the situation'

These *over*-verbs, differing in separability, share the path semantics.

It is noteworthy that both earlier and newer types coexist in Present-Day Dutch. This observation indicates that the grammaticalization of the preverb + verb combination undergoes a repetitive cycle, resulting in a stratum of layered morphology.

3. Application

To recap, Los et al. (2012) advance the hypothesis that ICVs represent the final stage of a grammaticalization cline. This hypothesis naturally leads to the following prediction:

If the structural development in (30) represents a grammaticalization cline, we would expect it to be accompanied by a corresponding loss of lexical meaning and the development of more abstract, metaphorical meanings (semantic bleaching; [...]). (Los et al. (2012: 192))

To prove the above prediction, Los et al. present ICVs that are morphosemantically related to SCVs while at the same time having a construction-specific meaning (Booij (2010)). Thus, the *over*-verbs in (3), reproduced below as (4a, b), share the path semantics but differ in separability, while the inseparable *over*-verb in (4c) is distinct from the one in (4b) in its non-spatial, quantificational meaning.

- (4) a. SCV: *de brief óver-lezen* (lit. the letter over-read) ‘to read over/through the letter’ (= (3a))
b. ICV: *de situatie over-zien* (lit. the situation over-see) ‘to survey the situation’ (= (3b))
c. ICV: *Jan over-spant de boog* (lit. John over-stretches the bow) ‘John overstretches the bow.’

Importantly, a similar paradigm is offered by the English verbal prefix *out*- and the relationship between its spatial and differential types (Nagano (2011), Kotowski (2023), Nagano and Togano (2024)).

In OE and eME, motion verbs formed SCVs in combination with *ut* ‘out.’ Although Los et al. (2012: Ch.6) highlights the resultative type such as (5a), there were also instances of the relator type such as (5b) ((5a) from Los et al. (2012: 140); (5b) from the *Oxford English Dictionary Online*).

- (5) a. *And seo helle Þone deofel ut a-draf.* (Old English)
and the hell the devil out prefix-drove
‘And Hell drove out the devil.’
b. *Þe harnes out sprange þe harnepan.* (Middle English)
the brains out sprang the brainpan
‘the brains went out of the brainpan springing; the brains sprang out of the brainpan.’

In (5a), the NP referring to ‘the devil’ and *ut* ‘out’ are in the subject-predicate relationship, whereas in (5b), the NP referring to ‘the brainpan’ is the source argument of *out*. Both SCVs conform to the structure in (1). Since *ut/out* is an incorporated head, it can have a syntactico-semantic relationship with the NP outside the complex verb (cf. Haspelmath (2023)). In (5b), the NP ‘the brainpan’ receives its case and

theta-role from the incorporated P.

Diachronically, the resultative type was replaced by the verb particle combination (Los et al. (2012: Ch.6)), but the relator type was not, as evidenced by *out*-ICVs such as follows (*OED Online*):

(6) *A..second Brother liued, whose ill out-sprung..the elder.* (Modern English)

The *out*-verb in (6) is related to the relator type such as (5b), with its object NP (*the elder*) having the source function. Just as the path in (4b) slightly differs in meaning from the one in (4a) (Los et al. (2012: 189-191)), the source in (6) differs from the one in (5b) in not being literal space. Furthermore, in Modern English, the type known as differential *out*- (Kurafuji (2013)) emerged, leading to examples such as (7):

(7) *Mary outran Fred by three meters.* cf. *Mary ran (*by) three meters.*

In (7), *Fred* is no longer a source but standard of comparison, as is confirmed by the availability of the differential measurement *by* phrase (Morzycki (2015)). The *out*-verb denotes the emergence of a degree gap between the two scalar points represented by its subject (“Mary”) and object (“Fred”). Crucially, this usage is absent from the free-standing *out*. It is a construction-specific meaning.

There is an independent empirical support for the conclusion that the source-denoting types ((5b), (6)) and the differential type ((7)) are related by grammaticalization. The historical development of an ablative marker into a comparative standard marker (“A > CS”) is widely attested in typologically unrelated languages (Heine and Kuteva (2002)). The reason for the frequent transition from the ablative function (“from ~”) to the standard of comparison (“than ~”) lies in the cognitive similarity between spatial path and property scale. The source-specified path can be quite naturally extended to the lower-bound degree scale (Kennedy (2012)). For instance, the phrase headed by *yori* in Japanese functions as a source or a standard of comparison; and this polysemy is due to the A > CS grammaticalization (Shibasaki (2023)). In our case, the comparative standard marker takes the form of a derivational prefix because it comes from an incorporated ablative marker. The formal incorporation profoundly impacts the verb lexical semantics, leading to a shift of the Lexical Conceptual Structure from the change-of-place type in (8a) to the change-of-state type in (8b) (see Nagano and Togano (2024) for more details).

- (8) a. [x EXIT y (the source) by verb-ing]
b. [x EXCEED y (the standard) by verb-ing]

4. Conclusion

This paper critically reviews Los et al.’s (2012) theory of complex predicate formation and argues against their basic assumption that English differs from Dutch in the synchrony and diachrony of the constructions under investigation. By demonstrating that English is not an exception, it is argued that a theory, by definition, should be put to use to reveal hidden commonalities across languages, rather than to talk about their differences. While the relationship between the SCV/ICV distinction and the

phrase/incorporation/compound/prefixation distinction is not delved into, it merits careful scrutiny in more sophisticated morphosyntactic theorizing.

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REFERENCES

- Booij, Geert (2010) *Construction Morphology*, Oxford University Press, Oxford.
- Haspelmath, Martin (2023) "Compound and Incorporation Constructions as Combinations of Unexpandable Roots," Zenodo, <https://doi.org/10.5281/zenodo.8137251> [Accessed September 4, 2023].
- Heine, Bernd and Tania Kuteva (2002) *World Lexicon of Grammaticalization*, Cambridge University Press, Cambridge.
- Kennedy, Christopher (2012) "The Composition of Incremental Change," *Telicity, Change, and State: A Cross-Categorial View of Event Structure*, ed. by Demonte & McNally, 103–121, Oxford University Press, Oxford.
- Kotowski, Sven (2023) "Modeling Locative Prefix Semantics. A Formal Account of the English Verbal Prefix *out-*," *Morphology* 33, 115-152.
- Kurafuji, Takeo (2013) "The Semantics of the English Comparative Prefix *Out-* and the Ontology of Degree and Difference," *Takeharu Susumu Kyoju Taishoku Kinen Ronshu* (Festschrift for Professor Susumu Takeharu), 315–334, Ritsumeikan University Law Association, Kyoto.
- Los, Bettelou, Corrien Blom, Geert Booij, Marion Elenbaas, and Ans van Kemenade (2012) *Morphosyntactic Change: A Comparative Study of Particles and Prefixes*, Cambridge University Press, Cambridge.
- Morzycki, Marcin (2015) "Eventualities and Differential Measurement," paper presented at Events workshop, Stuttgart.
- Nagano, Akiko (2011) "The Right-Headedness of Morphology and the Status and Development of Category-Determining Prefixes in English," *English Language and Linguistics* 15 (1), 61-83.
- Nagano, Akiko and Yuri Togano (2024) "A Grammaticalization Analysis of the English Differential Eventive Prefix *out-*," paper presented at the 57th Annual Meeting of the Societas Linguistica Europaea.
- Shibasaki, Reijirou (2023) "From Comparative Standard Marker to Comparative Adverb: On the Contact-Induced (De)grammaticalization of *yoru* in Modern through Present-Day Japanese," *Different Slants on Grammaticalization*, ed. by Sylvie Hancil and Vittorio Tantucci, 20–49, John Benjamins, Amsterdam.
- Thim, Stefan (2012) *Phrasal Verbs: The English Verb-Particle Construction and its History*, De Gruyter Mouton, Berlin.

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注

1. 河上誓作（私信：XX 年YY 月ZZ 日）によると、以下の例は.....
2. Oba (1997)にも指摘されているとおり、.....
3. 杉本 (1998:34)では、以下のような類例が紹介されている。
 - (i) I long for
 - (ii) I manage to
4. Takami (1996:51)には、以下のような.....

参考文献

小泉保 (1997) 『ジョークとレトリックの語用論』大修館書店, 東京. 松本曜・田中茂範 (1997) 『空間と移動の表現』研究社出版, 東京.

盛岡ハイツ・梶田優(編) (1994) 『海外言語学情報』（第7号）大修館書店, 東京.

和書の場合

福岡言語学研究会(編) (1993) 『言語学からの眺望』（福岡言語学研究会20周年記念論文集）九州

論文集の場合

大学出版会, 福岡.

吉村あき子(1996)『否定極性現象』博士論文, 大阪大学.

博士論文の場合

福井直樹 (1998)「極小モデルの展開」, 田窪行則他(編)『生成文法』(岩波講座言語の科学第六卷), 161- 210, 岩波書店, 東京.

論文集収録論文の場合

大阪太郎 (未公刊)「Donkey 文の解釈について」, 未公刊論文, 日本英語大学.

未公刊論文の場合

藤田耕司 (1997)「最適派生理論の最適化に向けて」, 『英語青年』5月号, 74-76, 研究社出版, 東京.

大津智彦 (1993)「現代イギリス英語における目的語節を導く that の有無について」, 『論集』第9号, 41-50,

大阪外国語大学.

雑誌論文の場合

東京花子 (印刷中)「英語統語論について」, 『日本英語学研究』, 日本英語出版.

雑誌掲載が決定しているが未公刊の論文の場合

塚本聡 (2013)「大名力『言語研究のための正規表現によるコーパス検索』」書評, 『英文学研究』第90巻,

155-160, 日本英文学会.

書評の場合1

廣瀬幸生 (1996)「Adele E. Goldberg: Constructions: A Construction Grammar Approach to Argument Structure」書評『英文学研究』73巻1号, 170-174, 日本英文学会.

書評の場合2 (洋書の書評を和文で執筆)

桐生和幸 (1997)「結果述語構文の言語類型論的研究」関西言語学会第22回大会口頭発表.

口頭発表の場合

川瀬義清 (1998)「認知的観点から見た進行形の意味」*KLS (Kansai Linguistic Society)* 18, 155-165.

学会等のプロシーディングスの場合

Freud, Sigmund (1905) *Jokes and their Relation to the Unconscious*, Moffat Ward, New York. (フロイト, ジグムンド. 生松敬三訳『機知—その無意識との関係』人文書院, 東京, 1970)

翻訳の場合

Radcliff, Allan (1940) "On Joking Relationships," *Africa* 13, 195-210. (ラドクリフ, アラン. 青柳まちこ訳『未開社会における構造と機能』(第4章)冗談関係について) 新泉社, 東京, 1975)

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