What do Mongolian Case-Marked Clauses Suggest?

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1. Introduction

This paper investigates properties of Case-marked clauses in the Khorchin dialect of Mongolian (henceforth M), an Altaic language, spoken in Inner Mongolia, and examines what the data newly elicited suggest for the theory syntax. It will be argued (i) that Maki et al.'s (2016) conditions on genitive subject licensing need to be revised, (ii) that accusative Case-marked clauses are both nominal and verbal in M, (iii) there is no C projection for indirect questions in M, and the relevant Q feature seems to reside on T in indirect questions in M, and (iv) that in Japanese (henceforth J), accusative Case-marked interrogative clauses are a projection of C, and accusative Case-marked declarative clauses are a projection of T followed by the nominal element *no*.

2. Background

First, Maki et al. (2016) propose (1) to capture the distribution of genitive subjects in M and J.

(1) Conditions on Genitive Subject Licensing
  a. A genitive subject must be c-commanded by a nominal element in a local domain.
  b. A genitive subject must be in a local relationship with the adnominal form of a predicate.

(1a) corresponds to Miyagawa's (1993, 2011) D-licensing approach, and (1b) to Watanabe's (1996)/Hiraiwa's (2001) C-licensing approach. Maki et al. (2016) claim that genitive subjects in Altaic languages must satisfy both to be licensed, which is evidenced by (2) and (3).

(2) Öčügedür Ulaɣan-ø/*-u ene nom-i qudaldun-abu-ɣsan-siu.
yesterday Ulagan-Nom/-Gen this book-Acc buy-take-Past.Adn-Prt
'Ulagan bought this book yesterday.' (Adn = adnominal form, Prt = particle)

(3) Ene nom-i öčügedür Ulaɣan-ø/-u *t* qudaldun-abu-ɣsan-siu.
this book-Acc yesterday Ulagan-Nom/-Gen buy-take-Past.Adn-Prt
'This book, Ulagan bought *t* yesterday.'

(3) shows that the object is moved to the sentence-initial position by scrambling, and the sentence is grammatical with a genitive subject. Note that in (3), the genitive subject is c-commanded by the scrambled object and is in a local relationship with the adnominal form of the predicate. In addition, the J counterpart of (3) disallows the genitive subject. It is precisely because the contrast between sentence-final and adnominal forms of verb is neutralized in modern J, further supporting the necessity for the dual licensing approach in (1). Note further that scrambled PPs cannot license genitive subjects, as shown in (5), in contrast to scrambled NPs, as shown in (3).

(4) Öčügedür Baɣatur-ø/*-un Ulaɣan-du nom-ø ügkü-gsen-siu.
yesterday Bagatur-Nom/-Gen Ulagan-to book-Acc give-Past.Adn-Prt
'Bagatur gave a book to Ulagan yesterday.'

(5) Ulaɣan-du öčügedür Baɣatur-ø/*-un *t* nom-ø ügkü-gsen-siu.
Ulagan-to yesterday Bagatur-Nom/-Gen book-Acc give-Past.Adn-Prt
'To Ulagan, Bagatur gave a book *t* yesterday.'

Second, Maki et al. (2015) argue that while genitive subjects are disallowed, accusative subjects are allowed in clauses headed by C, as shown in (6), where *bel* 'if' is presumably in C.

(6) Qoyar čaɣ-un daraɣa Ulaɣan-ø/-i/*-u ende ire-**bel**, bügüdeger-ø
two hour-Gen after Ulagan-Nom/-Acc/-Gen here come-if everyone-Nom
ɣačiɣda-na. 'If Ulagan comes here in two hours, everybody will be in trouble.'
trouble-Fut.Con (Fut = future, Con = conclusive form) (Maki et al. (2015: 147))

3. Data

Let us now examine accusative Case-marked clauses in M.

(7) Bi-ø [Tokyo-du Baɣatur-ø/-un/*-i ire-gsen]-i(-ni)
I-Nom [Tokyo-to Bagatur-Nom/-Gen/-Acc come-Past.Adn]-Acc(-PoP3)
čegejile-jü baina. 'I remember that Bagatur came to Tokyo.'
remember-CVS be (CVS = converbal suffix, PoP = possessor pronoun, 3 = 3rd person)

(8) Bi-ø [ali qota-du Baɣatur-ø/-un/*-i ire-gsen]-i(-ni)
I-Nom [which city-to Bagatur-Nom/-Gen/-Acc come-Past.Adn]-Acc(-PoP3)
čegejile-jü baina. 'I remember which city Bagatur came to.'
remember-CVS be

Both (7) and (8) show that in accusative Case-marked clauses, genitive subjects are allowed, but accusative subjects are disallowed. Note that in (7) and (8), the predicates in the embedded clauses are in the adnominal form, and are directly followed by the accusative Case marker. The genitive Case marker *-u* is similar to the J genitive Case marker *-no* in that it occasionally functions as a nominalizer. However, unlike its J counterpart in (9), *-u* cannot be placed between the predicate and the accusative Case marker in (7).

(9) Watasi-wa [Tookyoo-ni Taroo-ga/-no kita]*(-no)-o oboeteiru.
I-Top [Tokyo-to Taro-Nom/-Gen came]-NML-Acc remember
'I remember that Taro came to Tokyo.' (NML = nominalizer)

4. Discussion

Let us consider what the above facts might suggest for the theory of syntax. **First**, if (1) is correct, there must be a nominal element in each of (7) and (8) that can satisfy (1a). As there is no obvious noun, the relevant element should be the adnominal form of the predicate itself. If the complex of the predicate and T (V-T complex) is the licensor, it cannot c-command the genitive subject due to the T' node. Rather, it m-commands it. Therefore, 'c-command' in (1a) should be revised to 'm-command.' **Second**, as the adnominal form of the predicate in each of (7) and (8) must satisfy (1b) as well as (1a), the predicate should be both nominal and verbal. This kind of mixed category is not special to M, and is also seen in Quechua (Lefebvre and Muysken (1988)), as shown in (10), and old J, as shown in (11).

(10) [Xwancha-q-**hamu**-sqa-n-ta] yacha-ni
[Juan-Gen-come-NML-3-Acc] know-1 (NML = nominalizer)
'I know that Juan came.' (Lefebvre and Muysken (1988: 2), slightly edited)

(11) […namida-no **oturu**]-o osinuguikakusite…
[…tear-Gen drop.Adn]-Acc hide… (Nowaki, *Genji Monogatari*
'…(he) hid the tears dropping down …' (Chapter 'Nowaki,' *The Tale of Genji*))

It is important to note here that a predicate can be both nominal and verbal only when it is Case-marked; a predicate is only verbal otherwise. This prevents the predicate in (2) from being nominal, as it is not Case-marked. Hence, it cannot license the genitive subject in (2). **Third**, (6) and the fact that (8) is ungrammatical with an accusative subject suggest that there is no C projection for indirect questions in M, which in turn suggests that the relevant Q feature seems to reside on T in indirect questions in M. **Fourth**, in J, accusative Case-marked interrogative clauses are a projection of C, as shown by (12), and accusative Case-marked declarative clauses are a projection of T followed by the nominal element *no*, as shown by (9).

(12) Watasi-wa [dono mati-ni Taroo-ga/*-no kita]*(-ka)(-o) oboeteiru.
I-Top [which city-to Taro-Nom/-Gen came]-Q-Acc remember
'I remember which city Taro came to.'

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Augmentation and Upgradation of the Existing Bengali WordNet with New Features and Contents

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Abstract

The Bengali WordNet, which is developed in 2012 and made available online as a part of the IndoWordNet (https://www.cfilt.iitb.ac.in/indowordnet/) is a combination of a dictionary and a thesaurus with addition of some application features useful in understanding meanings of Bengali words and rendering the same in language teaching and technology. Although this WordNet serves some purposes of language teaching, language processing, and general reference (Dash *et al.* 2017), it has many limitations relating to its vocabulary, meaning presentation, sense denotation, and usage variations due to which it fails to serve properly in both primary and advanced functions like Bengali language processing, machine learning, machine translation, online language teaching, and e-governance (Bhattacharyya 2010). The small vocabulary of the existing Bengali WordNet (36346 synsets) is a skewed representation of the large Bengali lexicon that contains more than three hundred thousand forms. Besides, there are many irrelevant expressions (e.g., *proper names, surplus numerals, foreign words, obsolete terms, surnames, forcefully formed words*) which, in a real sense, do not represent the advanced Bengali vocabulary. Moreover, it has errors in spelling, sense representation, parts-of-speech information, ontological relations, usage, and technical issues due to which the application of the existing Bengali WordNet is greatly restricted.

To overcome these shortcomings, we have started revising the existing Bengali WordNet with new ideas and information. It is now augmented with new words and senses, supported with accurate POS information, made free from spelling errors, defined with new ontological structures, diversified with more lexical items, enriched with more linguistic information, and upgraded with more technical sophistication. Moreover, since it is visualized as a workable digital resource for Bengali and English language teaching, it is featured to be supported with English meanings of Bengali words and their usages keeping in mind the use of the resource by native and foreign learners. Another unique feature of this WordNet is the inclusion of Bengali postpositions in the database with lexicographic information, which is not found in English and other WordNets (Vossen 1998). This particular feature is added due to the fact that Bengali has a large number of postpositions that are frequently used in the language with a wide range of sense variations. The inclusion of postposition is a kind of approval of its crucial functional role in language usage and cognition. Some more specific functional features of this WordNet are reference to spatiotemporal lexical set, reference to frequently used collocations, and possible lexical suggestions that may enable end-users to find desired synsets from the inbuilt lexical databases (Kanojia *et al.* 2018).

We have also addressed some of the basic issues of the Bengali WordNet which have not been addressed in the earlier version. For instance, there is no consistency in the inclusion and treatment of compound nouns, compound verbs, and idiomatic expressions which are quite arbitrarily included in the earlier database. These forms, however, need careful selection supported with relevant information to be optimally useful for target learners. These issues are not only relevant for understanding the modern Bengali language but also important for learners who want to learn this language with its full lexical details. Proper presentation of lexicological information of compound expressions in the WordNet is an important part for addressing the requirements of machine learning and translation. To justify the functional

relevance of this resource further, we are in the process of receiving feedback from language teachers with regard to the application of the WordNet in actual classroom situations. This may justify the need for a comprehensive Bengali WordNet for both Bengali and English learners. In short, the revised Bengali WordNet is being developed as a comprehensive, ontologically interlinked, lexically well-defined, and technically user-friendly digital resource that may be utilized to access modern Bengali vocabulary, spelling variations, pronunciation, parts-of-speech, meaning variations, usage variations and ontological semantic relations (e.g., *synonymy, antonymy, hypernymy, hyponymy, homonymy, holonymy, meronymy, troponymy, entailment, polysemy*) of the synsets that are carefully selected, classified, analyzed, and populated with more appropriate information in the database. The revised version contains more than 60 thousand synsets, which are obtained from Bengali text corpora and assigned with unique IDs, conceptual definitions, parts-of-speech, synonyms, usages, and collocations. Moreover, based on their form and usage, synsets are divided into five major parts-of-speech (i.e., *noun, adjective, verb, adverb,* and *postposition*)—the last one is an addition to existing WordNet due to language-specific features and requirements (Bond *et al.* 2014).

The revised Bengali WordNet is designed to be robust with a user-friendly interface so that it serves diverse requirements with a provision of accessibility of data and information by users navigating within a web portal. It is digitally assorted for Bengali language speakers, Bengali language learners, and professionals working with the modern Bengali language. It is being framed to be used as an aid for online Bengali language teaching by educational institutions at the secondary and senior secondary levels (Redkar *et al.* 2017) as well as for automatic text analysis and applications like word sense disambiguation, machine translation, machine learning, text summarization, and sentiment analysis (Piasecki *et al.* 2013). In the wider scheme of global multilingualism and digitalization, this Bengali WordNet may hold a significant position in bilingual and multilingual language teaching as it is designed to perform a crucial role in enhancing the linguistic skills of the target learners. It is therefore constructed as a benchmarked resource in upgrading the status of Bengali in the realms of language teaching, language technology and digital humanities.

Keywords: Synset, WordNet, NLP, semantic, thesaurus

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The Right Sides of Japanese Sentences

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This paper examines the nature of Japanese right-dislocation constructions (RDCs). A bi-clausal analysis has widely been proposed (e.g. Kuno 1987, Tanaka 2001, Takita 2011) in the Japanese linguistic literature. However, this analysis poses a question to a uniform analysis of the RDC (1), which includes an adverb and an accusative-marked DP on the right periphery.

(1) A reply to the question "what did you do with this box?"
Tanaka-san-ga [e] tukurimashita-yo tegiwayoku soreo hako-o.
Tanaka-Mr-Nom made-Prt efficiently the box-Acc
'Mr. Tanaka made it_i; he made the box_i efficiently.' (Adapted from Kamada 2009)
'Mr. Suzuki made the box efficiently.'

(1) is missing the object preverbally and the combination of an adverb and a DP postverbally. As the English glosses show, (1) can yield two interpretations. With a pause after the verb, it has a bi-clausal interpretation, and the null object is the anaphoric use of *pro*. In this case, it is possible to insert an additional interpretation such as *sousou* "oh, yes" after the verb. The combination of the adverb and the accusative-marked nouns is taken as a secondary piece of information. Interestingly, without a pause (1) can yield a mono-clausal interpretation. Under this interpretation, the right-dislocated elements are not taken as a secondary piece of information. Rather, the postverbal elements are interpreted as parts of the single clause. What is significant here is that the preverbal null category is not *pro* because the *pro*-form cannot include the adverbial reading besides that of DP. Thus, the mono-clausal interpretation challenges to a bi-clausal analysis or the uniform treatment of Japanese RDCs.

Under the assumption that the verb is overtly raised to T (Hayashi & Fujii 2015, Sato & Hayashi 2018), I suggest the mono-clausal analysis with VP movement in the schematic structure (2), where VP undergoes movement while the verb is overtly raised to T. This analysis explains the mono-clausal interpretation of the construction, the reference of the null category and the correct word order of (1).

(2) $[_S \ \ldots t_i \ \text{Verb}] \ [_{VP} \ \text{Adv} \ \ \text{DP-Acc}_i \ \ t_v]_i$

To support the mono-clausal analysis, I exhibit Condition C effects in (3a), which includes a DP and optionally an adverb postverbally. I propose the schematic structure (3b).

(3) To the question "what happened?"
a. *Mary-ga $kare_i$-ni [e] miseta, (sotto) [$John_i$-no tegami]-o.
Mary-Nom he-Dat showed quietly John-Gen letter-Acc
'Mary showed him_i [e], $John_i$'s letter (quietly).' (Adapted from Abe 1999)
b. [$Pronoun_i$ t_k Verb] $[_{VP}$ (Adv) $Name_i$-NP $t_V]_k$

(3a) shows a violation of Condition C once the pronoun corefers with the name within the postverbal DP. Crucially, when the adverb occurs postverbally, the preverbal null element cannot

be the *pro*-form for the same reason as in (1). It is the trace of the postverbal elements in (3b), where the reconstruction effect is observed. If the right-dislocated phrase is generated by base generation, the extraposition did not bleed Condition C (e.g., Culicover & Rochemont 1990). One might object that the same effect is achieved in a bi-clausal construction. However, a bi-clausal structure fails to account for the existence of a mono-clausal interpretation besides a bi-clausal counterpart. Let us look at the existence of two interpretations of an RDC (4).

(4) To a reply to the question "What was Mari doing at that time?"
Mari-wa [e]/*sore$_i$ yondeita-yo hitoride ehon$_i$-o.
Mari-Top was.reading-Prt alone picture.book-Acc
'(lit.) Mari was reading [e], alone a picture book.'
i. 'Mari was reading a picture book alone.'
ii. 'Mari was reading something/one; she was reading a picture book alone.'

The RDC without a pause after the verb yields (4i) whereas it has (4ii) when a pause is inserted. What is important here is that the preverbal null element refers to the combination of the right-dislocated object and an adverb for the mono-clausal interpretation (4i) while it is interpreted as an indefinite pronoun for the bi-clausal interpretation (4ii). Apparently, the preverbal null element cannot be the anaphoric use of *pro* as in the case of the overt pronoun *sore* 'it' (cf. Takita 2011). (4i) is consistent with the proposal analysis (2), and it cannot be accounted for in a bi-clausal analysis.

Furthermore, the RDC with an adverb postposed in (5) shows the Proper Binding Condition (PBC), the requirement that traces via movement must be bound (Fiengo 1977).

(5) *Mari-mo sono tango-o$_k$ [*t*]$_i$ si-na-katta [neto-de [*e*]$_k$ sirabe-sae$_i$
Mari-also the word-Acc do-Neg-Past internet-on look.up-Neg-Past
Intended: 'Mari did not look up the word on the internet as well.'

In (5), the objects occur preverbally whereas the adverbs and the focus-marked verbs occur postverbally. If the postverbal elements are base-generated postverbally, there is no trace to be bound, and thus no PBC effect should be observed, contrary to fact. Likewise, the raising of the object from inside the base-generated phrase postverbally would not induce the PBC effects either. The existence of the PBC effects in (5) supports the present mono-clausal analysis of the construction.

The present paper analyzes Japanese RDCs with adverbs postverbally and shows the existence of two interpretations of the constructions (see (1), (4), (5)) along with those of the preverbal null elements (see (4)). It demonstrates that constructions involve rightward movement of VP and thus that a uniform bi-analysis of the constructions is not on the right track. It also offers a further support of the string-vacuous verbal movement in Japanese.

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Pseudogapping in English: Move-and-delete or direct licensing?

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Pseudogapping, unlike gapping and VP ellipsis, involves ellipsis of part of a nonfinite VP, as seen from an example like *It says more about them than it does [me]*.[1] There are two main tasks in accounting for pseudogapping: one is how to capture its similarities to and differences from its relatives like gapping and VPE, and the other is how to license the construction. In addressing the first task, there have been two directions: one is to take pseudogapping as a type of gapping (Agbayani & Zoerner 2004; Johnson 2009), and the other is to assume it as a type of VPE (Jayaseelan 1990; Lasnik 1999; Kubota & Levine 2017). As for the second task, there have also been two strands: movement-cum-deletion and base-generation. Movement approaches suggest that the remnant(s) is moved out of a VP constituent though there are differences in the kinds of movements proposed (A-movement vs. A'-movement) and the direction of movement (leftward vs. rightward) (see Jayaseelan 1990; Lasnik 1999; Agbayani & Zoerner 2004; Thoms 2016). Meanwhile, base-generation approaches suggest that its syntax is licensed by simple syntactic rules with no derivational operations while its semantics is resolved by an anaphoric mechanism by inference (Miller 1990; 2014; Kubota & Levine 2017).

This paper performs a corpus investigation of the construction using the corpus COCA (Corpus of Contemporary American English). The investigation tells us that pseudogapping is much more flexible than the previous literature have noted. For instance, the object of a verb or a preposition has been known to function as a remnant, but the attested data allow even a gerundive expression to be a remnant:

(1) Bagozzi will spend less running his Cavalier than he will [buying a new car]. (COCA 1990 MAG)

The remnant can be an element in the deeply embedded expression, implying that it is quite different from gapping.

(2) Sometimes I think you like hanging around more with animals than you do [people]. (COCA 2001 MOV)

The data also give us examples where the remnant is in an island, challenging move-and-delete operations. The correlates in the antecedent clause in the following are within a complex NP:

(3) Looking for that special someone who is caring, honest. Someone who would care for me the same way as I would [them]. (COCA 2003 FIC)

Observing such attested data that challenge the derivation of pseudogapping from syntactic movement operations, the paper offers a direct licensing construction-based analysis of pseudogapping. In particular, the paper suggests that psuedogapping is a sub-construction of VPE

[1] The underlined wave is an understood elided part and the [brackets] means the remnant in the pseudogapping clause.

with its own constructional constraints that allow tight interplays among syntactic, semantic, and discourse information. This direction offers a streamlined analysis for the empirical facts that pseudogapping, forming a network with its kin constructions including, is more restricted than VPE, but differs in many respects.

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Ga/No-Nominative Conversion and A- and A′-movement

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For the transparent mapping to the syntax-semantics interface, it is important to specify which place an element occupies in the syntactic structure and what kind of property that position exhibits. Especially, it is important to identify whether it is an argument position (A-position) or not (A′-position). Under the configurational definition of A/A′-positions, it is assumed that an A-position is a potential theta position (Chomsky 1981) or a Case position (Bošković 2001), while an A′-position is a position where an element receives a discourse-configurational value, such as topic or focus (Rizzi 1997). However, the configurational definition fails to specify the A/A′-properties of intermediate positions of movements. Therefore, Martin and Uriagereka (2019) argue that A/A′-movement distinctions should be made contextually under the phase theory, based on copy formation/chain; the two copies are regarded as A-copies when they are contained in the same transfer domain, while the copies are regarded as A′-chains when only part of the chain is contained in the domain of phase. I propose that the configurational and copy-based A/A′-definitions are both necessary, and these definitions, in conjunction with the Case-theory advocated by Kasai (2018) and the phase theory by Saito (2017a), lead to the expectation that some movements in Japanese exhibit A- and A′-properties. I show that this expectation is borne out based on *ga/no*-nominative alternation on the nominative objects in the Hichiku dialect of Japanese (HJ).

In Japanese, when a main verb or a causative suffix *(s)ase* is followed by the potential suffix *–(r)are/(r)e*, which makes a complex predicate stative, the object may be marked as either accusative or nominative (Kuno 1973).

(1) a. Mai-ga melon-o/ga tabe-rare-ru. (potential construction: PC)
Mai-NOM melon-ACC/NOM eat-POT-PRES
'Mai can eat melon.'

b. Mai-wa Ken-ni melon-o/ga tabe-sase-rare-ru. (causative-potential
Mai-TOP Ken-DAT melon-ACC/NOM eat-CAUS-POT-PRES construction: CPC)
'Mai can make Ken eat melon.'

Following Tada (1992), Yatsushiro (1999), and Kasai (2018), among others, I argue that while accusative objects are licensed by V, nominative objects overtly move to *v*P that hosts the potential affix *(r)are/(r)e* as its head ($vP_{(r)are}$) in the cartographic structure schematized in (2). Furthermore, following Bošković (2014), I assume that the highest head in the phase-edge domain is the phase head: $vP_{(r)are}$ in PC, and the matrix $vP_{(r)are}$ and the embedded vP_{voice} in CPC.

(2) a. [**vP(r)are** Obj [vPvoice [VP ~~Obj~~ V]](r)are/(r)e] (PC)

b. [**vP(r)are** Obj [vPvoice [vP(s)ase [**vPvoice** [VP ~~Obj~~ V]] (s)ase]] (r)are/(r)e] (CPC)

The assumption is supported, for instance, by the fact while an accusative pronominal object in CPC may be coreferential with the matrix subject, the nominative object cannot.

(3) Taroo$_i$-ga Hanako-ni kare$_i$-o/*ga hihans-ase-rare-ta.
Taroo$_i$-NOM Hanako-DAT he$_i$-ACC/*NOM criticize-CAUS-POT-PAST
'Taroo$_i$ could make Hanako criticize him$_i$.' (Miyagawa 1984)

The ungrammaticality of the nominative object in (3) might result from binding condition B; after the movement of a nominative object to $vP_{(r)are}$, the matrix subject and the nominative object are in the same binding domain (which is defined in terms of coargument domain (Büring 2005)), leading to the ban on coreference between them.

Regarding the optionality of nominative/accusative Case, I follow Kasai (2018) in assuming that a nominal phrase does not have to fix its Case in its base-generated position and it can get its Case licensed after movement, if the unvalued Case feature is fixed at the time of transfer. Although Kasai (2018) assumes that the transfer domain is VP (Chomsky 2001), I follow Saito (2017b) in assuming that in Japanese, where φ-agreement is lacking, the transfer domain is *v*P, not VP, and that *v*P is transferred when the higher phase is completed. Hence, the object can receive the nominative Case after moving to Spec, $vP_{(r)are}$ in PC, as the movement is within a transfer domain, as shown in (2a). Note also that this movement is A-movement under the configurational/copy-based A/A′-distinction, as the movement is for Case and within the same transfer domain. Furthermore, the object in CPC can move to Spec, $vP_{(r)are}$, as shown in (2b), because the transfer of the lower vP_{voice} is operated at the completion of the higher phase. When the object gets its Case licensed by $v_{(r)are}$, the lower copy also satisfies its Case requirement under the identity via copy formation (Chomsky 2020)). Thus, the lower copy does not cause any problem when transferred. This movement to obtain Case is regarded as an A-movement under the configurational definition of movement. At the same time, the object moves out of

the lower phase, which is regarded as an A′-movement under the copy-based A/A′-definition. Therefore, the movement of the nominative object in (2b) has both A-and A′-properties.

The assumption that the movement in PC is A-movement, while that in CPC is A- and A′-movement, accounts for the optional/obligatory focus interpretation of the nominative object in these constructions. Kato (2007) and Nishioka (2013) observe that the Kumamoto dialect of Japanese (KJ), a kind of HJ, allows *ga*/*no*-nominative alternation, but *no*-nominative Case has the anti-topic/focus property. Nishioka (2018) further observes that the objects of PC in HJ allows not only accusative/nominative alternation, but also *ga/no*-nominative alternation, as shown in (4a). However, the *ga*/*no*-nominative alternation on the object does not occur in CPC, as in (4b).

(4) a. Taroo-ga eigo-ba/?ga/no dekuru (to). (KJ)
Taroo-NOM English-?NOM/NOM can PART
'Taroo is capable of English.' (Nishioka 2018: 167, slightly modified)
b. Maki-ga Haruki-ni tako-ba/ga/*no tabe-sase-rare-ru (to yo). (HJ)
Maki-NOM Haruki-DAT octopus-ACC/NOM/*NOM eat-CAUS-POT-PRES PART PART
'Maki can make Haruki eat octopus.'

This is because the movement in (4b) has both A-and A′-properties. This leads to the obligatory focus interpretation of the nominative object, which in turn prohibits the *no*-nominative object from occurring in Spec, vP$_{(r)are}$ because they have the anti-focus/topic property.

Other cases of nominative objects in complex predicates also disallow *ga/no*-nominative alternation. For instance, restructuring verbs followed by the potential affix such as *kari-ni ik-e-ru* 'can go to borrow' allow the nominative/accusative alternation on the object (Takahashi 2012). In such a case, however, *ga/no*-nominative alternation is disallowed in HJ.

(5) Boku-ga tosyokan-ni hon-o/ga/*no kari-ni ik-e-ru. (HJ)
I-NOM library-to book-ACC/NOM/*NOM borrow-ni go-POT-PRES
'I can go to the library to borrow a book.'

I assume that in such restructuring constructions, the nominative object undergoes A-movement for Case into vP$_{(r)are}$ in the matrix vP out of the embedded vP phase, which adds A′-properties to the movement; the movement must yield focus interpretation. As *no*-nominative objects resist such focus interpretation, they cannot occur in the restructuring construction.

The analysis is further extended to the movement of the subject from Spec, vP$_{voice}$ to Spec, TP; this movement is A-movement as the subject is assigned the nominative Case in Spec, TP (or Spec, vP). The movement also has A′-properties as it crosses the transfer domains. The A- and A′-properties of the movement leads to the obligatory focus/topic interpretation of the subject in Spec, TP. This accounts for the fact that *no*-nominative subject may appear in Spec, vP$_{voice}$ in a scrambled sentence, but it may not appear in Spec, TP with the SOV word order.

(6) a. Hon-ba Maki-ga/no yon-da. b. Maki-ga/*no hon-ba yon-da. (HJ)
book-ACC Maki-NOM/NOM read-PAST Maki-NOM/*NOM book-ACC read-PAST
'Maki read the book.'

In sum, I argue that (i) nominative objects undergo A-movement to Spec, vP$_{(r)are}$, (ii) *no*-nominative elements exhibit the anti-topic/focus property, that is, they resist being in A′-positions, and (iii) some cases of A-movement of the nominative object crosses the transfer domain, and thus exhibit both A- and A′-properties, prohibiting the *no*-nominative Case. Notably, the focus property of the moved element in the above cases are defined in a configurational /contextual way; none of the above nominal elements is intrinsically focused. The configurational/contextual A/A′-distinction is further supported by the fact that a wh-phrase may be marked with the *no*-nominative Case, if it is in the base-generated A-position.

(7) a. Dai-ga/no ki-ta to? b. Hon-ba dai-ga/no yon-da to? (HJ)
who-NOM/NOM come-PAST PART book-ACC who-NOM/NOM read-PAST PART
'Who came?' 'Who read the book?'

Saito (2017b) argues that wh-indeterminate phrases are operators that need to specify their quantificational force by (covertly) moving to the specifier position of the question particle -*ka* or the focus particle -*mo*. Under the assumption, wh-indeterminate phrases do not possess a wh-feature in the A-position, in which the *no*-nominative Case may appear. It is after the movement of a wh-phrase to an A′-position that the wh-phrase receives an interrogative feature.

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The contribution of *either* in *either…or* constructions

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Introduction

Disjunction is expressed by *or*, with an optional element of *either* to create *either ... or* constructions (**EOR**, henceforth). Does the presence or absence of *either* (**ETH**, henceforth) in EOR make any difference semantically or pragmatically? Previous work has given syntactic analyses of EOR (Hofmeister 2010, Schwartz 1999), and semantic/pragmatic analyses of disjunction in general (Geurts 2005, Nouwen 2018, Simons 2001). I aim to clarify the contribution of ETH in EOR, based on a corpus-based analysis and generalization. Issues of conventionalization and comparison with Japanese data will also be discussed.

Preliminaries

EOR express a disjunction of propositions. We assume that disjunction semantically has the inclusive-or meaning as its basis (i.e. a disjunction is true just in case at least one of the disjunct propositions is true) and that the exclusive-or reading is attributed to pragmatics.

Method

Using COCA, occurrences of ETH were searched and the first 1000 examples were saved. Excluding those where ETH is used as a negative polarity counterpart of *too*, 759 examples were considered to be relevant and analyzed.

Results and analysis

In some cases, ETH seems to be just a placeholder. However, in a majority of cases, certain contributions of ETH were acknowledged, as mentioned below (Underlines are mine).

First, ETH has a metalinguistic function of clarifying the disjunctive structure. It is effective when disjuncts are long or embedded, or the list of disjuncts is long, as in (1) ~ (3).

(1) At some point you <u>either</u> have to plug up the bleeding heart crap in the face of reality... <u>or</u> step up to the plate and put your time, home and heart

(2) team will be Russ Smith, Luke Hancock, Angel Nunez, Chane Behanan and <u>either</u> Stephan Van Treese <u>or</u> Zach Price.

(3) always have their faces covered with <u>either</u> masks, scarves, shawls, <u>or</u> what have you.

Second, ETH contributes to triggering the free choice reading (**FC-R**, henceforth). In (4) ~ (6), the two options given by the disjuncts (e.g. accept/reject) are trivial, and thus by itself *or* does not do any significant work. With ETH, possibilities for both options are indicated.

(4) into a bankruptcy get to make demands on the interested parties that the latter can <u>either</u> accept <u>or</u> reject, suffering the consequences either way.

(5) while beauty is <u>either</u> natural <u>or</u> artificial, justice is always artificial

(6) to confront him on a statement he makes. You will get several options to <u>either</u> keep confronting <u>or</u> let it go.

Third, ETH may trigger a stronger FC-R, creating the nuance of 'it does not matter which'. In (7) ~ (9), the FC-R is triggered without ETH, too. With ETH, however, it is indicated that which option applies does not make a difference in the current context.

(7) probably due to the strong feeling that your worth is not currently being appreciated, <u>either</u> platonically <u>or</u> romantically. You probably feel that others simply do not understand you

(8) commercial value due to what the young ladies had chosen to do with their lives <u>either</u> privately <u>or</u> publicly.

(9) decisions, not to show how organized you are. If the project plan is <u>either</u> too long <u>or</u> not up-to-date, it will be useless for making decisions.

Fourth, as in (10) ~ (11), ETH has the effect of emphasizing the fact that there is no option other than the presented two, that is, that the options are complementary (**Comp-R**, henceforth), in contrast with the hearer's expectation of other, intermediate options.

(10) the ultimate choice that's being presented to mankind is either evolve or perish.
(11) a standard way that can be applied across the board. Definitions that exist are either too broad (to cover every nuance) or too narrow (hence very unique).

Discussion

First, I discuss the following created data.
(12) A: Eat soup or salad. B: May I eat both?
(13) A: Eat soup or salad. B: Which do you want me to eat?
(14) [as a reply to B's utterance in (12)/(13)] Eat {either / ∅} soup or salad.

(14) with ETH is interpreted differently, depending on the context. As a reply to (12), it has the exclusive reading (**Exc-R**, i.e. 'only one option applies'), in contrast with the expectation of 'both options apply'. As a reply to (13), it has the FC-R (i.e. 'whichever you want'), in contrast with the assumption of 'one option applies'. In both cases, ETH plays a crucial role. (14) without ETH is a mere repetition of A's utterance in (12)/(13) and does not work. A unified account of the two readings of (14) with ETH is possible: ETH focuses on a specific aspect of disjunction which contrasts with the expectation or assumption provided by the context.

The same line of account applies to the corpus data mentioned above. In (4) ~ (6), ETH triggers the FC-R in contrast with the possibility of only one option being applicable. Also, in (7) ~ (9), ETH adds the nuance of 'it does not matter which' to the FC-R, when different consequences are expected from the two options, contextually or generally. In (10) ~ (11), when 'not A, and not B' (resulting in the falsity of disjunction) is expected, ETH has the effect of denying such a possibility. Besides, in (1) ~ (3), ETH has a metalinguistic function of signaling and clarifying the disjunctive structure, although the position of ETH in the sentence is flexible to some extent. The corpus data also showed that NPs of the form *either* … (e.g. *either way*, *either side*), which underlyingly involve disjunction (e.g. *either this side or that side*), is conventionalized to have only the FC-R (supported by 138 examples).

The specific meanings triggered by ETH partly correspond to 'just one of them' (Exc-R) and 'any of them' (FC-R), as opposed to more general 'some of them' (for *or*), where 'them' indicate the given options. Japanese data also indicate the contribution of ETH. The Japanese counterpart for 'A or B' is 'A-ka B', while the ones for 'either A or B' are 'A-ka B-no dochira-ka' (for Exc-R and Comp-R) and 'A-demo B-demo' or 'A-to B-no dochira-demo' (for FC-R).

Conclusion

Based on a corpus-based analysis and a generalization using additional data, it was argued that the presence of ETH in EOR has certain contributions at semantic/pragmatic levels. ETH focuses on some specific aspect of disjunction which contrasts with the contextually given expectation or assumption. ETH also has a metalinguistic function of clarifying the disjunctive structure. The contribution of ETH is supported by lexicalized expressions and Japanese data.

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Default Case and Chain Interpretation

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This paper discusses what Default Case is and the condition posed by interfaces when a chain is interpreted. This condition succinctly accounts for why Quantifier Raising (QR) of the associate in the *there*-construction (ATC) is banned as in (1) (see also Williams (1984) and Bobaljik (2002)).

(1) There aren't many linguistics students here.

(i) not > many, (ii) *many > not (Chomsky (1991: 78))

Furthermore, we propose a new analysis for the relation between scrambling and Case in Japanese.

Default Case: In (2), ATC with Accusative Case is licensed, but ATC with Nominative Case is not.

(2) There is only me/*I in the garden. (Sobin (2014: 386))

In light of this observation, Sobin (2014) and Moritake (2021) argue that ATC receives Accusative Case by default. According to McFadden (2007), Default Case is an actual lack of Case. This paper modifies McFadden's account in a way that is more in line with the minimalist program as follows: Default Case is used to pronounce DPs with an unvalued Case-feature ([uCase]) when a sentence is finally uttered. Namely, [uCase] is a command to pronounce a Case-less DP by the default strategy. This further means that DPs with [uCase] remain unvalued at the SM-interface.

Chain: Sportiche (2016) illustrates that *Mary*$_0$ has [uCase] and *Mary*$_1$ obtains Nominative Case as a reflex of phi-feature agreement via matrix T, after which it moves to matrix Spec-T in (3).

(3) [$_{CP}$ [$_{TP}$ Mary$_2$ [NOM] [$_T$ T [seems ~~Mary$_1$ [NOM]~~ to be ~~Mary$_0$ [uCase]~~ happy]]]]

According to Sportiche (2016), an illegible feature (i.e. [uCase] in (3)) can be ignored at the interface if one of its copies receives a value. This condition is what he calls *Neglect*.

With this in mind, let us see (4). Although there is only one occurrence of ATC with [uCase] at the SM-interface, the sentence in (4) is completely acceptable. Sportiche's argument would incorrectly rule out (4) since ATC lacks a valued feature.

(4) There is <u>only me [uCase]</u> in the garden.

Instead of *Neglect*, we then propose the following interface condition:

(5) If there are multiple occurrences of a single DP in a derivation, they must have a valued feature in order for them to form a nontrivial chain and be representationally identified as a series of copies at the SM-interface; they are regarded as a repetition otherwise. This condition, however, is irrelevant to just one occurrence of a single DP, since it consists of a trivial chain by itself and is regarded as a copy regardless of whether it involves an unvalued or valued feature.

This interface condition entails *Neglect*, at least in spirit, but we consider that it is, in fact, the necessary condition of the (non)trivial chain and applies to the SM-interface: occurrences that meet the necessary condition in (5) are properly regarded as a copy.

Analysis: First, consider (4), where there is only one occurrence of ATC. Based on (5), it consists of a trivial chain and is identified as a copy. Let us return to (1). Assuming that QR occurs in syntax (e.g. Takahashi (2010)), the following representation causes a problem, in which QR applies to ATC:

(6) … QP associate [uCase] … QP associate [uCase] …

(6) is composed of two occurrences of QPs with [uCase]. This representation violates the condition in (5), and the relevant QPs cannot be identified as two occurrences of the same copy. It incorrectly predicts that these two QPs are taken to be a repetition, which results in gibberish at the SM-interface.

One may wonder why (7) is grammatical: ATC undergoes *wh*-movement, but the sentence is acceptable, in contrast with (6).

(7) What$_i$ is there t_i in the refrigerator? (Aissen (1975: 7))

Here, an unvalued Q-feature ([uQ]) on *what* is valued (i.e. [vQ]) at Spec-C as in (8), which satisfies the condition in (5): two occurrences of *what* in (8) are successfully identified as the same copy.

(8) what [vQ] [uCase] … what [uQ] [uCase] …

Extension: This analysis can be extended to scrambling in Japanese. It has been assumed that scrambled objects must bear overt Case as in (9) (see Saito (1985)). In what follows, ø stands for a DP without an overt Case-marker.

(9) Ringo-o/*ø$_i$ John-ga t_i tabe-ta.
apple-Acc/ø John-NOM eat-Past
'John ate an apple.'

According to Schütze (2001), left-dislocated DPs reveal what Default Case is in the relevant languages. It follows from Schütze's (2001) analysis that a bare DP indeed has Default Case in Japanese as in (10), in which only a bare DP is appropriate for the left-dislocated DP (see also Moritake (2021)).

(10) John-ø/*ga/*o, kare-wa tensai-da.
John-ø/Nom/Acc, he-Top genius-Cop
'John, he is a genius.'

Based on this argument, let us see the rough representation of the scrambled object in (9) below:

(11) Ringo [uCase] … Ringo [uCase] …

As is clear from (11), there are two occurrences of DPs with [uCase], which violates the condition in (5). It is then wrongly expected that they are both pronounced since they are identified not as a copy but as a repetition. Therefore, the scrambled DP needs overt Case when (9) is uttered out of the blue.

However, as (12) shows, there is a case where the scrambled object can have no overt Case.

(12) Ringo-dake-ø$_i$ Taro-ga t_i tabe-ta.
apple-only-ø Taro-Nom eat-Past.
'It is only an apple that Taro ate.'

The scrambled object is bare, but this sentence is completely fine. We claim that the scrambled object gets a focus interpretation since a focus-particle *dake* 'only' is attached to it. With the assumption that DPs meet focus in a course of the derivation, the representation of (12) will be roughly shown in (13).

(13) Ringo-dake [uCase] [vFocus] … Ringo-dake [uCase] [uFocus] …

What is important here is that [uCase] remains unvalued, but [uFocus] obtains a value through a derivation, which is a striking difference from (11). The representation in (13) conforms to the condition in (5) due to [vFocus]. (12) can thus be correctly interpreted at the SM-interface.

Apparent Counterexamples: One might think that the examples in (14) undermine our proposal.

(14) a.*Who does it seem to like Mary? (Chomsky (1981: 175))
b.*It was believed Mary. (Lasnik (2008: 19))

Under our proposal in (5), *Who* in (14a) should be licensed since [uQ] on *Who* obtains a value ([vQ]) at Spec-C. *Mary* in (14b) should also be licensed since there is only one occurrence of *Mary* as in (4). We argue, however, that these examples are ruled out by virtue of an independent assumption suggested by Bošković (1997) and McFadden (2004): the licensing condition of expletive *it*.

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Generative Typological Investigation of Indefinite Pronouns

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Introduction: This work addresses the typology of indefinite pronouns from the generative perspective, which was originally investigated in the non-generative typological literature. In his seminal work, Haspelmath (1997) observes that there are two major types of indefinite pronouns cross-linguistically: generic-noun-based indefinite pronouns such as English *somebody*, which is composed of the quantificational element *some* and the generic noun *body*, and interrogative-based indefinite pronouns such as Japanese *dare-ka* 'somebody', which is composed of the interrogative pronoun *dare* 'who' and the quantificational particle *ka*.

Haspelmath raises the question whether there is a typological correlation between the type of indefinite pronouns and other properties of relevant languages, but he leaves it open. The present work addresses this issue, establishing a novel cross-linguistic generalization regarding the availability of a particular type of interrogative-based indefinite pronouns, from a perspective of Talić's (2015, 2017) three-way distinction of NP/DP-languages (cf. Bošković 2008, 2012), in which languages with affixal definite articles such as Bulgarian pattern with languages without definite articles such as Japanese rather than languages with non-affixal articles such as English in a number of respects.

Novel cross-linguistic generalization: To the best of my knowledge, the first (and only) work that addresses the issue of potential correlation between typology of indefinite pronouns and other linguistic properties is Watanabe (2004). Watanabe notes that productivity of interrogative-based pronouns of the Japanese type, which Kuroda (1965) calls *indeterminate pronouns*, seems to correlate with absence of definite articles. For instance, Japanese and Russian, which lack definite articles, have productive indeterminate pronouns. He also points out that Latin, which lacked definite articles, had productive indeterminate pronouns, whereas most Modern Romance languages, which have acquired definite articles, do not have them.

While the correlation between definite articles and indeterminate pronouns appears to be robust, Watanabe acknowledges that Bulgarian, Romanian, and Hungarian have indeterminate pronouns although these languages have definite articles. Watanabe in fact does not provide a clear descriptive generalization regarding indeterminate pronouns that accommodate these languages.

Note here that Bulgarian and Romanian, two exceptional languages which have indeterminate pronouns but also have definite articles, are languages with affixal definite articles. The definite article in Hungarian has also been treated as a prefix in the traditional Hungarian grammar (MacWhinney 1976). Interestingly, Talić (2015, 2017) shows that languages with affixal definite articles such as Bulgarian pattern with languages without definite articles such as Japanese in a number of respects (see also Despić 2011, Oda 2021). It may then be the case that affixal-article languages pattern with article-less languages in the domain of indeterminate pronouns, too. In order to confirm this, I have conducted a large-scale cross-linguistic survey of indefinite pronouns, in which 80 languages are identified as having productive indeterminate pronouns. Among those 80 languages, 68 do not have definite articles, and 12 have affixal definite articles. Thus, I establish the following descriptive generalization (note that this is a one-way correlation):

(1) Languages that have productive indeterminate pronouns either lack definite articles or have affixal definite articles.

The question to be addressed here is why non-affixal article languages such as English can *never* have productive indeterminate pronouns whereas article-less languages such as Japanese and

affixal-article languages such as Bulgarian can *in principle* have productive indeterminate pronouns.

<u>Deduction of (1):</u> Building on Kuroda's (1965) decomposition of Japanese indeterminate pronouns, I propose that indeterminate pronouns in general are NPs (cf. Huang 1982) which consist of Root that specifies the domain (e.g., person, thing), and N (or *n*; I use the label N only for presentational purposes). In addition, I suggest, based on Saito (2017), that this N bears an unvalued uninterpretable operator feature $uOp_{[\ ]}$, which is valued as [Q] by interrogative C or as [∀], [∃], etc. by quantificational affixes/particles. The structure of indeterminate NP is schematized in (2). I assume that the structure in (2) is universally the base form of interrogative/indeterminate pronouns.

(2) a. $[NP\ [N_{uOP[\ ]}]\ [Root_{PERSON,\ THING\ldots}]]$

Turning to the distinction between non-affixal article languages on the one hand and affixal-article languages and article-less languages on the other hand, I follow Talić (2015, 2017) in proposing that DP must project above NP in non-affixal article languages, whereas it can be absent in affixal-article languages and article-less languages when the definite article is absent. Thus, in non-affixal article languages DP must project above the relevant NP in (2a), whereas it can be absent in affixal-article languages and article-less languages. In addition, I propose that this DP (i.e., D) bears a valued interpretable operator feature $iOp_{[Q]}$, which gives the value to the operator feature of N and marks the relevant NP as an interrogative pronoun (cf. Cable 2007, 2010). Thus, the value of the operator feature of the relevant NPs in non-affixal article languages is practically always [Q] because of the obligatory presence of the relevant D. The structure of 'who' in non-affixal article languages is schematized in (3).

(3) $[DP\ [D_{iOp[Q]}]\ [NP\ [N_{uOp[Q]}]\ [Root_{PERSON}]]]$

This means that the operator feature of indeterminate NPs in those languages cannot have other values such as [∀], [∃], which would be given by quantificational particles/affixes. It thus follows that non-affixal article languages do not allow productive indeterminate pronouns. In contrast, in article-less languages and affixal article languages, this D may be absent, so that the operator feature of indeterminate NPs can be valued by quantificational particles/affixes.

Thus, the present work sheds new light on the investigation of the typology of indefinite pronouns under the generative framework in the spirit of Talić's (2015, 2017) three-way distinction of NP/DP-languages.

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On the spatial meanings of *by*: A semantic network analysis based on schema and predominance

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Previous studies have agreed that the preposition *by* has very many uses (cf. *Random House Japanese Dictionary*, Limdstromberg (1998)). Although semantic network approaches to English prepositions are mainstream, Hirasawa (2019) claims that the uses of *by* are not related with each other because they cooccur with different types of predicates and that they are stored in our mind independently. Although he criticizes Hanazaki a semantic network analysis, we cannot deny that at least some uses of *by* are semantically related and thus motivated by a semantic network. Given a fine-grained network, we can defend semantic network approaches. To prove this, we will restrict ourselves to the spatial meanings of *by* and construct a more detailed semantic network of them than Hanazaki and Kato.

Hanazaki and Kato (2004) and Hanazaki (2005) develop the image schema approach proposed by Tyler and Evans (2003), who suggest two steps for extracting distinct meanings of a preposition from the context, and emphasize a diachronic analysis of the usage of *by*. In addition, Hanazaki and Kato determine a center of the semantic network of *by* through the predominance of its central meaning—a meaning used most frequently. Based on the above processes, they construct the semantic network of ten meanings of *by*.

However, there are some problems with their analysis. They establish only one schema describing the spatial meaning of *by*, i.e., the <Near/Out of the domain> meaning, as in Figure 1 below, where the trajector (TR) is located near the landmark (LM). This schema cannot explain Shimada's (2010) observation that although both the prepositions *by* and *near* describe proximity, they behave differently in some respects.

(1) a. There are a few benches <u>near/ by the river</u>.… (Shimada (2013:28-29), with some modifications)
b. A robot submarine is deployed <u>near /* by the sea floor.</u> (Shimada (2013:28), with some modifications)

(2) I live <u>very near the sea /* very by the sea</u>, so I had plenty of time to get used to boats. (Shimada (2010:41))

Firstly, *by* cannot represent vertical proximity. In (1a), both *by* and *near* can describe "vicinity in a horizontal plane. In (1b), however, *by* cannot denote the proximity to the sea floor, that is, the vertical proximity. Moreover, *by* cannot cooccur with adverbs of degree. In (2), while *near* expresses the situation involved with the adverb of degree *very*, *by* is not allowed to employ such an adverb. Furthermore, the schema in question cannot deal with some spatial meanings involved with the concept of transfer.

(3) A train bellowing by just over my head, a train that would probably be dropping some nice hot sparks into my hair and down the back of my neck… (*The Body*, p. 79, underline is mine)

(4) My name is Joey Gladstone. I'll be by to pick the tickets up this afternoon.
(*Full House, Season 5, Episode 6,* cf. Hirasawa (2019: 128-129), underline is mine)

(3) describes the situation of going across and over someone's head and (4) indicates that a certain person dropped in a certain place. These spatial meanings of *by* are involved with the notion of transfer because we cannot infer it from the meanings of the verbs, so it is difficult to analyze these meanings with <Near/Out of the domain>.

In addition to the spatial meaning at sake, Hanazaki and Kato admit another distinct meaning, as in (5a).

(5) a. I live for the moment <u>day by day</u>. (Hanazaki (2005:432), underline is mine)
b. Then, as we were sitting in the dull light, <u>side by side</u> on the edge of his bed, he said to me.
(*Never Let Me Go*, p. 245, underline is mine)

Hanazaki and Kato maintain that the gradual meaning indicated by *day by day* results from our experience in which the LM and TR are located near each other and another TR is placed close to the LM, which functions as the former TR. These observations lead them to construct the schema labeled <Bit by bit>, as illustrated in Figure 2, and they claim that this schema is derived from the schema of <Near/Out of the domain>. However,

it seems difficult to semantically relate Figure 1 to Figure 2 directly because there are some differences in the two image schemas. Moreover, they seem to overlook a case like *side by side*, whose image schema has two focal entities that reciprocally function as TR and LM at one time.

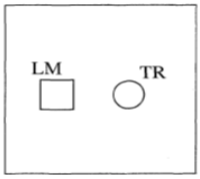

Figure 1: <Near/ Out-of-the domain> (Hanazaki (2005:433))

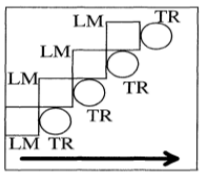

Figure 2: <Bit by bit> (Hanazaki (2005:433))

To solve these problems, we will concentrate on the spatial meanings of *by* and establish a more fine-grained semantic network with some semantic notions adopted in Lakoff (1987). We collected 886 examples of *by* from four novels and found 66 instances of the spatial meanings of *by*. By incorporating notions such as "bounded area" and "horizontal proximity" into Hanazaki's analysis, we construct image schemata of the proximity of *by* and *near* whereby we can grasp the differences between *by* and *near* in detail. Also, we propose the schemata for the <Going by> and <Dropping in> illustrated by (3) and (4), based on the collected data, and give a semantic network in which they extend from and are semantically related to the central meaning, <Vicinity in a horizontal plane>. In addition, we construct the schema for <Side by side> to make the network precisely. The network is given in Figure 3. <Vicinity in a horizontal plane> is identified as the center of the semantic network for the spatial meanings of *by* through the predominance and extends to <Going across> and <Dropping in> through the inheritance of some notions. The <Side by side> schema is derived from the center and the <Bit by bit> schema derives from the former because there are more examples of <Side by side> in the four novels than <Bit by bit>.

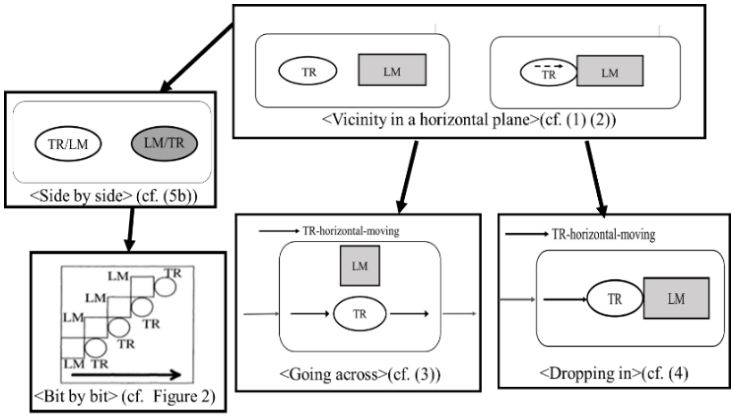

Figure 3:The semantic network for the spatial meanings of *by*

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Reduplication and different interpretations of "different"

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Synopsis: The semantics of "different" has received a great deal of attention in different languages (Carlson 1987, Moltmann 1992, Beck 2000, Barker 2007, Matushansky 2010, Charnavel 2015). By investigating (im)possible interpretations of "different" and the reduplicated "different" in Japanese and Tamil, this paper argues that "different" in these languages behaves differently, depending on whether or not "different" can have a nominal argument.

Data: As shown in (1), *betsu* 'different' in Japanese can have a discourse anaphoric reading.

(1) a. *Taro-wa ie-o mita.* [Japanese]
Taro-TOP house-ACC saw
'Taro saw a house.'

b. *Hanako-wa* [***betsu****-no ie*]*-o mita.*
Hanako-TOP different-GEN house-ACC saw
'Hanako saw a house different from what Taro saw.' (after (1a)) [anaphoric]

When *betsu* is reduplicated, the resulting item *betsu-betsu* receives only a distributive reading, as in (2). In Japanese, common nouns are number neutral. The common noun *ie* 'house' in (2) functions as a domain plural of the distributive "different" (Farkas 1997, Balusu 2006).

(2) *Hanako-wa* [***betsu-betsu****-no ie*]*-o mita.* [Japanese]
Hanako-TOP different-different-GEN house-ACC saw
'Hanako saw different houses.' [distributive]
* 'Hanako saw a house different from what Taro saw.' (after (1a)) [anaphoric]

A similar pattern of "different" is observed in Tamil [Dravidian]. In (3b), *væ:ra* 'different' allows only the discourse anaphoric reading.

(3) a. *Sinduja oɾɯ vi:ɖɯ pa:n̪ta.* [Tamil]
Sinduja one house saw
'Sinduja saw a house.'

b. *Ankita* ***væ:ra*** *vi:ɖɯ-gəl pa:n̪ta.*
Ankita different house-PL saw
'Ankita saw houses different from what Sinduja saw.' (After (3a)) [anaphoric]

The reduplicated form of *væ:ra* disallows the anaphoric reading, as shown in (4).

(4) *Ankita* ***væ:ra-væ:ra*** *vi:ɖɯ-gəl pa:n̪ta.* [Tamil]
Ankita different-different house-PL saw
'Ankita saw different houses.' [distributive]
* 'Ankita saw houses different from what Sinduja saw.' (After (3a)) [anaphoric]

What Japanese and Tamil have in common is that the reduplicated form of "different" cannot yield the discourse anaphoric interpretation.

Proposal: I propose that the non-reduplicated "different" can take the covert pronoun *pro* as its argument, as represented in (5a). (Note that Tamil also allows null arguments.)

(5) a. *Hanako-wa* [[pro ***betsu***]*-no ie*]*-o mita.*
Hanak-TOP different-GEN house-ACC saw
'Hanako saw a house different from a contextually determined individual.'

b. *Hanako-wa* [[*sore-to* ***betsu***]*-no ie*]*-o mita.*
Hanak-TOP it-P different-GEN house-ACC saw
'Hanako saw a house different from it.'

When the covert pronoun in (5a) refers to a contextually determined individual, (5a) receives the discourse anaphoric reading. Evidence for the current analysis comes from the fact that the non-reduplicated "different" can co-occur with an overt nominal argument followed by the postposition *to*, as shown in (5b). I assume that the non-reduplicated "different" generally combines with a nominal argument. On the other hand, the reduplicated "different" cannot appear with an overt argument, as in (6).

(6) **Hanako-wa* [[*sore-to betsu-betsu*]-*no* *ie*]-*o* *mita.*
Hanak-TOP it-P different-different-GEN house-ACC saw

Based on the unacceptability of (6), I assume that the reduplicated "different" cannot take a nominal argument including the covert pronoun *pro*. Under the proposed analysis, the discourse anaphoric interpretation relies on the presence of *pro*, as in (5a). The discourse anaphoric interepretation is unavailable with the reduplicated "different" because it cannot take *pro*.

More on the distributive reading: As shown in (7), the non-reduplicated "different" can yield the distributive interpretation, in addition to the discourse anaphoric one.

(7) [*dono gakusei*]-*mo* [[pro *betsu*]-*no* *ronbun hitotsu*]-*o* *yonda.*
INDET student-also different-GEN paper one.CLS-ACC read
'Every student read one different paper.' [^{OK}anaphoric, ^{OK}distributive]

I assume that the covert pronoun in (7) can be interpreted as a bound variable. (See Hoji 2006 for a similar analysis of the Japanese reciprocal *otagai*.) When the covert pronoun functions as a bound variable, (7) receives the distributive interpretation. (7) can also have the discourse anaphoric interpretation when the covert pronoun refers to a contextually determined individual. It should be noted that the reduplicated "different" can also yield the distributive interpretation, as shown in (8).

(8) [*dono gakusei*]-*mo* [*betsu-betsu-no* *ronbun hitotsu*]-*o* *yonda.*
INDET student-also different-different-GEN paper one.CLS-ACC read
'Every student read one different paper.' [*anaphoric, ^{OK}distributive]

I have proposed that the reduplicated "different" cannot combine with a nominal argument. Given this, the bound variable analysis of the distributive interpretation cannot be extended to the reduplicated "different". It has been observed that reduplication are often associated with distributivity cross-linguistically. (See for instance Gil 1982, Balusu 2005, Cable 2014 for analyses of distributive numerals.) Regarding the distributive interpretation of (8), I assume that distributivity comes from reduplication (Balusu & Jayaseelan 2013). This means that *betsu* and *betsu-betsu* have a different source of the distributive interpretation. Evidence comes from the following examples.

(9) a. [[pro *betsu*]-*no* *sensei hitori*]-*ga* [*Taro-to Hanako*]-*o* *hometa.*
different-GEN teacher one.CLS-NOM T.-and H.-ACC praised
Lit. 'One different teacher praised Taro and Hanako.' [^{OK}anaphoric, *distributive]

b. [*Taro-to Hanako*]$_1$-*o* [[pro *betsu*]-*no* *sensei hitori*]-*ga* Δ_1 *hometa.*
T.-and H.-ACC different-GEN teacher one.CLS-NOM praised
Lit. 'Taro and Hanako, one different teacher praised.' [^{OK}anaphoric, ^{OK}distributive]

(10) [*betsu-betsu-no* *sensei hitori*]-*ga* [*Taro-to Hanako*]-*o* *hometa.*
different-different-GEN teacher one.CLS-NOM T.-and H.-ACC praised
Lit. 'One different teacher praised Taro and Hanako.' [*anaphoric, ^{OK}distributive]

In (9a), the distributive interpretation is unavailable. The distributive interpretation becomes available when the coordinated object moves to a c-commanding position as in (9b). The contrast in (9) can be explained under the present analysis. I assume that the covert pronoun *pro* functions as a bound variable only when there is a c-commanding antecedent. (9a) does not have the distributive interpretation because the covert pronoun is not c-commanded by the plural antecedent, unlike (9b). The same restriction does not hold for the distributive interpretation of the reduplicated "different" in (10). In this case, *betsu-betsu* allows the distributive interpretation, regardless of whether or not a plural antecedent c-commands it. The proposal developed here can thus explain the contrast between (9a) and (10).

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