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The Japanese Existential Possession: A Case Study of Pragmatic Disambiguation

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Abstract

The Japanese existential construction can be used either to assert the presence of some entity in a certain location or to indicate that something is an integral part of another. It has been noted, however, that the part-whole reading seems to disappear when the nominative NP precedes the locative PP. Contrary to the existing analyses which make appeal to some constraint on movement to derive this disambiguation effect, this paper presents an information structural account. The analysis is empirically supported by the lack of disambiguation in embedded contexts and the significant role of contextual information that encourages the ‘missing’ part-whole interpretation to re-emerge.

Keywords

Information structure, part-whole relation, eventuality, inalienable possession, contrastive topic

1. Ambiguity in the Japanese Existential Construction

Semantic ambiguity has been a very important tool not only in formal semantics but also in formal syntax as a window into the nature of the two interrelated components of grammar. Equally important and interesting is a process of disambiguation. The most robust and well-known strategy of disambiguation is contextual information. A potentially ambiguous sentence is unambiguously interpreted because the utterance context clearly calls for a particular interpretation. Our knowledge of the world also helps to eliminate a grammatically possible but implausible meaning. However, contextual information is not the only source of disambiguation. There are many cases in which an ambiguous sentence becomes unambiguous after an application of some syntactic operation, and the most obvious operation that creates disambiguation is movement. Scope interpretations are often very sensitive to syntactic positions, and movement of a scope-bearing expression sometimes has the effect of disambiguation. A number of such instances have been reported crosslinguistically, and they have become very hot topics in the recent syntactic and semantic literature. Perhaps not as recognizable but nonetheless as important as scope phenomena is the disappearance of structural ambiguity. For instance, the following example has two distinct interpretations.

- (1) Few people like visiting relatives.

The phrase *visiting relatives* can be either sentential (a gerund) or an NP in which *visiting* functions as a modifier. Once *relatives* is topicalized, however, only the sentential interpretation survives.

- (2) Relatives, Tom hates visiting (, but friends, he doesn't).

This disambiguation process has a very simple explanation: Movement of an NP that strands a modifier is in general unacceptable in English.¹ Thus, the movement eliminates the meaning that Tom hates relatives who visit him. However, not all instances of disambiguation by movement are as simple as (2). Movements often affect pragmatic interpretations, or putting differently, some movements seem to be pragmatically motivated. Then, at least some disambiguation effects by movement can be attributed to a contextual factor associated with the movement.

In this paper, I present a case study of a pragmatic disambiguation process by examining semantic interpretations of the existential construction in Japanese. Actually, the name, 'existential', may be a little misleading. The construction, which takes the form of *NP-ni ^ NP-ga ^ aru/iru*, 'NP-loc ^ NP-nom ^ exist', can either assert the existence of the second NP in the location of the first NP (henceforth the locative interpretation) or mean that the first NP possesses the second NP as one of its essential parts (the part-whole interpretation). Take (3ab), for instance.

¹ The cautionary note 'in general' is there because a modifier that can be extraposed is spared from this generalization.

- (3) a. Kono torakku-ni atarashii enzin-ga aru
 this truck-loc new engine-nom exist
 Locative meaning: ‘There is an new engine in this truck (possibly on its bed)’
 Part-whole meaning: ‘This truck has a new engine (as one of its essential parts)’
- b. Gareezi-ni doa-ga hutatu aru
 garage-loc door-nom two+CL exist
 Locative meaning: ‘There are two doors stored in the garage.’
 Part-whole meaning: ‘The garage has two doors (= two entrances)’

This construction is also used to express the inalienable possession (4a), which is one kind of part-whole relation, as well as the relational possession (4b).²

- (4) a. Haha-ni siraga-ga aru
 mother-loc grey hair-nom exists
 ‘My mother has grey hair.’
- b. Tanaka-san-ni kodomo-ga hitori aru/iru.
 Tanaka-honorable-loc child-nom one+CL exist
 ‘Mrs. Tanaka has one child.’

What is peculiar about the ambiguity exemplified in (3) is that the part-whole reading seems to disappear when the order of the two NPs is reversed.³ To our knowledge, this fact was first discussed in the generative grammatical literature by Muromatsu (1998).

- (5) a. Atarashii enzin-ga kono torakku-ni aru
 new engine-nom this truck-loc exist
 Locative: ‘There is an new engine in this truck (possibly on the truck’s bed.)’
 ???Part-whole: ‘This truck has a new engine (as one of its essential parts)’
- b. doa-ga hutatu gareezi-ni aru
 door-nom two+CL garage-loc exist
 Locative meaning: ‘There are two doors stored in the garage.’
 ???Part-whole meaning: ‘The garage has two doors (= two entrances)’

In the case of the inalienable possession and the relational possession, the sentences

² As a matter of fact, this existential construction is a more commonly used form for expressing possession than such possessive verbs as *motte-iru* ‘hold+progressive’ and *soyuu-suru* ‘own+do’.

³ I must warn the readers that the judgement here is rather subtle. See the discussion in 2.2 and 4.2.

become odd.⁴

- (6) a. ??? Siraga-ga haha-ni aru
 grey hair-nom mother-loc exist
 ‘My mother has grey hair.’
- b. ?? Kodomo-ga hitori Tanaka-san-ni aru/iru.
 child-nom one+CL Tanaka-honorable-loc exist
 ‘Mrs. Tanaka has one child.’

The initial impression that many native speakers have is the following. The unmarked word order of this construction is *NP-ni* ^ *NP-ga*, and the other order is derived by moving the nominative NP over the locative NP. Since scrambling is a very robust phenomenon in Japanese, this assumption is both intuitive and attractive. If that is the case, then it is rather natural to think that the loss of the part-whole reading in (5) and the degrading of (6) should be attributed to a violation of some constraint caused by this movement. In other words, this disambiguation phenomenon is one similar to the ‘visiting relatives’ case (= (2)) that we discussed above. The existing analyses of this phenomenon, namely Muromatsu (1998) and Tsujioka (2000), indeed make use of this idea.

The main claim of this paper is that, very attractive though these analyses may seem, the disambiguation in (4) is essentially pragmatic. In the next section, I will quickly review the previous analyses and show that they encounter a serious problem when the disambiguation effect disappears in embedded contexts. Subsequently, I will present a pragmatic analysis based on Vallduvi’s (1992, 1995) theory of information structure. The disappearance of the part-whole reading is due to the ill-formed information structure under such an interpretation. The root-embedded contrast introduced in Section 2 is accounted for based on the information structural difference of the *ga*-marked subject in the two environments. To support this analysis, we will discuss a variety of root-embedded asymmetries that all point to the same direction. Section 4 is devoted to the discussion of disambiguation by topic-marking (also due to Muromatsu 1998 and Tsujioka 2000). Although the phenomena associated with the topic marker *wa* does not threaten the validity of the main proposal in Section 3, it suggests that the notion of link/topic may have to be broader than a theory like Vallduvi’s envisioned, and that there is much to gain for such a theory by incorporating some aspects of another branch of pragmatic theory, which defines a topic as an implicit question in the context.

2. Disambiguation by Syntax

⁴ According to the several native speakers I consulted, the Korean existential construction exhibits the same pattern. One difference seems to be that inalienable possessions are more naturally expressed by the double-nominative construction. The same strategy is also available in Japanese.

2.1. Movement Analyses

Muromatsu (1998), the original discoverer of the disambiguation effect, provides an account that stems from structural and semantic differences between the locative and the part-whole existentials. Following Hornstein, Rosen and Uriagereka (1995), she proposes that the ambiguity of $NP-ni \wedge NP-ga \wedge aru$, ‘NP-loc \wedge NP-nom \wedge exist’, originates from different thematic structures that are shown below.

(7) a. Locative reading

[_{Small Clause} [_{NP} atarasii enzin] [_{PP} koto torakku-ni]]
 new engine this truck-loc

b. Part-whole reading

[_{Small Clause} [_{NP} kono torakku] [_{NP} atarasii enzin]]
 this truck new engine

In (7b), the NP *atarasii enzin*, ‘new engine’, is a predicate that thematically selects its whole *kono torakku*, ‘this engine’. She further proposes that the movement over the locative *ni*-phrase is the indication that the moved phrase (= the *ga*-marked NP) is the subject. In her analysis, only referable NPs can be subjects, and predicative NPs are not referable. Therefore, the movement of the *ga*-marked NP in the structure (7b) is illegal. This is how Muromatsu derives the disambiguation effect in the $NP-ga \wedge NP-ni$ word order.

Tsujioka (2000) provides a different account which is nonetheless based on the structural difference between the two interpretations of the existential construction, like Muramatsu’s. She makes appeal to the constraint on remnant movement proposed by Müller (1998). She also assumes, along with Stockwell, Schachter, and Partee (1972), Vergnaud and Zubizarreta (1992) among others, that the thematic structure of the part-whole reading is different from that of the locative reading. The Part-N selects the Whole-NP as its internal argument, assigning a possessor θ -role to it. The unmarked word order $NP-ni \wedge NP-ga$ is derived via the movement of the Whole-NP (= $NP-ni$) to Spec of IP (cf. Szabolcsi 1983). This movement is considered an instance of A-movement. The opposite word order comes about as a result of scrambling of the Part-NP (= $NP-ga$) over the Whole-NP (= $NP-ni$). The derivation that Tsujioka proposes is schematized in (8).

(8) a. D-Structure

[_{NP} [_{N'} [_{NP} Whole-*ni*] [_N Part-*ga*]]]

b. Movement of the Whole NP

[_{IP} [_{NP} Whole-*ni*]₁ [_{NP} [_{N'} [_{NP} *t*₁] [_N Part-*ga*]]] ...]
 └──────────────────────────────────┘

c. Movement of the Part NP

[_{IP} [_{NP} [_{N'} [_{NP} *t*₁] [_N Part-*ga*]]]₂ [_{IP} [_{NP} Whole-*ni*]₁ *t*₂ ...]

account also predicts that (11) is grammatical.

2.2. Problems

Despite their effectiveness and broad coverage of empirical facts, I believe that neither Muramatsu's nor Tsujioka's analysis is ultimately tenable. I do not have major objections to their claims that the locative and the part-whole interpretations arise from different thematic relations that are mapped to different syntactic structures. They each offer a variety of arguments other than the two readings in the existential construction in support of their analyses. It may be said that a few ingredients of their analyses are debatable (e.g., the existence of focus movement) and need independent support, but such an objection is only indirect. My main objection is based on a very simple fact: The disambiguation effect of the *NP-ga* ^ *NP-ni* word order is totally absent in embedded contexts. Here are some examples.

- (12) a. Siito-beruto-ga kuruma-ni aru-koto-wa kodomo-demo sitteiru.
 seatbelt-nom car-dat exist-fact-top child-even know
 'Even a child knows that a car has seatbelts.'
- b. Taabo-enzin-ga kumura-ni are-ba hassin-ga hayai
 turbo engine-nom car-loc exist-if acceleration-nom fast
 'If a/the car has a turbo engine, it accelerates fast.'

The inalienable possession and the relational possession interpretations also survive in the *NP-nom* ^ *NP-ni* order under embedding.

- (13) a. Siraga-ga sanzyuudai-no hito-ni at-temo okasiku-nai
 grey hair-nom 30's-gen person-loc exist-even if strange-neg
 'It's no surprise if someone in his thirties has grey hair.'
- b. Kodomo-ga moo hitori Tanaka-san-ni at-/i-tara sigoto-o
 child-nom more one+CL Tanaka-honorable-loc exist-if job-acc
 yamete-iru-daroo
 quit-prog-mod
 'If Mrs. Takaka had one more child, she would have quit her job.'

Whether it is in a root or an embedded clause, the nominative marked Part-NP should have undergone the same movement. Therefore, the presence of the part-whole reading in these examples is left unexplained in Tsujioka's theory that makes use of a constraint on remnant movement. Muromatsu's account fares no better. The prohibition on a predicative NP from being the subject should be equally operative in embedded contexts. Thus, her analysis also makes an incorrect prediction that there should not be any root-embedded contrasts. The generalization of the two readings in the existential construction is a little more intricate than our initial impression.

- (14) The *NP-ga* ^ *NP-ni* order does not allow the part-whole reading in root contexts unless the NP-nom is focused or the nominative marker is replaced by the topic marker *wa*. No restriction in embedding.

To add more intricacy to our current situation, it is worth pointing out that the judgment on the *NP-ga* ^ *NP-ni* order is not very solid. Indeed, the two anonymous reviewers for *Lingua* both informed me that they found the contrast between the two word order patterns rather weak. My own inclination is that the relevant contrast is present, which calls for explanation, but it is not as strong as one would expect from a violation of a typical syntactic constraint. Comparison with the English *visiting relatives* sentence in (1) and (2) highlights the second point. There is no dispute about the disappearance of the *visiting-as-a-modifier* interpretation in (2). Now that it is fairly clear that movement cannot be the source of the disambiguation effect, an alternative solution must be sought. The key fact, I believe, is the root-embedded asymmetry, and my proposal takes advantage of one of the best-known root-embedded contrasts in Japanese, namely topic-marking.

3. Topic-Focus Structure in Japanese

3.1. Root-Embedded Contrasts of Other Kinds

It is widely acknowledged that Japanese is a language which possesses morphological marking of topicality. Amongst the numerous properties of the topic marker *-wa* that have been discussed by generative and traditional grammarians, I list below several that are relevant for our discussion.

- (15) Properties of Japanese Topics
- a. Matrix subjects tend to be the default topics.
 - b. If something other than the matrix subject is the topic, it linearly precedes the subject. If it is left in situ, it gets the contrastive interpretation.
 - c. Multiple topics are not totally prohibited but rather rare, except for ‘contrastive’ topics.
 - d. Embedded subjects are not topic-marked.⁵

These properties, particularly (15d), have many empirical consequences, some of which take the form of root-embedded contrasts. For instance, Kuroda (1965) observed that a *ga*-marked subject with an individual-level predicate leads to the exhaustive

⁵ Many native speakers share the judgement that topic-marking in embedded clauses is not bad if the embedded clauses are complement CPs (of attitude verbs). In contrast, topic-marking within other embedded clauses, such as relative clauses, is significantly worse. This contrast is not so surprising if one believes in the ‘quotation’ theory of attitude verbs. If an embedded sentence is really an embedded quotation, the information structure might well survive under embedding.

interpretation while no such effects are found with a *wa*-marked subject in Japanese. Moreover, the exhaustive reading is, though available, not obligatory with a stage-level predicate. These contrasts are exemplified by the following examples.

- (16) Individual-level predicate
 a. John-ga zurugasikoi
 John-nom sly
 Exhaustive reading: Of all the people relevant in the context, it is John who is sly.
- b. John-wa zurugasikoi
 John-top sly
 Neutral reading: Speaking of John, he is sly.
- (17) Stage-level predicate
 John-ga ki-ta
 John-nom come-past
 Neutral reading: There was an event of John's arrival
 Exhaustive reading: Of all the people relevant in the context, it is John who arrived (possible when the subject is stressed).

As discussed extensively in Heycock (1994), this contrast between the two types of predicates disappears with embedding.

- (18) a. Individual-level predicate
 Erika-wa [CP John-ga zurugasikoi to] omo-ttei-ru
 Erika-top John-nom sly Comp think-prog-pres
 'Erika thinks that John is smart' (Neutral reading)
- b. Stage-level predicate
 Erika-wa [CP John-ga ki-ta to] omo-ttei-ru
 Erika-top John-nom come-past Comp think-prog-pres
 'Erika thinks that John came' (Neutral reading)

The obligatory exhaustive interpretation disappears in (18a), making no contrast with the stage-level predicate example (18b).

Another instance of root-embedded contrasts is the (in)definiteness effect. In general, Japanese does not morphologically mark definiteness of NPs in the same way as English does, and bare NPs, such as *kodomo* 'child', can be either definite or indefinite, depending on the utterance context. As Kuno (1973) among others notes, however, topic-marking and its lack thereof has an impact on the (in)definiteness. For instance, consider the following mini-discourse.

- (19) Kinoo uti-no mise-ni okyaku-ga inu-o turete yattek-ita. Inu-#ga/-✓wa
 yesterday my store-loc customer-nom dog-acc with come-past dog-nom/-top
 akai tyokki-o kis-se-rare-tei-ta.

red vest-acc wear-cause-pass-prog-past

‘Yesterday, a customer came to our store with a dog. **The** dog was wearing a red vest.’

Topicality is known to presuppose familiarity, and the topic-marking in the second sentence of (19) is appropriate because *inu* ‘dog’ has been mentioned in the first sentence. The infelicity of the nominative marking suggests that, when we have a choice of topic-marking, the nominative option is reserved for expressing new information. This indefinite requirement for a nominative subject is suspended when it occurs in an embedded sentence.

- (20) Kinoo uti-no mise-ni okyaku-ga inu-o turete yattek-ita. Inu-**ga** akai
yesterday my store-loc customer-nom dog-acc with come-past dog-**nom** red
tyokki-o kis-se-rare-tei-ta-node, warat-te-simatta.
vest-acc wear-cause-pass-prog-past-because laugh-perf-past
‘Yesterday, a customer came to our store with a dog. Because **the** dog was
wearing a red vest, I couldn’t help laughing.’

Unlike a nominative subject in a root-clause, the embedded subject *inu-ga* ‘dog-nom’ is successfully understood to be the dog that came with the customer.

Most recently Lee and Tomioka (2000) and Tomioka (to appear) note that what have come to be known as an LF intervention effect (cf. Hoji 1985, Beck 1996, Beck and Kim 1997, Tanaka 1997 among many others) disappears or significantly weakens in embedded contexts. LF intervention effects show up when certain quantifiers c-command wh-phrases at S-structure, as exemplified in (21a). The same relative configuration does not cause a problem when the sentence is embedded, as shown in (22).

- (21) a. ??Daremo-ga nani-o yon-da-no
everyone-nom what-acc read-past-Q
‘What did everyone read?’ (= Tomioka 2004, (2a))
- b. Kimi-wa [_{CP} daremo-ga nani-o yon-da-to] omotteiru-no
you-top everyone-nom what-acc read-past-comp think-Q
‘What do you think that everyone read?’ (= Tomioka 2004, (8a))

Tomioka attributes this contrast to the anti-topical nature of an intervener like *daremo* ‘everyone’, noting that potential interveners cannot be combined with the topic-marker *wa* (i.e., **daremo-wa* ‘everyone-top’). The question (21a) requires that the non-wh portion of the sentence be confined within the background/presupposition, but *daremo-ga* cannot belong to the background by virtue of being a topic. This property is ‘cancelled’ in the embedded contexts because such a anti-topical requirement is lifted there.

The generalization that emerges from the root-embedded contrasts we saw above is that nominative subjects must obey extra interpretive constraints that stem from their focalized nature (e.g., exhaustiveness, novelty, and anti-topicality) when they could have

been marked for the topic-marker *-wa* but are not. Topic-marking is much more limited to embedded subjects, and as a result, those interpretive constraints do not apply to embedded nominative subjects. Putting it slightly differently, nominative subjects show ‘aggressively non-topic’ properties when they appear in positions in which they could have been topic-marked. Essentially, this is the generalization that Heycock (1994) and Tomioka (to appear) reached. I would like to suggest that the disambiguation of the existential construction and the lack of disambiguation in embedded contexts belong to this larger class of root-embedded asymmetries that stem from information structural differences of the topic-marking.

3.2. Theoretical Background

The information structure theory that I adopt in this paper is Vallduví (1992, 1995)’s *Information Packaging* theory. It was developed from several different traditions of Topic-Focus pragmatics, such as Chafe (1976) and Prince (1986). Information Packaging is about the correlations between the organization of sentences and what speakers assume hearers know at the time of utterance. In Vallduví’s system, a sentence is partitioned into two major parts, a *focus* and a *ground*, and a ground is further divided into a *link* and a *tail*. Roughly speaking, a focus corresponds to a syntactic constituent which is interpreted as new information in the sentence. Old information or information easily recoverable from the utterance context via accommodation is confined within the constituent that corresponds to a ground. Of the two types of grounds, a link connects an utterance with the previous context by setting up a theme of the utterance, and a tail is the non-link part of a ground. More formally speaking, each part of the information structure comes with its own File Change Semantic instruction (cf. Heim 1982, Chapter 3). A link points to a file card which is about to be updated, whereas focus contains the information to be newly added to the file card that the link corresponds to. A tail often represents the information already put down on existing cards or the information that can be easily inferred. Following Heycock (1994) and Portner and Yabushita (1998), I assume that a topic-marked phrase in Japanese is a link in the information component. The constituent that is the most prominent prosodically (or some constituent which dominates such a constituent) is considered focus. The remaining part of a ground is a tail, although I will rarely make reference to tails in this paper.

3.3. Information Structure of the Existential Construction in Root Clauses

In this section, I will show how information structure can make an impact on the semantic interpretations of the existential construction. Let us begin with the (un)ambiguity in root contexts. Consider (22).

- (22) Kono torakku-ni atarashii enzin-ga aru
 this truck-loc new engine-nom exist
 Locative meaning: ‘There is an new engine in this truck (possibly on its bed)’
 Part-whole meaning: ‘The/a truck has an engine (as one of its essential parts)’ (= (3a))

It is not entirely obvious what kind of information structure (22) can have. In particular, the lack of overt topic marking in it makes it more difficult than usual to determine which constituent corresponds to the link of the sentence. One possibility is that the *NP-ni* ‘NP-loc’ is the link. Although the topic marker *-wa* is absent, it can be considered as a result of the topic marker drop, a phenomenon quite prevalent in Japanese. True case particles, such as *-ga* (nom) and *-o* (acc), must be entirely replaced by *-wa*, and once the topic marker drop applies, the result is an NP with no particle. More postposition-like particles, including the locative *-ni*, co-appear with *-wa*. Therefore, the topic marker drop makes the NP look as if nothing had happened. The following table illustrates this point.

(23) Paradigm of Topic Marking

Type of Particle	Topic Marking	Topic Marker Drop
<i>-ga</i> (nom), <i>-o</i> (acc)	Ken-(* <i>ga</i> /* <i>o</i>)- <i>wa</i>	Ken- \emptyset
<i>-ni</i> (loc/dat), <i>-kara</i> (from)	Ken- <i>ni-wa</i> Ken- <i>kara-wa</i>	Ken- <i>ni</i> - \emptyset Ken- <i>kara</i> - \emptyset

Then, the information structure of (22) can be (24), which is compatible with either the locative or the part-whole reading, as the two paraphrases show, although I find the second interpretation the more salient of the two.⁶

⁶ *-Wa* drop is quite common when the topic is definite (e.g., a proper name, a demonstrative), but the topic marker drop is not very good with a bare common noun. The generalization seems to be that the more ‘specific’ the NP is, the better the topic marker drop becomes.

- (i) *Wa*-drop with the subject
- a. Hayashi-san(-*wa*) atama ii yo.
Hayashi-honor-(top) smart-part
‘Mr./Ms. Hayahi is smart.’
 - b. Saru-??(-*wa*) atama ii yo.
monkey(-top) smart-part
‘Monkeys are smart.’
 - c. Kono-syu-no saru-??(*wa*) atama ii-yo
this-kind-gen moneky-(top) smart-part
‘This kind of monkey is smart.’
 - d. Ano doobutuen-no saru-(*wa*) atama ii yo
that zoo-gen monkey-(top) smart-part
‘The monkeys in that zoo are smart.’

The behavior of locative phrases without *-wa* matches this pattern. Hajime Hoji (pc) suggested that we make the Part-phrases Wh-phrases so that the locative phrases are most likely understood to be Topics.

- (24) [kono torakku-ni(wa)]_{LINK} [atarasii enzin-ga aru]_{FOCUS}
 this truck-loc(-top) new engine-nom exist
 Locative meaning: ‘Speaking of this truck, there is an new engine located on it.’
 or Part-whole meaning: ‘Speaking of this truck, it has a new engine’

Alternatively, we may regard the predicate part of the sentence *enzin-ga aru* as the link and the *NP-ni* as the focus, as illustrated in (25).

- (25) [KONO TORAKKU-NI]_{FOCUS} [atarasii enzin-ga aru]_{LINK}
 this truck-loc new engine-nom exist
 Locative meaning: ‘A new engine is in THIS TRUCK’
 Part-whole meaning: ‘THIS TRUCK has a new engine.’

(25) is modeled after Heycock’s (1994) analysis of the exhaustivity-inducing nominative subject and Matsuda’s (1997) analysis of a similar phenomenon. Under this analysis, we depart from the assumption that there is a bi-conditional correspondence between the morphological topic marking and the linkhood.⁷ In effect, (25) is information-structurally

(ii) *Wa*-drop with the locative

- a. Saru-ni??(-wa) donna sippo-ga aru no
 monkey-loc(-top) what kind of tail-nom exist-Q
 ‘What kind of tail does a monkey have?’
- b. Kono-syu-no saru-ni??(-wa) donna sippo-ga aru no?
 this-kind-gen monkey-loc(-top) what kind of tail-nom exist-Q
 ‘What kind of tail does this type of monkey have?’
- c. Ano doobutuen-no saru-ni(-wa) donna sippo-ga aru no?
 that zoo-gen monkey-loc(-top) what kind of tail-nom exist-Q
 ‘What kinds of tails do the monkeys in that zoo have?’

⁷ This analysis is by no means uncontroversial. Matsuda herself argues against it in her later work (Matsuda 2003). She argues that the analysis would treat (ia) and (ib) information structurally identical (the examples are taken from Heycock (to appear)).

- (i) a. Isya-wa Hiromi-da
 Doctor-top Hiromi-Cop
 ‘The doctor is Hiromi.’
- b. Hiromi-ga isya-da
 Hiromi-nom doctor-cop
 ‘HIROMI is the doctor.’

If someone says, ‘I know that the nurse is Ayako, but the doctor...?’, you can answer to her by (ia), but not (ib). Therefore, the two sentences seem to have different information structures. Heycock (to appear) challenges to this criticism and points out that the

analogous to the cleft-like structure (26), in which the predicate part is overtly topicalized.

- (26) [atarasii enzin-ga aru-no-wa]_{LINK} [kono torakku(ni)-da]_{FOCUS}
 new engine-nom exist-nominal-top this truck(-loc)-copula
 Locative meaning: ‘It is on this truck that a new engine is located.’
 Part-whole meaning: ‘It is this truck that has a new engine.’

As the two translations suggest, this information structure is also compatible with both readings.

The third possibility is that none of the (overt) constituents corresponds to a link. In Vallduví’s system, focus is the only required element, and (22) can be an instance of ‘all-focus’. A similar idea can be found in Selkirk’s (1984) theory of ‘focus projection’ in which focus, represented as F-feature, can percolate all the way up to the IP-level. However, this seemingly link-less sentence can have an alternative information structure. There may be a phonologically null element which functions as the link of the sentence. One candidate is a situation argument or Davidsonian eventuality argument (e.g., Gundel 1977, Erteschik-Shir 1997, Heycock 1994 among others).^{8 9}(27) illustrates such a possibility.

- (27) [e_{eventuality}]_{LINK} [kono torakku-ni atarasii enzin-ga aru]_{FOCUS}
 this truck-loc-(top) new engine-nom exist

What interpretation does (27) lead to? An eventuality argument comes with a certain restriction. In Kratzer (1995), it is argued that an eventuality (or spatio-temporal argument in Kratzer’s term) argument is present only with a stage-level predicate. The locative reading involves stage-level predication since the location of something changes

differences between (ia) and (ib) persist in embedded contexts, where topic-marking is not an issue. See Heycock (to appear, section 3.3) for detailed discussion.

⁸ Although Vallduví himself does not explicitly discuss eventuality links, he claims that information is updated on a ‘default situation file card’ when there is no overt link (e.g. Vallduví 1995, pp.125, (3c)).

⁹ One reviewer wonders whether this analysis can be made compatible with Kuroda’s (1992, Chapter 1) notion of ‘thetic’ judgement (or the lack of any judgment) of a *wa*-less sentence. If a link is an indispensable ingredient in a sentence and a link is likened to the subject of a categorical judgment, as Kuroda claims, then, one could suppose that there are no pure ‘thetic’ judgment sentences, at least at the matrix level. This may appear to be a radical departure of Kuroda’s analysis, but we need to be aware that his notion is essentially static and still leaves some room for dynamic re-interpretation of it. Perhaps, the admission of a null sentential topic, as discussed in Section 4, is unavoidable even for a theory like Kuroda’s. However, proper treatment of such matters in connection to Kuroda’s judgment theory is beyond the scope of the current project.

legitimate information structure for (28), in which the implicit eventuality argument is link.

(30) [*e*_{eventuality}]_{LINK} [atarasii enzin-ga kono torakku-ni aru]_{FOCUS}

For the reason mentioned earlier, (30) is only compatible with the locative reading since the part-whole reading does not allow an event argument to be present. Since there is no other feasible information structure for (28), the proposed analysis based on information structure derives the first half of the target generalization (14): The *NP-ga* ^ *NP-ni* order does not allow the part-whole reading in root contexts unless the NP-nom is focused.

3.4. Embedded clauses

The second half of the generalization is the lack of disambiguation effects in embedded clauses. As we have seen in Section 3.1, the obligatory exhaustive reading and the indefinite requirement for a nominative subject are only applicable in root clauses. In embedded clauses, all the extra requirements (the obligatory focus, the novelty, etc.) imposed on nominative subjects are lifted. Generally speaking, root clauses present the main template for the information structural partition while embedded clauses are parts of the root clauses, and they themselves may not have internal topic-ground distinctions. This secondary nature of embedded clauses in terms of information structure gives more freedom to nominative subjects. Let us reconsider the relevant examples.

- (31) a. Siito-beruto-ga kuruma-ni aru-koto-wa kodomo-demo sitteiru. (= (12a))
 seatbelt-nom car-dat exist-fact-top kid-even know
 ‘Even a kid knows that a car has seatbelts.’
- b. Taabo-enzin-ga kumura-ni are-ba hassin-ga hayai (= (12b))
 turbo engine-nom car-loc exist-if acceleration-nom fast
 ‘If a/the car has a turbo engine, it accelerates fast.’

The more straightforward of the two is (31a), where the complex NP headed by *koto* is overtly marked for topic. This leads to the information structure shown in (32).

(32) [Siito-beruto-ga kuruma-ni aru-koto-**wa**]_{LINK} [kodomo-demo sitteiru]_{FOCUS}
 seatbelt-nom car-dat exist-fact-top kid-even know

In the preceding discussion, I suggested that the reason for the *NP-ga* ^ *NP-ni* order lacking the part-whole reading is that there is no suitable link under such a reading. This reasoning does not apply to (32) since the entire sentence is a part of the link. Therefore, this information structure does not disambiguate the embedded sentence, and the part-whole reading can survive. The situation is not so obvious for (31b), which contains no overt element marked with *-wa*. Furthermore, (31b) is not a mere description of a certain spatio-temporal situation but is some kind of generalization about the correlation between a turbo engine and acceleration. It means that positing an eventuality link is not

a wise choice. There have been claims about topicality in conditional sentences like (31b), however. Kratzer (1986) initiated the trend by arguing that the antecedent of a conditional serves as the restriction for the hidden adverbial quantifier.¹¹ In other words, it shares with a topic the function of setting up an appropriate stage for assertion. Indeed, a topic-marked phrase sometimes acts like the antecedent of a conditional in the so-called the Conditional Topic construction, as discussed in detail by Tateishi (1990). (33) is an instance of this construction, and its meaning is reminiscent of what is often referred as a ‘relevance conditional’.

- (33) Biiru-ga hosii-hito-wa reezooko-ni mada takusan aru-yo.
 beer-nom want-person-top fridge-loc still a lot exist-particle
 ‘Lit: Speaking of those who want beer, there’s still a lot left in the fridge.’ or ‘If you want beer, there’s still a lot left in the fridge.’

With such a close correspondence between a topic and a conditional, it seems reasonable to think that (31b) has the information structure shown in (34).¹²

- (34) [Taabo-enzin-ga kumura-ni are-ba]_{LINK} [hassin-ga hayai]_{FOCUS}

Once the focus-ground partition is established as in (34), no information structural disambiguation takes place within the embedded clause, and the ambiguity persists. Of course, I have not exhausted all the types of embedding structure. The important point is that elements within an embedded clause do not function as links at the root level. If an embedded element needs to be set up as a link, it must be topicalized to the matrix clause and be marked with *-wa*. Or else, it is base-generated as the matrix topic, and a phonologically silent pronoun (i.e., *pro*) occupies the embedded position. Whichever strategy is chosen, an embedded nominative subject does not participate in the ‘competition’ with a topic-marked subject, which leads to the disappearance of aggressively non-topic behavior.

Although the question still remains whether there is any need to articulate ‘recursive’ information structures in subordination, one can interpret this general tendency as a sign that structural reflexes of information-based partition are much weaker in embedded clauses, and the current proposal correctly predicts that the loss of the part-whole reading does not occur in subordinate clauses.

¹¹ The topicality of the antecedent in a conditional is more explicitly argued for by von Stechow (1994).

¹² Allowing a sentential link may be considered as a departure from Information Packaging theory in the purest form. As Portner and Yabushita (1997) notes, Vallduvi’s framework is a representative of the ‘topic-as-a-discourse-entity’ approach to topics, as evidenced by its use of the file-card analogy (for another representative of this branch, see Erteschik-Shir 1997). The information structure in (34) resembles its rival theory, ‘topic-as-an-implicit-question’ (e.g., von Stechow 1994, Büring 1997). See Section 4 where this issue will become more pressing.

4. More on Topic Marking

There are two additional disambiguation-related effects in the Japanese existential construction, both of which involve topic-marking. One is the observation by Muromatsu (1998) that the topic marking on the locative NP is only compatible with the part-whole interpretation. The second phenomenon is the lack of disambiguation with the contrastive topic marking, discussed in Tsujioka (2000). Since the analysis proposed in the previous section makes appeal to the notion of topicality or linkhood in order to account for the disambiguation effects, it is worthwhile to see whether the information structural account can withstand the challenges that these phenomena present. It will be shown that, while they do not threaten the overall analysis, they reveal some uncertainties concerning the file-card analogy of the Information Packaging theory.

4.1. Disambiguation by Topic-marking

Muromatsu (1998) notes that the ambiguity of *the NP-ni^NP-ga* order remains in tact when the topic-marker is added to *NP-ni* while the locative reading disappears when the topic marker entirely replaces the locative *-ni*. This paradigm is illustrated below.

- (35) a. Kono torakku-ni atarashii enzin-ga aru
 this truck-loc new engine-nom exist
 ✓ Locative meaning ✓Part-whole meaning (= (3a))
- b. Kono torakku-**ni-wa** atarashii enzin-ga aru
 this truck-**loc-top** new engine-nom exist
 ✓ Locative meaning ✓Part-whole meaning
- c. Kono torakku-**wa** atarashii enzin-ga aru
 this truck-**top** new engine-nom exist
 ???Locative meaning ✓Part-whole meaning

Muromatsu suggests that the lack of the locative interpretation in (35c) indicates the categorial difference of the *ni*-phrase in the two readings; it is a dative-marked NP under the part-whole reading while *ni* in the locative reading is a postposition. Since a postposition is usually retained when *wa* is attached, this contrast has some independent support.

As far as the information structure is concerned, such a disambiguation effect is unexpected. In general, the structure *XP-wa YP* does not discriminate the predicate types. The YP can be an individual-level or a stage-level predicate, as shown below.

- (36) a. Kono torakku-**wa** baransu-ga warui (Individual-level)
 this truck-**top** balance-nom bad
 ‘Speaking of this truck, it is not well-balanced.’

- b. Kono torakku-**wa** yogore-teiru (Stage-level)
 this truck-**top** get dirty-prog
 ‘Speaking of this truck, it is dirty.’

Therefore, unlike the scrambling case discussed in the previous sections, the contrast in (35) should not be attributed to ill-formed information structure.

While I concur that Muromatsu’s suggestion is essentially on the right track, there are some problematic cases for her generalization. The incompatibility between the topic-marking and the locative interpretation actually depends on the lexical meaning of the noun used in the locative NP or PP. Consider (37).

- (37) a. [_{NP} [_{CP} kinoo itta] kaigan]-**wa** gomi-ga (takusan) at-ta
 yesterday went beach-**top** trash-nom a lot exist-past
 ‘Speaking of the beach I went to yesterday, there was a lot of trash on it.’
- b. Yuube boku-no heya-**wa** ka-ga i-ta.
 last night my room-**top** mosquito-nom exist-past
 ‘Speaking of my room, there were mosquitos in it last night.’

The presence of a temporal modifier (e.g., *kinoo* ‘yesterday’) makes the part-whole interpretation infelicitous. These sentences are indeed grammatical with the locative interpretations, as the English translations suggest. The crucial difference seems to be the nature of the nouns: *Kaigan* ‘beach’ or *heya* ‘room’ is, in a sense, inherently locative. On the other hand, other nouns, such as *kuruma* ‘car’ or *reezooko* ‘refrigerator’, are primarily object-oriented although they can be used as locatives. The topic-marking without *ni* is allowed for a locative argument when the noun is inherently locative. In other words, the contrast in (35bc) does not necessarily lead to the structural ambiguity of *ni*-phrase between an NP and a PP. Instead, it suggests the necessity of fine-tuning the file-card analogy. Each file card corresponds to a particular discourse referent. However, one referent may have more than one ‘guise’. For instance, a referent x_1 , which is a car, has a default ‘object-guise’. In addition, it can have a ‘locative-guise’ when it is used with the locative marker *ni*. What (35bc) suggest is that a file card may not always correspond to a unique discourse referent but to a unique guise of it. The presence of the locative particle *ni* helps us pick out the ‘locative-guise’ card. When *ni* is absent, our first protocol is to go for the default ‘object-guise’ card, to which locative information, such as ‘there is a new engine in it’, cannot be easily added. As for an inherently locative noun, such as *heya* ‘room’, either there is only one guise in which the notions of ‘object’ and of ‘location’ are not distinguished, or it also has two guises, but the locative-guise is default. Whichever the case, the lack of *ni* does not hurt inherently locative nouns nearly as much as ordinary entity-denoting nouns.

4.2. Contrastive Topics

The second topic effect involves contrastive topics. Recall that, unlike the canonical *ni*^{ga} order, the *ga*ⁿⁱ order does not have the part-whole interpretation in root context.

Tsujioka notes, however, that the second pattern retains the part-whole reading if *wa* is attached to the *ni*-phrase.

- (38) a. *hisyo-ga syatyoo-ni i-ru (= Tsujioka 2000 (39a))
 secretary-nom president-dat exist
 ‘The president has a secretary.’
- b. hisyo-ga SYATYOO-NI-WA i-ru (= Tsujioka 2000 (40a))
 secretary-nom president-dat-contrastive exist
 ‘PRESIDENTS (but not others) have a secretary.’

(38b) is an instance of a contrastive topic which involves the topic-marker *wa* accompanied with prosodic prominence akin to focus. This may not be the most obvious instance of the part-whole interpretation, but the same contrast can be replicated with familiar examples.

- (39) a. Atarasii enzin-ga kono torakku-ni aru (= (5a))
 new engine-nom this truck-loc exist
 Locative: ‘There is an engine in this truck(possibly on the truck’s bed.)
 ???Part-whole: ‘This truck has an engine (as one of its essential parts)’
- b. ?Atarasii enzin-ga KONO TORAKKU-NI-WA aru (= (5a))
 new engine-nom this truck-loc exist
 Locative: ‘On THIS TRUCK, there is a new engine.’
 Part-whole: ‘THIS TRUCK has an engine.’

It is not clear what a contrastive topic brings into the current framework of the information structural partition. One might treat it as a special instance of a link based on the identity of the particle used in the construction. This is essentially how Portner and Yabushita (1998) deals with it.¹³ However, there are a couple of reasons to be skeptical about such an approach. First, in a Wh-interrogatives, a Wh-phrase in general cannot be *wa*-marked. This makes sense because ordinarily Wh-phrases are focused, and the topic marking signals linkhood, a part of a ground which is a polar opposite of focus. If a Wh-phrase is *wa*-marked at all, it must be understood to be contrastive. In other words, a contrastive topic is compatible with something we usually consider focus. Second, a contrastive topic often triggers what is called post-focus prosodic reduction. It is a particular prosodic pattern associated with focusing in which the prosodic prominence of the material after a focused constituent is significantly reduced (cf. Nagahara 1994, Deguchi and Kitagawa 2002, Ishihara 2002). No such reduction is observed after a usual

¹³ As a matter of fact, Portner and Yabushita do not make reference to ‘contrastive topic’ in their paper, but they treat the wide scope of *NP-dake-wa* ‘NP-only-top’ in intensional contexts by assuming that the NP is a link. All instances of *NP-dake-wa* in embedded clauses are contrastive topics.

topic phrase (often called a ‘thematic’ topic). These facts suggest that a contrastive topic is, despite its name, more like a special kind of focus than a topic. This intermediary conclusion is in accordance with Hara's (to appear) analysis of contrastive topics. In her system, a contrastive topic evokes a set of alternatives in the sense of Alternative Semantics for Focus (cf. Rooth 1985, 1992), just as is the case of ordinary focus. When used contrastively, the particle *wa* imposes the scalar implicature of the following sort: Let α be a sentence that contains a contrastive topic. The set of alternatives to the ordinary meaning of α must include at least one proposition more informative than the ordinary semantic value of α . The contrastive *wa* implicates that the ordinary semantic value of α is the maximum limit of informativeness that the speaker is willing assert. If a contrastive topic is really a focus with scalar implicature, what is the link in a sentence like (38b) or (39b)? Although it is by no means clear, the examination of a likely context in which such a sentence can be uttered will be useful. To say (38b), for example, we need special contexts, and the following mini-discourse exemplifies them.

(40) A: Koko-no-kaisya, hukusyatyoo-no tatiba, anmari yoku-nai-nda-yo.
 here-gen-firm vice president-gen situation very good-neg-cop-particle
 ‘(I tell you,) the situation of the vice president of this company is not so good.’

B: Hee, soo-nano.
 Hum so-cop
 ‘Oh, is that so?’

A: Tatoeba, hisyo-ga SYATYOO-NI-WA i-ru-kedo HUKUSYATYOO
 for example secretary-nom president-dat-WA exist-but vice-president-dat
 -NI-WA i-nai-ndayo.
 -dat-WA exist-neg-cop-particle
 ‘For instance, the president has a secretary, but the vice president doesn’t.’

This example shows how difficult it is to determine the information structural partition when contrastive topics are involved. None of the constituents in the second utterance seems to fit the profile of a link. If there is a link in it at all, it is perhaps ‘the vice president’s situation in the company’ or ‘the reason why A thinks that the vice president is mistreated’, which is arguably syntactically represented as a phonologically null topic.

If such a move is feasible, however, we need to re-think the analysis presented in Section 2. In particular, even with an individual-level predicate, we would predict that the *NP-ga^NP-ni* order can have the part-whole reading in a root context, provided that the context calls for an implicit link of the kind we saw in (40). This prediction seems borne out.

(41) A: Motto anzen-ni ki-o tuketa-hoo-ga ii-desu-yo.
 more safety-dat attention-acc pay-rather-nom good-cop-particle
 ‘You’d better pay more attention to your safety.’

B: Soo-desu-ka?

so-cop-Q
'Really?'

A: Ee. Tatoeba, kagi-ga toire-no mado-ni nai-de-syoo?
yes for example lock-nom toilet-gen window-loc neg-cop-particle
Abunai-desu-yo.
dangerous-cop-particle
'Yes. For instance, the bathroom window doesn't have a lock, right? That's dangerous.'

The second utterance A can only be understood to mean that the bathroom window lacks a lock as its essential part. Thus, it is most likely in this case that the whole sentence is a focus, adding new information to the link 'B's safety' (or 'the lack thereof').¹⁴ In general, a context that requires a null topic of the kind described above is rather complex, and we need to build it up by setting up a mini-discourse. Since we often attempt to interpret a sentence in isolation, it is not surprising that a sentence of the *NP-ga*^*NP-ni* order is judged to lack the part-whole interpretation. With an appropriate context like the one above, it re-emerges, which also constitutes strong support for the pragmatic solution advocated in this paper.

4.3. Some Consequences

¹⁴ Shige-yuki Kuroda (personal communication) pointed out to me that a context like (40) and (41) also affects the obligatory exhaustive focus reading of a nominative subject with an individual-level predicate.

(i) A: Iyaa, saikin kono daigaku kawarima-sita.
well recently this university change-past
'Well, this university has changed a lot recently.'

B: Soo-desu-ka?
so-cop-Q
'Is that so?'

A: Ee. Mazu daiiti-ni **gakusee-ga** mazime-desu-yo. Kyuuukoo-suru-to
yes first of all **student-nom** serious-cop-particle cancel-class-do-if
okoru-n- desu-kara-nee.
angry-cop-because-particle
'Yes. First of all, students are serious. If a class is cancelled, they get angry...'

Here, the nominative subject *gakusee-ga* 'student-nom' is the argument of *mazime* 'serious', an individual-level predicate. Nonetheless, it does not have the exhaustive meaning. (i.e., 'it is (the) students that are serious.')

The discussions on topic-marking in the existential construction have turned out to be quite revealing. The locative topic makes it necessary that file cards correspond to something more finely defined than discourse referents. Some referents may have more than one ‘guise’, and each guise can have its own file card. The topicalization of a locative NP without *ni* is sensitive to the lexical meaning of the N head.

It seems to me, however, that the repercussion of the issue of contrastive topics is far more fundamental. The use of a contrastive topic requires a link that is not a discourse referent or anything that can be obviously related to it. It has more sentential or propositional in its character, and it is unclear at best how the file card analogy works in such cases. This problem has already been acknowledged in the discussion on the information structure that involves embedded sentences (see footnote 9). I analogized, following the spirit of Kratzer (1986) and von Stechow (1994), that the antecedent of a conditional can serve as a link. Heycock (1994), who paved the way for importing Vallduvi’s analysis into Japanese, also took a similar direction by claiming that a VP can be a link. If a non-entity link is indeed incorporated into Information Packaging theory, then, the file card analogy begins to look less intuitive and straightforward than before, and the outlook of the theory comes several steps closer to the ‘topic-as-an-implicit-question’ theory for topics (e.g., von Stechow (1994), Roberts (1992), Büring (1997) among others).¹⁵ In a sense, it is not surprising that this dilemma for the ‘topic-as-a-discourse-referent’ theory like Vallduvi’s becomes more acute in connection with contrastive topics. In Büring’s (1997) influential theory of topics, for instance, a topic value of a sentence is defined as a set of questions, and the use of a contrastive topic is allowed when the assertion leaves some of those questions still disputable.

We have seen the reason why the debate between the two theories of topics continues. When one looks at the (thematic) topic marking in Japanese/Korean or the word order effects in a language like Catalan, Information Packaging theory is quite attractive and has a lot to offer. There are many instances, however, that cannot be easily analogized to the file-change semantic strategy, and precisely in those cases, the other type of topic theory is more appealing. However, Heycock (to appear) warns us, citing the following example, that the postulation of null ‘propositional’ topics requires more careful examinations.

- (42) (= (30) in Heycock (to appear))
 A: doosite sonna-ni hayaku kaeritai no?
 why so early leave-want
 Why do you want to leave so early?
 B: [_F miti-ga abunai]

¹⁵ One possible adjustment is to go back to Vallduvi’s original claim that sentences can lack links. In (40) or (41), A’s second utterance is an all-focus sentence. Such a stance would, however, significantly weaken the validity of the current account for the disambiguation of the Japanese existential since the obligatoriness of a link is tied to the loss of the part-whole interpretation in the *NP-ga^NP-ni* order in root contexts.

roads-nom dangerous
The roads are dangerous.

B':?# [_F Newark ga] abunai
Newark-nom dangerous
Newark is dangerous.

The topic in B/B' can be understood to be 'the reason for your wishing to leave early', and there doesn't seem to be any good reasons to expect a significant contrast between B and B'. However, B' is far less natural. As indicated by the narrow F-marking on the subject *Newark-ga*, it carries the typical exhaustive interpretation. I cannot offer any coherent explanation for the contrast at this point.

Perhaps it is worth pointing out that a similar kind of issue has been brought up in the Discourse Representation Theory (DRT), another dynamic semantic framework. Instead of limiting discourse markers to entities, later versions of DRT allow non-entities, such as properties, to be represented in a way similar to entities (e.g., Klein's (1986) treatment of VP ellipsis in DRT). It remains to be seen whether such modification is feasible for Information Packaging theory and, if it is, how it can be done.

5. Conclusion

In this paper, I have argued that the interpretations of the Japanese existential construction are intimately influenced by information structure. The semantic impact of the word order differences gives an impression that the disambiguation is a result of a syntactic constraint, but that impression is misleading. When focus, topic marking, and embedded sentences are taken into consideration, it becomes clear that a syntactic approach cannot provide a coherent explanation. The pragmatic approach advocated in this paper succeeds in deriving the facts in a systematic way. The closer examination of the topic marking in the existential construction has revealed that some links are not obviously definable in terms of file cards, and that Information Packaging theory, a pragmatic framework adopted in this paper, may need to incorporate some aspects of its rival theory in order to provide coherent accounts for non-entity links.

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