

Island Effects in Japanese Exclamatives Revisited*

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1. Introduction

Within the generative framework, it has been observed that negation interferes with the extraction of non-arguments like a degree *wh*-word (Ross (1984:259)).¹ Let us look at the following contrasts in English and Japanese.²

- (1) a. **How long_i** did the concert last **t_i**?
 b. * **How long_i** didn't the concert last **t_i**?
(Ross (1984:259), with slight modifications)
- (2) a. Konsaato-wa **dorekurai** kakari-masita **ka**?
 concert-TOP how much take-POL.PAST Q
 'How long did the concert last?'
 b. * Konsaato-wa **dorekurai** kakari-masen desita **ka**?
 concert-TOP how much take-NEG.POL COP.PAST Q
 'How long didn't the concert last?'

The negation in (1b) intervenes between the degree *wh*-phrase and its trace, and the contrast in (1) shows that degree *wh*-movement causes the so-called negative island effect. A similar contrast is also observed in the Japanese degree *wh*-question (2) (cf. Schwarz and Shimoyama (2010)). These facts mean that degree *wh*-questions are sensitive to negative island effects cross-linguistically.

As well as degree *wh*-questions, exclamatives are known to involve degree *wh*-movement of non-arguments, which yields scalar implicature, or an extreme degree interpretation (Kondo (1995) and Oda (2002) for English exclamatives and Ono (2006) for Japanese exclamatives). Thus, it will be expected that English and

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¹ On the other hand, negation leaves unaffected the extractability of arguments.

- (i) a. This mist can't last, which Morpho and Hoppy (don't) realize.
 b. * This mist can't last, as Morpho and Hoppy (* don't) realize.
(Ross (1984:258))

Wh-movement of the argumental (proclausal) element *which* is not affected by the presence of negation, while that of the adverbial element *as* cannot be extracted across negation.

² The following abbreviations are used throughout this paper: ACC = Accusative, ASP = Aspect, C = Complementizer, COP = Copula, EXCL = Exclamative-Marker, NEG = Negation, NOM = Nominative, POL = Polite, PRES = Present, TOP = Topic, Q = Question.

Japanese exclaimatives both exhibit negative island effects; however, observing the (apparent) case in which certain Japanese exclaimatives do not show negative island effects, Oda (2005) argues that they are derived without (overt/covert) degree *wh*-movement (see Section 2 for the details).

With the background above, we will first point out that Japanese exclaimatives, in fact, show negative island effects in certain grammatical contexts. Then, we will provide an alternative analysis based on feature percolation and pied-piping (cf. Nishigauchi (1986)), with reference to the morpho-syntactic nature of negation in Japanese as a predicate (Nagano and Shimada (2015, 2016)). This paper claims that the apparent absence of negative island effects in Japanese exclaimatives is primarily attributed to the morpho-syntactic nature of negation in Japanese; negation in Japanese may behave as a predicate which is allowed to form a complex predicate with its adjacent gradable predicate.

This paper is organized as follows. Section 2 reviews Oda's (2005) analysis of the apparent lack of negative island effects in Japanese exclaimatives and observes that they exhibit negative island effects especially when negation is syntactically separated from a gradable predicate. Assuming that negation in Japanese may behave as a predicate (Nagano and Shimada (2015, 2016)), Section 3 proposes an analysis of the presence/absence of negative island effects in exclaimatives on the basis of feature percolation and pied-piping (cf. Nishigauchi (1986)). Section 4 argues that strong island effects in Japanese exclaimatives are accounted for as a consequence of our proposal. Section 5 draws conclusions.

2. Negative Island Effects in Japanese and English Exclaimatives Revisited

In the literature, negative island effects have been observed in English exclaimatives (Kondo (1995) and Oda (2005)), which are argued to express the speaker's emotional attitude toward the extreme degree of some property (cf. Zanuttini and Portner (2003)).

- (3) a. **How (very) tall_i** John is **t_i**!
 b. * **How (very) tall_i** John isn't **t_i**!

(Oda (2005:259), with modifications)

The contrast in (3) shows that the negation intervenes between the E(xclamative)-marker, *how (very) tall*, and its trace, causing the negative island effect. This fact suggests that both degree *wh*-questions and exclaimatives are derived by degree *wh*-movement and therefore show negative island effects. If we assume that the derivation of exclaimatives by degree *wh*-movement is universal no

matter what language it is, exclamation in any language should exhibit negative island effects.³

However, contrary to the prediction, Oda (2005) observes that the following types of Japanese exclamation do not show negative island effects:

- (4) a. John-wa nante-sunao-na no-daroo.
 J-TOP EXCL-honest-COP.PRES C-Mood
 ‘How (very) honest John is!’
- b. John-wa nante-sunao-de-nai no-daroo.
 J-TOP EXCL-honest-COP-NEG.PRES C-Mood
 ‘lit. How (very) honest John is not!’

The Japanese exclamation clause type is characterized by the co-occurrence of the E-marker, *nante* ‘what a (NP)/how very (Adj),’ and the sentence final sequence *no-daroo*, which is further decomposed into the completizer *no* and the modal-like element *daroo* ‘will,’ as shown in (4a).⁴ The Japanese exclamation in (4b) shows that the negative element *nai* intervenes between the E-marker and the sentence final sequence; thus, the Japanese exclamation in (4b) shares a similar configuration with the English one in (3b), but the sentence is acceptable. On the basis of the data like (4b), Oda (2005) further argues that Japanese exclamation are not derived by *wh*-movement and as a consequence do not show any negative island effect.^{5, 6}

³ In the recent literature, it has been argued that negative island effects are not treated as syntactic islands (e.g. Rullmann (1995) for the semantic account of negative islands in terms of *maximality*). I leave aside the issue of whether a purely syntactic analysis is sufficient to account for negative island effects, but the crucial point is that Rullmann’s (1995) approach (and Oda’s (2002, 2005) analysis of exclamation) is based on the presence/absence of *wh*-movement.

⁴ In Japanese linguistics, *daroo* has been seen as an epistemic modal auxiliary (cf. Morita (1980) and Masuoka (1991)), but some previous studies in generative grammar argue that *daroo* is decomposed into the focus marker *da* and the evidential mood *-roo* (see Ono (2006) for details). For the sake of simplicity, we will regard *daroo* as a single mood element.

⁵ For the sake of simplicity, we will not review all the details of Oda’s (2005) semantic analysis of the lack of negative island effects in Japanese exclamation. According to her analysis, English exclamation are derived by *wh*-movement, which forms an operator-variable configuration. The operator-variable configuration opens a set of degrees at LF, where “[t]he exclamation operator is a function that takes a property of type <d, t> and maps to a sentence such that the maximal degree given in the sentence is larger than the speaker’s expectation” (Oda (2005:298)). The maximal degree, however, is not defined in the downward entailing context; hence the negative island effect is attributed to the problem of undefined maximality. Japanese exclamation, on the other hand, are not derived by *wh*-movement, and their syntactic configuration does not involve any operator-variable configuration. This syntactic structure does not open a set of degree alternatives at LF, and hence the notion of maximality does not hold true of Japanese exclamation.

Thus, if we follow Oda’s (2005) analysis, the lack of negative islands will mean that Japanese also lack *wh*-movement.

A close look at the meaning of (4b), however, shows that the exclamative sentence exhibits a negative island effect. More precisely, it is impossible to interpret (4b) as showing that negation is employed to deny the scalar meaning of the E-marker; intuitively, this amounts to saying that the negative element in (4b) denies the speaker's surprise at the extreme degree of John's honesty, which is a contradiction. The point here is that the E-marker seems to take different scopes. In the acceptable reading, the E-marker is interpreted together with the complex predicate *sunao-de-nai* 'be dishonest,' and the sentence corresponds to an English exclamative sentence like 'How (very) dishonest John is!.'⁷ In the unacceptable reading, negation takes scope over the E-marker; that is, the speaker expresses that John is extremely honest, and at the same time s/he denies that John is extremely honest. The examples in (5b-d) also show that Japanese exclamatives exhibit negative island effects.

- (5) a. * John-wa nante-sunao-de-nai no-daroo.
 J-TOP EXCL-honest-COP-NEG.PRES C-Mood
 'How (very) honest John is not!' [Neg > E-deg]
- b. * John-wa nante-teineini sooz-i-o si-nai no-daroo.
 J-TOP EXCL-carefully clean-ACC do-NEG.PRES C-Mood
 'How (very) carefully John does not do the cleaning!' [Neg > E-deg]

⁶ Oda (2002:fn. 3), by contrast, mentions the alternative possibility that the negative element *nai* and the adjacent adjective (*sunao-da* 'be honest') form a complex predicate which roughly means '(be) dishonest.' However, Oda (2005) does not adopt this alternative view.

⁷ It should be noted here that the E-marker *nante* does not modify all of the combinations of the negative element *nai* with gradable predicates (see Fàbregas (2007:4-9) for the brief summary of the properties of gradable predicates). First, the E-marker cannot modify the combination of a non-subjective polar adjective predicate with the negative element, as shown below:

- (i) a. taka-i 'be tall' ... tiisa-i 'be small'
 b. * John-wa se-ga nante-takaku-nai no-daroo
 J-TOP height-NOM EXCL-tall-NEG.PRES C-Mood
 'How very tall John is not!'

In our account, the E-marker modifies the complex predicate consisting of the predicate *taka-i* 'be tall' and *na-i* 'be null/empty,' leading to conveying that the speaker is surprised at the extreme value of the opposite position of *taka-i* 'be tall,' which is almost the same as the position of *tiisa-i* 'be small.' This leads to a certain kind of semantic/pragmatic incompatibility (e.g. a concept similar to markedness in using the adjective *tall* (instead of *small*) when the speaker wants to ask the hearer's height by saying "How tall are you?").

Contrary to the polar adjectives above, certain subjective qualitative adjectives (like *sunao-da* 'be honest') can be modified by the E-marker when combined with the negative element *nai* (4b). In this case, the negation of a qualitative adjective expresses the lower part of the scale denoted by it (cf. Kennedy (1999)).

- c. * John-wa nante-sunao-na gakusei de-nai no-daroo.
 J-TOP EXCL-honest-COP student COP-NEG.PRES C-Mood
 ‘How very honest a student John is not!’ [Neg > E-deg]
- d. * John-wa hon-o nante-ooku yoma-nai no-daroo.
 J-TOP book-ACC EXCL-many read-NEG.PRES C-Mood
 ‘How very many books John does not read!’ [Neg > E-deg]

In examples (5b-c), each of the gradable predicates is separated from the negative element, and hence there is no possibility for the E-marker to modify them as a single constituent. Thus, the felicitous interpretation that (5a) allows is not available in these examples. In contrast with Japanese exclamatives, English exclamatives clearly show negative island effects, and it is impossible for the E-marker to modify the gradable predicate and negation as a single constituent, as shown below:

- (6) * How honest John isn't!
 (cf. How dishonest John is!)

The observations so far raise the interesting issue of why Japanese exclamatives, unlike English ones, permit the E-marker to modify a gradable predicate and its adjacent negation as a constituent, without causing any negative island effect. The next section proposes that the mechanism of feature percolation enables the E-marker to modify a gradable predicate and its adjacent negation as a constituent.

3. Proposal

On the basis of the notion of feature percolation (cf. Nishigauchi (1986)), this section proposes an analysis of Japanese exclamatives, with special reference to the status of the negative element *nai* in Japanese.

3.1. Licensing Mechanism for the E-Marker

3.1.1. The Co-Occurrence of the E-Marker with the Sentence Final Sequence

It is a traditional observation that *wh*-words in Japanese co-occur with sentence final elements such as *ka* or *no*, either of which serves to encode the clause type of a sentence as a question.⁸ In the case of Japanese exclamatives, the E-marker is argued to co-occur with the sentence final sequence *no-daroo*, which

⁸ There are counter-arguments to the claim that neither *ka* nor *no* is a Q-marker; however, this paper does not deal with this issue and assumes that they may behave as a Q-marker.

can be decomposed into the C-element *no* and the Mood-element *daroo* (cf. Adachi (2002), Oda (2005), Ono (2006), and Sasai (2006)), as in (7b).

- (7) a. Hanako-wa nani-o {tabeta no / tabe-masita ka}?
 H-TOP what-ACC {eat.PAST C(Q) / eat-POL.PAST Q}?
 ‘What did Hanako eat?’
- b. Hanako-wa nante-yasasi-i no-daroo.
 H-TOP EXCL-kind-COP.PRES C-Mood
 ‘How (very) kind Hanako is!’

Within the generative framework, these co-occurrences are, in general, accounted for by assuming that spec(ifier)-head agreement is established by covert movement at LF (e.g. Huang (1982a, b), Nishigauchi (1986), and Rizzi (1996)). For concreteness, the derivations of (7a, b) are shown below:

- (8) a. [_{CP[Q]} **nani-o**_i [_{C'} [_{TP} Hanako-wa **t**_i tabe-masita] ka]]
 b. [_{CP[E-Deg]} **nante**_i [_{C'} [_{TP} Hanako-wa **t**_i-yasasi-i] no-daroo]]

In the case of *wh*-questions, the *wh*-word and the sentence final particle *ka* (or *no*) share the Q-feature with each other by spec-head agreement. In the case of exclamatives, the E-marker and the sentence final sequence is assumed to share the Extreme-Degree feature (hereafter, the E-Deg feature) by spec-head agreement.⁹ As a result of spec-head agreement, the configuration in (8a) is clause-typed as a *wh*-question and that in (8b) as an exclamative.

The next subsection further provides a specific assumption on where the E-marker is attached.

3.1.2. The Co-Occurrence of the E-Marker with Gradable Adjectives

One of the defining properties of the E-marker is to modify a gradable predicate, but not a non-gradable one.¹⁰ This property is illustrated in the following contrast:

⁹ These assumptions are relatively rough but suffice to serve a purpose in the following discussions. Interested readers are referred to Zanuttini and Portner (2003) for more details on the nature of the E-marker and its contribution to the semantics of exclamatives.

¹⁰ One might wonder whether an example like *nante-hito* ‘what a man’ can be seen as a counter-example to the generalization that the E-marker is obligatorily attached to a gradable predicate. This kind of example, however, always conveys the speaker’s surprise at the extreme degree of some particular property related to the referent of the man in question.

- (9) a. Hanako-wa nante {-yasasi-i / -sunao-na} no-daroo.
 H-TOP EXCL {-kind-COP.PRES / -honest-COP.PRES} C-Mood
 ‘How (very) kind/honest Hanako is!’
- b. * Hanako-wa nante-byooki-na no-daroo.
 H-TOP EXCL-sick-COP.PRES C-Mood
 ‘How (very) sick Hanako is!’

The adjectival predicates, *yasasi-i* ‘be kind’ and *sunao-da* ‘be honest,’ are classified as gradable adjectives because degree modifiers like *totemo* ‘very’ can be attached to them. The adjectival predicate, *byooki-da* ‘be sick,’ on the other hand, is a non-gradable adjective because it cannot be modified by any degree modifier (e.g. **totemo-byooki-da* ‘be very sick’). Thus, we assume that the E-marker is endowed with the unvalued gradable feature [*uGradable*], and the [*uGradable*] feature must be valued by a gradable adjectival predicate with the valued gradable feature [*vGradable*] (see Pesetsky and Torrego (2007) for the feature valuation/sharing system).

Then, adopting Watanabe’s (2013) view that the Predicate AP projection involves the Degree Phrase (DegP), we assume that E-marker is base-generated below DegP as a kind of degree modifier.

- (10) [_{PredAP} [_{DegP} E-Marker (*nante*)] [_{PredA'} [_{AdjP} *sunao*] -*da*]]

The adjectival predicate, *sunao-da* ‘be honest,’ in (10) forms a Predicate AP (PredAP) clause, and DegP is assumed to occupy a higher position within the PredAP projection. The E-marker, as well as degree modifiers, is assumed to be generated below DegP. The syntactic configuration in (10) allows the [*uGradable*] feature of the E-marker to be valued by the [*vGradable*] feature of the gradable adjective by the Probe-Goal relation; the E-marker with [*uGradable*] serves as a probe and finds the gradable adjective with [*vGradable*] as its goal within its c-commanding domain. As a result, they share the [*vGradable*] feature, and the derivation converges.

On the basis of the licensing mechanism for the E-marker, the next section proposes that feature percolation allows a gradable predicate and its adjacent negation to behave as a complex predicate.

3.2. *The Asymmetry in Negative Island Effects between Japanese and English Exclamatives*

Recall that Japanese exclamatives differ from English ones in that the former

allow the E-marker to modify a gradable predicate and its adjacent negation as a single constituent (see Section 2).

- (11) a. John-wa nante-sunao-de-nai no-daroo. (= (4b))
 J-TOP EXCL-honest-COP-NEG.PRES C-Mood
 ‘OK How (very) dishonest John is!’
 vs. ‘* How (very) honest John isn’t!’
 b. * How honest John isn’t! (= (6))

We suggest that the contrast between (11a, b) is derived from the morpho-syntactic difference of negation in English and Japanese. In Japanese, an adjective like *sunao* ‘honest’ accompanies the suffix *-da* ‘be’ and forms the complex adjectival predicate *sunao-da* ‘be honest,’ which further takes inflectional forms like *sunao-datta* (honest-be.PAST) ‘was honest’ (e.g. Nagano and Shimada (2015, 2016)); basically, the same is true of the negative element *na-i* ‘be null/empty’ (e.g. *na-katta* ‘be.PAST null/empty’).¹¹ In English, on the other hand, negation cannot be inflected for ϕ and tense features and hence behaves as a particle.

The differences of the status of negation in Japanese and English can be attributed to the presence/absence of the Predicate AP Projection, or PredAP (e.g. Watanabe (2013)); more specifically, Japanese has a PredAP, while English does not. Then, we propose that the PredAP shares the [ν Gradable] feature of a gradable

¹¹ One may wonder whether it is possible for a gradable predicate with the negative element *nai* to behave as a complex verbal predicate in Japanese. Kishimoto and Uehara (2016), in this connection, mentions *sugiru* ‘exceed’ as the only functional verbal element which can combine with a variety of elements (e.g. a verb, a noun, an adjective, a negated predicate, etc.) to form a complex predicate.

- (i) Kare-wa {tabe/kodomo/sizuka/isogasi/sira-na}-sugi-ru.
 he-TOP {eat/child/quiet/busy/know-NEG}-exceed-PRES
 ‘He {eats too much/is too childish/is too quiet/is too busy/knows too little}.’
 (Kishimoto and Uehara (2016:68))

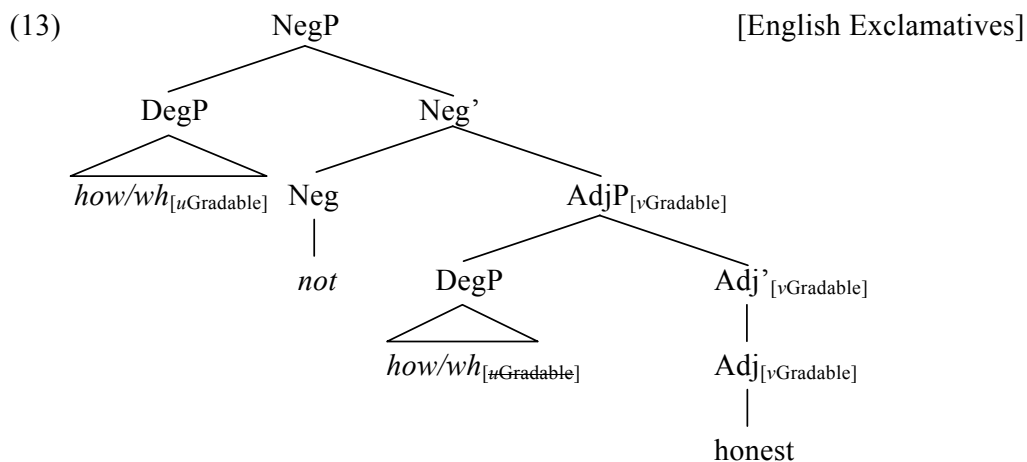
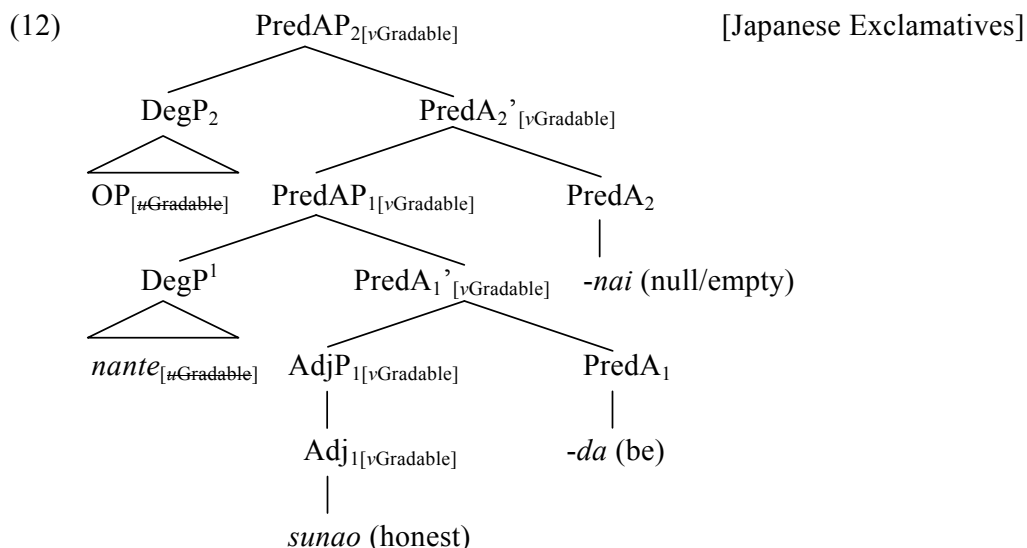
Kishimoto and Uehara also argue that *sugiru* ‘exceed’ is not a lexical predicate, but a functional one because it cannot be nominalized by *kata*-suffixation.

- (ii) * kare-no {kodomo/karu/tabe}-sugi-kata.
 he-GEN {child/light/eat}-exceed-way
 ‘the way of his {being too childish/being too light/eating too much}’
 (Kishimoto and Uehara (2016:69))

The fact that *sugiru* ‘exceed’ takes a negated predicate as its complement to form a complex V-V compound may also imply that the predicate and its adjacent predicate are open to combine with each other to form a complex predicate. We would like to leave open for future research the question of whether and when a predicate and its adjacent negation behave as a complex predicate.

predicate within it though the process of the [vGradable] feature spreading to the maximal projection, i.e. feature percolation (cf. Nishigauchi (1986)); the same percolation process is not applicable to the negative particle in English because there is no predicate (AP/NP) projection in the language.¹²

In what follows, we would like to show how our mechanism works to capture the asymmetry in negative island effects between Japanese and English exclamatives. Let us first look at the following syntactic structures of Japanese and English exclamatives with negation:



¹² In the recent development of Minimalist Program, the syntactic mechanism of feature percolation is substituted by another one based on the operation of Agree (e.g. Narita (2014)). It will be possible to restate our proposal in terms of Agree by assuming that the PredA head hosts a [uGradable] feature which serves as a Probe to find its Goal within the c-commanding domain.

The structure for Japanese exclamatives in (12) shows that the [ν Gradable] feature of the adjectival element percolates up to the top-most PredAP₂, and as a result, the E-marker (or its null counterpart) is licensed to occur either at DegP₁ or DegP₂ because its [u Gradable] feature is valued by the percolating [ν Gradable] feature. When the E-marker occurs below DegP₁ and undergoes LF movement into [Spec, CP], the E-marker moves across the negative predicate, resulting in a negative island violation. If the E-marker (or its null counterpart) occupies DegP₂ and moves to [Spec, CP] at LF, it will not move across the predicative negation (cf. Watanabe (1992)). The E-marker, in this case, serves to modify the gradable predicate and its adjacent predicate negation as a single constituent, and hence, the resulting configuration roughly means “How (very) dishonest she is!.” By contrast, the structure for English exclamatives with negation in (13) shows that the [ν Gradable] feature of the adjectival element does not percolate up to NegP because negation is not a predicate but a particle. Hence, the E-marker is not licensed to occur within the PredAP (= Neg) projection; rather, the only possible syntactic position for the E-marker to occur is below DegP within the Adjective projection. Therefore, the E-marker obligatorily moves into [Spec, CP] across negation, leading to a negative island violation in English exclamatives.

We have proposed in this section that the obviation of negative island effects in Japanese exclamatives is attributed to the morpho-syntactic status of negation; the negative element *na-i* ‘be empty’ in Japanese behaves as a predicate and is able to form a complex predicate when combined with an adjectival element. This property allows the [ν Gradable] feature of an adjectival element to percolate up to the PredAP, and as a result, the E-marker is licensed at [Spec, PredAP (= *nai*)] by sharing the [ν Gradable] feature with the gradable predicate. The next section, furthermore, discusses some consequences of our proposal, with special reference to strong islands which ban the extraction of both arguments and non-arguments.

4. Consequences

The previous section has proposed that feature percolation enables the PredAP to possess a [ν Gradable] feature, which further licenses the occurrence of the E-marker below the DegP within the PredAP. As a result, the whole AP including the E-marker is allowed to move (or pied-pipe) to [Spec, CP], wherein the moved AP and the C head share the E-Deg feature by spec-head agreement (14).

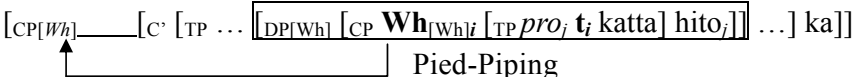
$$(14) \quad [{}_{CP} [{}_{E-Deg}] \text{---} [{}_{C'} [{}_{TP} \dots [{}_{PredAP} [{}_{\nu Gradable}] \textit{nante} [{}_{E-Deg}] [{}_{PredA'} [{}_{\nu Gradable}] \dots]]] \dots] \text{no-daroo}]$$

An arrow labeled "Pied-Piping" points from the boxed constituent $[{}_{PredAP} [{}_{\nu Gradable}] \textit{nante} [{}_{E-Deg}] [{}_{PredA'} [{}_{\nu Gradable}] \dots]]$ to the $[{}_{C'}$ position in the CP structure above.

The interesting question that arises here is whether feature percolation in Japanese exclamatives has any consequence on strong island effects, as well as negative island effects.

It should be noted, in this connection, that the proposed analysis is similar to Nishigauchi's (1986) pied-piping analysis of the absence of strong island effects in argument *wh*-questions. Let us consider the contrast in (15) and the derivation of (15a) in (16).

- (15) a. John-wa [nani-o katta] hito-o sagasiteimasu ka?
 J-TOP what-ACC buy-PAST person-ACC look. for.ASP.COP Q
 'What_i is John looking for a person who bought t_i?'
 (Saito (1994:204), with modifications)
- b. * John-wa [sono-hon-o naze katta] hito-o sagasiteiru
 John-TOP that-book-ACC why buy.PAST person-ACC look.for.ASP
 no?
 C(Q)
 'Why_i is John looking for the person who bought the book t_i?'
 (Saito (1994:204), with modifications)

- (16) $[_{CP[wh]} \text{---} [C' [TP \dots [_{DP[wh]} [_{CP} \mathbf{Wh}_{[wh]i} [TP \textit{pro}_j \textit{t}_i \textit{katta}] \textit{hito}_j]]] \dots] \textit{ka}]]$


The argument *wh*-phrase in (15a) occurs in the relative clause, but the sentence does not exhibit any strong island effect. The reason *wh*-phrase, *naze* 'why,' in (15b), on the other hand, shows the strong island effect. According to Nishigauchi (1986), the strong island effect in (15a) is obviated because the complex NP, but not the *wh*-phrase, covertly moves to [Spec, CP], as illustrated in (16). More specifically, the *wh*-word, *nani* 'what,' first moves into [Spec, CP] within the relative clause. Then, the categorial feature (DP) of the *wh*-word matches that of the head noun (DP). This matching process allows the *wh*-feature of the *wh*-word to percolates to the complex DP, which further pied-pipes to [Spec, CP] in the matrix clause at LF, establishing a spec-head agreement relation. The categorial feature of the reason *wh*-word, *naze* 'why,' on the other hand, is assumed to be QP, which mismatches the categorial feature of the complex DP; as a result, the *wh*-feature of *naze* does not percolate up to the complex DP. The only available option is to move *naze* to [Spec, CP] in the matrix clause, but in this case, *naze* moves across the complex NP island; hence, the ungrammaticality of (15b).

With Nishigauchi's (1986) analysis in mind, let us consider the possibility that

the [vGradable] feature of a gradable predicate percolate up to the complex NP including the gradable predicate within it. Recall that adjectival predicates are classified into two types: gradable and non-gradable ones. This distinction depends on whether or not degree modifiers like *totemo* ‘very’ can co-occur.

- (17) a. Kono-udedokei-wa totemo-karu-i.
 this-watch-TOP very-light-COP.PRES
 ‘This watch is very light.’
- b. * Kono-udedokei-wa totemo-nihonsei-da.
 this-watch-TOP very-made.in.Japan-COP.PRES
 ‘This watch is very made in Japan.’

The PredAP, *karu-i* ‘be light,’ in (17a) is a gradable predicate because the degree modifier, *totemo* ‘very,’ can be attached to it. The predicative NP (PredNP), *nihonsei* ‘made.in.Japan,’ in (17b), on the other hand, is not gradable because the degree modifier cannot co-occur with it. By contrast, the following examples suggest that both the PredNP, *bizin* ‘beauty,’ and the PredAP, *utsukusi-i* ‘be beautiful,’ are gradable because they can co-occur with the degree modifier:

- (18) a. Nancy-wa totemo-bizin-da.
 N-TOP very-beautiful.person-COP.PRES
 ‘Nancy is a very beautiful person.’
- b. Nancy-wa totemo-utsukusi-i hito-da.
 N-TOP very-beautiful-COP.PRES person-COP.PRES
 ‘Nancy is a person who is very beautiful.’

The point here is that the gradable PredNP, *bizin* ‘beauty,’ in (18a) can be decomposed into two morphemes, *bi-* ‘beautiful’ and *-zin* ‘person.’ In this case, the former serves as the source of a [vGradable] feature. If we extend our feature percolation mechanism to the nominal expression in question, it will be assumed that the [vGradable] feature percolates up to the whole PredNP by establishing a modifier-modifiee relation; as a result, *totemo* ‘very’ is licensed to occur with the PredNP.^{13, 14} The same percolation process can be assumed for the predicative

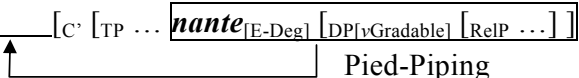
¹³ One may wonder whether the degree modifier, *totemo* ‘very,’ can be directly attached to the morpheme *bi-* ‘beautiful,’ but we will reject this possibility because such a modification process is not compatible with the so-called lexical integrity hypothesis.

¹⁴ As well as negation, the [vGradable] feature of adjectives is not assumed to percolate up in English because they, in general, do not accompany an affix which allows the entire constituent to behave as a predicate.

nominal expression which is modified by the relative clause in (18b). For concreteness, the configurations of the examples in (18a, b) are shown below, respectively:

- (19) a. $[\text{PredNP}_{[\text{vGradable}}] [\text{PredN } bi_{[\text{vGradable}}]\text{-zin}] \text{-da}]$ (= (18a))
 b. $[\text{DP}_{[\text{vGradable}}] [\text{RelP } pro_i \text{ utsukusi-}i_{[\text{vGradable}}] \text{ hito}_i]]$ (= (18b))

The percolation process allows the E-marker (or its null counterpart) to attach to the complex DP, and hence the complex DP with the E-marker is allowed to pied-pipe to [Spec, CP] at LF without causing any strong island effects, as shown below.

- (20) $[\text{CP}_{[\text{E-Deg}}] \text{---} [\text{C}' [\text{TP } \dots \boxed{nante_{[\text{E-Deg}}] [\text{DP}_{[\text{vGradable}}] [\text{RelP } \dots]}]}] \dots] \text{no-daroo}]]$


In what follows, it is shown that the derivation in (20) is supported by strong island effects in Japanese exclamatives.

First, it is predicted that Japanese exclamatives, unlike reason *wh*-questions, obviate strong island effects by feature percolation and pied-piping (see (20)), although both the E-marker and the reason *wh*-word belong to non-arguments, which leads us to expect that both of them show strong island effects. This prediction is borne out by the following contrast:

- (21) a. * John-wa [sono-hon-o naze katta] hito-o sagasiteiru
 John-TOP the-book-ACC why buy.PAST person-ACC look.for.ASP
 no?
 C(Q)
 ‘Why_i is John looking for the person who bought the book t_i?’
 (= (15b))
- b. John-wa [Mary-ga nante-taisetsuni siteita] piano-o
 J-TOP M-NOM EXCL-important do.PAST piano-ACC
 kowasite simatta no-daroo.
 break do.PAST C-Mood
 ‘How very precious_i did John break the piano that Mary considers (it) t_i!’
 (Ono (2006:60), with modifications)

As Ono (2006:60) carefully observes, the example in (21b) is “acceptable, discounting the fact that [it is] rather complex. In other words, they [= exclamative clauses] are much better than those containing an adjunct *wh*-phrase *naze* ‘why’

inside the relative clause.”¹⁵ Thus, Ono’s observation strongly supports our proposal.

The second prediction comes from the distinction between the feature percolation system of Japanese exclamatives and that of argument *wh*-questions. In the former, the feature percolation of a [*v*Gradable] feature is licensed by the modifier-modifiee relation, but in the latter, the feature percolation of a *wh*-feature is allowed by categorial-feature matching. This difference makes the following interesting prediction: if the head noun of a relative clause is not a modifiee, then it will be predicted that the E-marker, unlike the *wh*-word, shows strong island effects. This prediction is borne out by the following contrast:

- (22) a. John-wa [Mary-ga nani-o katta] riyuu-ni odoroteiru
 J-TOP M-NOM what-ACC buy-PAST reason-DAT be.surprised.ASP
 no?
 C(Q)
 ‘What_i is John surprised at the reason why Mary bought t_i?’
- b. * John-wa [Mary-ga sono-piano-o nante-taisetuni siteiru]
 J-TOP M-NOM the-piano-ACC EXCL-important do.ASP
 riyuu-ni odoroteiru no-daroo.
 reason-DAT be-surprised.ASP C-Mood
 ‘How very precious_i is John surprised at the reason why Mary considers the piano t_i?’

The derivation of the *wh*-question in (22a) proceeds as follows. First, the *wh*-word moves into [Spec, CP] within the relative clause, and the *wh*-feature of the *wh*-word percolates up to the complex DP because the *wh*-word and the complex DP share the same categorial feature, DP; as a result, the complex DP is allowed to pied-pipe to [Spec, CP] in the matrix clause, establishing a spec-head agreement relation. The derivation of the exclamative in (22b), by contrast, does not permit feature percolation because the gradable predicate *taisetsuni-suru* ‘cherish’ does not modify the head noun *riyuu* ‘reason.’ Then, the head noun does not have the [*v*Gradable] feature, and hence the E-marker is not licensed to attach to the complex DP; hence, the only available option is to move the E-marker to [Spec, CP] in the matrix clause, causing a complex NP constraint violation. Thus, the different feature percolation

¹⁵ Ono (2006) does not provide a particular analysis of strong island effects in his paper because his primary concern is the interaction between the E-marker and *wh*-island effects. Our analysis to be proposed below, however, will be easily incorporated into his system in various ways.

mechanisms assumed for *wh*-questions and exclamatives correctly predict the strong island patterns in (22).

The third prediction concerns the strong island formed by the reason adverbial clause headed by *-node* ‘because.’ Under the assumption that the reason adverbial clause, as well as the reason *wh*-word, is a QP, it will be expected that the feature percolation of the *wh*-feature of an argument *wh*-word is not available. The feature percolation of the [*vGradable*] feature of a gradable predicate is expected to be impossible because the subordinator, *-node* ‘because,’ cannot be modified by the gradable predicate. Therefore, it is predicted that both reason *wh*-questions and Japanese exclamatives show strong island effects when the reason *wh*-word and the E-marker occur within the reason adverbial clause. This prediction is confirmed by the following examples:

- (23) a. * John-wa [Mary-ga sono-hon-wo naze katta] node
 J-TOP M-NOM the-book-ACC why buy.PAST because
 odorositeiru no?
 be.surprised.ASP C(Q)
 ‘What_{*i*} is John surprised at the reason why Mary bought *t_i*?’
- b. * John-wa [Mary-ga sono-piano-o nante-taisetuni siteiru]
 J-TOP M-NOM the-piano-ACC EXCL-important do.ASP
 node odorositeiru no-daroo.
 because be.surprised.ASP C-Mood
 ‘How very precious_{*i*} is John surprised at the reason why Mary considers the piano *t_i*?’

The examples above suggest that exclamatives pattern like reason *wh*-questions in the context in which no feature percolation is possible (i.e. the reason adverbial clause).

This section has demonstrated that our feature percolation system of exclamatives provides a consistent account of strong island effects, as well as negative island effects.

5. Concluding Remarks

This paper argues that the apparent lack of negative island effects in Japanese exclamatives are attributed to the morpho-syntactic property of the negative predicate *na-i* (be null/empty), but not to the distinction between overt/covert movement (cf. Oda (2005)). By assuming that the negative predicate allows the [*vGradable*] feature to percolate up to the entire complex PredAP, we first accounted

for the apparent lack of negative island effects. Then, we further applied our feature percolation mechanism to the modifier-modifiee configuration. As a consequence of our proposal, we demonstrated that our mechanism correctly predicts when strong island effects occur in Japanese exclamatives.

Within the current development of the Minimalist Program, a mechanism like feature percolation has been regarded as undesirable because it is not deduced from any core concept of narrow syntax (e.g. Narita (2014)). We will leave open for future research the question of whether (and how) the feature percolation mechanism proposed in this paper can be developed in terms of a current theoretical mechanism like head detection.

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