

A Study on the Exceptional Cases to the Anti-Superiority Effect in Korean and Japanese: A Morpho-Syntactic Approach

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Abstract

In an English multiple Wh-construction with two wh-words, only a higher-located wh-word in a sentence structure is allowed to pre-pose to the Spec of CP, which has been known as a Superiority Effect(SE). Contrary to English, Korean and Japanese have been known not to respect SE, and this phenomenon has been called an Anti-Superiority Effect(ASE). Recent studies including Takita et al(2007) and Harada(2015) among others, however, have suggested exceptional cases to ASE in Japanese, and attempted to explain them through a feature checking mechanism within the Minimalist Program(MP) by Chomsky(1995, 1998). Such explanations of MP, which are based on the abstract feature checking system, have recently been considered just as a kind of technicalia and should be backed up with further empirical evidence. In this paper, I show that there are also exceptions to ASE in Korean, and the exceptional cases to ASE both in Korean and Japanese can be well explainable based on the empirical evidence of Korean/Japanese morpho-syntax.

Keywords: *Anti-Superiority Effect(ASE), Minimalist Program(MP), Feature Checking, Morpho-Syntactic Approach*

1. Introduction

In an English multiple Wh-construction with two wh-words only a higher-located wh-word in a sentence structure can pre-pose to the Spec of CP. Consider:

- (1) a. Why did Tom buy what?
b.*What did Tom buy why?

In (1a) ‘why’ is higher in sentence structure than ‘what’, so ‘why’ pre-poses and ‘what’ stays in-situ. (1a) obeys the Superiority Effect(SE) which requires a high-located wh-word to prepose to the Spec of CP. On the contrary, in (1b) a lower-located ‘what’, instead of ‘why’, precedes crossing over a higher-located ‘why’, and violates SE, thereby resulting in an ungrammatical sentence.

In Korean, however, SE is not respected. The four Korean adverbial wh-words such as ‘əndʒe’ for ‘when’, ‘ədiesə’ for ‘where’, ‘əddəke’ for ‘how’ and ‘wæ’ for ‘why’ have been considered to go through

flexible Wh-movement. That is, in the following Korean sentences with two Korean wh-words respectively, either of Korean wh-words which correspond to English wh-words can freely go to the Spec of CP, a strong piece of evidence for no respect of SE in Korean. Consider:

- (2) a. Tom-i **ǎdiesǎ** **muǎt-il** sa-t-ni?
 Tom-Nom where what-Acc buy-P-Q
 “Where did Tom buy what?”(Lit. meaning)
- b. Tom-i **muǎt-il** **ǎdiesǎ** sa-t-ni?
 Tom-Nom what-Acc where buy-P-Q
 “Where did Tom buy what?”(Lit. meaning)

Grammatical sentences of (2a&b) above show flexible Wh-movement where either of the two Korean wh-words in a sentence may precede over the other. In (2a) **ǎdiesǎ** ‘where’ precedes **muǎt-il** ‘what’, and in (2b) **muǎt-il** ‘what’ precedes **ǎdiesǎ** ‘where’. No wh-word has superiority in moving forward over the other in (2a&b), and so flexible movement of wh-words.

It was not until Watanabe(1992) and Saito(2004) when validity of flexible Wh-movement in Korean and Japanese began to be undermined. Both of them suggested a very interesting set of Japanese data which is clearly against ASE. They tried to explain the anti-case to SE in a purely syntactic way with no convincing empirical base.

In this paper, I discuss a set of Korean data exceptional to ASE. In order to explain the set of Korean data exceptional to the Korean ASE case, first I will review Takita et al(2007), which is one of the most recent studies on Japanese ASE as well as Watanabe(1992) and Saito(2004). Then, after pointing out the theoretical weakness of Takita et al(2007) and others, I will unfold my new theory on ASE in Korean and Japanese which is based on empirical morphological properties of Korean and Japanese wh-words.

2. Discussion

2.1 An Exception to ASE in Japanese and Korean

Consider the following Japanese data from Harada(2015, p59):

- (3) a. Taro-wa **nani-o** **naze** kat-ta-no?
 Taro-Nom **what-Acc** **why** buy-P-Q
 “What did Taro buy why?”(Lit. meaning)
- b. *Taro-wa **naze** **nani-o** kat-ta-no?
 Taro-Nom **why** **what-Acc** buy-P-Q
 “Why did Taro buy what?”(Lit. meaning)

The ungrammaticality of (3b) undermines the validity of the ASE of Japanese seriously. If ASE were valid in Japanese, then both of (3a&b) should be judged grammatical. **naze** ‘why’ and **nani** ‘what’ are both Japanese wh-words, and either wh-word should be allowed to precede over the other according to ASE. But it is not.

The same story can easily be found in Korean, too. Consider the following Korean multiple Wh-constructions corresponding to Japanese (3a&b).

- (4) a. Tom-i **muǎt-il** **wǎe** sa-t-ni?

- Tom-Nom **what**-Acc **why** buy-P-Q
 “What did Tom buy why?”(Lit. meaning)
- b. *Tom-i **wæ** **muət-il** sa-t-ni?
 Tom-Nom **why** **what**-Acc buy-P-Q
 “Why did Tom buy what?”(Lit. meaning)

The ungrammatical (4b) is also a big problem to the generally accepted ASE in Korean. Each sentence of (4a&b) has two Korean wh-words with one in a higher and the other in a lower structure of a sentence. Flexible movement of wh-words in Korean should allow either wh-word to precede the other in a sentence with no problem. But it is not. This observation in Korean and Japanese requires a more careful re-analysis on multiple Wh-constructions of both languages.

2.2 Previous Studies and Takita et al(2007)

The ASE has been analysed in two major ways: one by Watanabe(1992) and the other by Saito(2004). However, since Watanabe’s analysis relies on the Empty Category Principle(ECP), which is not employed in the recent Minimalist framework any longer, I regard Saito’s analysis as the representative analysis of ASE. In fact, Takita et al(2007) recently adopted Saito’s analysis and extended it to the analysis of the comparison between Japanese and Chinese in terms of the presence of covert Wh-movement. Let’s take a close look at his approach.

Based on the feature checking system of the Minimalist Program (henceforth MP) by Chomsky 1995), Takita et al(2007) argues that essentially, the ungrammaticality of (3b) is attributed to **naze** ‘why’ being unable to check an appropriate feature. First, he assumes covert movement in Japanese. Second, he adopts two operations of ‘Attract Closest’ and ‘Tucking-in’, so the WH that is structurally higher undergoes movement first and the subsequent WH moves to the inner specific position immediately following the firstly-moved WH.

Let’s take a more detailed look at the feature checking mechanism that Takita et al assumes.

2.2.1 Takita et al(2007)’s Feature Checking

Takita et al assumes that C^0 has two features such as *P(eripheral)-feature* and *Q-feature*. These features are checked by WH’s in this order, and a WH that has checked the Q-feature takes a scope within the CP headed by C^0 and thus the Q-feature became unable to participate in further movement operations. Considering that the WH with the Q-feature is able to a scope in the relevant CP, Takita et al assumes the Q-feature as the more prominent feature, stipulating that a more prominent feature are checked later in Japanese.

Crucially they suppose that Q-feature is divided into two sub-features: *Q-primary* and *Q-secondary*. Note that the Q-feature, which is assumed to be more prominent than P-feature, is checked later than the P-feature in their system. So, as expected, the more important Q-primary is checked later than the Q-secondary. Finally, they suppose that a wh-adjunct **naze** ‘why’ must check Q-primary. With these assumptions in mind, let’s take a look at the feature-checking process in the ASE sentence (3b):

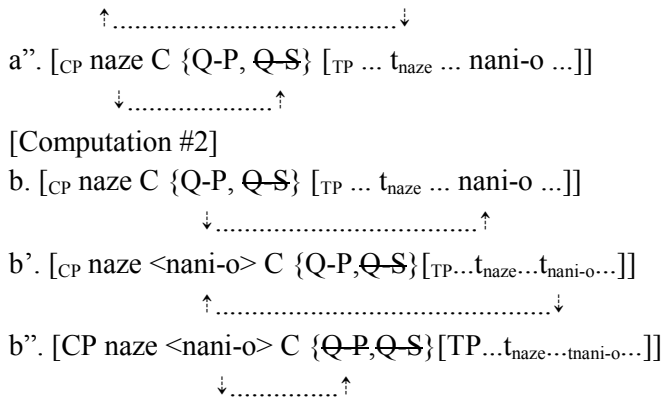
(5) Computations for Feature Checking

[Computation #1]

a. [_{CP} C {Q-P, Q-S} [_{TP} ... naze ... nani-o ...]]

↓.....↑

a’. [_{CP} naze C {Q-P, Q-S} [_{TP} ... t_{naze} ... nani-o ...]]



(Partially re-quoted from Harada 2015, p.60)

The sentences of (5) are representing detailed processes of feature checking in the multiple Wh-construction of (3b). In (5a), Q-secondary in C of CP first attracts **naze** ‘why’ possessing a corresponding WH-feature through Attract Closest. After naze moves to the Spec of CP as in (5a’), the feature Q-S in C gets deleted in the Spec-Head relation with **naze** ‘why’ in the Spec of CP as illustrated in (5a’). This is the first computation done through covert movement followed by feature checking represented from (5a) to (5a’).

After that, the second computation starts. Q-primary in C of CP attracts **nani-o** ‘what’ as in (5b), and **nani-o** ‘what’ gets tucked into the Spec of CP as in (5b’). Since both WH’s such as **naze** ‘why’ and **nani-o** ‘what’ checked Q-features, they can take the matrix sentence as their scope.

Then, our question goes on with what these complicated feature checking operations suggest with regard to the ungrammaticality of (3b).

Takita et al argues that the ungrammaticality of (3b) is due to **naze** ‘why’ having checked Q-secondary first, not Q-primary, as illustrated in detail from (5a) to (5a’). On the other hand, (3a), in which **naze** ‘why’ is preceded by **nani-o** ‘what’, is grammatical since after **nani-o** moves first to the Spec of CP by Attract-closest and checks Q-secondary of C, **naze** tucks in the Spec of CP and checks Q-primary.

To make a long story short, **naze** ‘why’ in Japanese multiple constructions of (3a&b) needs to check Q-primary, not Q-secondary. Thus, (3a), in which **naze** ‘why’ checks Q-primary, is judged grammatical. On the other hand, (3b), in which **naze** ‘why’ checks Q-secondary, is judged ungrammatical.

2.2.2 Theoretical Weakness of Takita et al (2007)

Takita et al’s argument, which is based on the inappropriate feature checking, may explain why (3a) is grammatical and why (3b) is not. But there are some important questions that need to be answered immediately, which is why **naze** ‘why’ in a Japanese multiple Wh-construction needs to check Q-primary, not Q-secondary. Why should **naze** ‘why’ be treated different from the other three Japanese adverbial Wh-words like **itsu** ‘how’, **dokode** ‘where’, and **do** ‘how’. Consider the following sets of Japanese multiple Wh-constructions with the other three adverbial wh-words:

(6) Sets of Japanese Multiple Wh-constructions

a. Taro-wa **nani-o** **itsu** kat-ta-no?
 Taro-Nom **what**-Acc **when** buy-P-Q
 “What did Taro buy when?” (Lit. meaning)

a’. Taro-wa **itsu** **nani-o** kat-ta-no?

Taro-Nom **when** **what**-Acc buy-P-Q

“When did Taro buy what?” (Lit. meaning)

b. Taro-wa **nani-o** **dokode** kat-ta-no?

Taro-Nom **what**-Acc **where** buy-P-Q

“What did Taro buy where?” (Lit. meaning)

b'. Taro-wa **dokode** **nani-o** kat-ta-no?

Taro-Nom **where** **what**-Acc buy-P-Q

“Where did Taro buy what?” (Lit. meaning)

c. Taro-wa **nani-o** **do** kat-ta-no?

Taro-Nom **what**-Acc **how** buy-P-Q

“What did Taro buy how?” (Lit. meaning)

c'. ?Taro-wa **do** **nani-o** kat-ta-no?

Taro-Nom **how** **what**-Acc buy-P-Q

“How did Taro buy what?” (Lit. meaning)

The three sets of Japanese multiple Wh-constructions (6a&a', 6b&b', and 6c&c') above all include one nominal Wh-word and one adverbial Wh-word respectively just like (3a&b) do. They show typical ASE of Japanese. That is, the three adverbial WH's in Japanese may either check Q-primary or Q-secondary. When they check Q-secondary, then we have grammatical (6a', b' & c'). Or when they check Q-primary, then we have another sets of grammatical (6a, b, & c).

At this point of discussion, let's ask some very important questions:

First, is it reasonable just to agree to Takita et al's argumentation that **naze** 'why' of (3) and the other adverbial WH's of (6) are different from each other in that **naze** 'why' must check Q-primary and the other WH's like **itsu** 'how', **dokode** 'where', and **do** 'how' may check either Q-primary or Q-secondary? This kind of argumentation is not based on any kind of empirical evidence. It is nothing more than a seemingly plausible assumption that could explain the different aspects of data at hand. Secondly, why is (6c') judged “marginal”, instead of grammatical? We understand that the difference of grammaticality of sentences provided in (3) and (6) is directly due to the difference of features each adverbial WH owns respectively. If this argumentation is correct, then does it mean that there is difference in features between **itsu** 'when'/**dokode** 'where' of (6a, a' & 6b, b') on one hand and **do** 'how' of (6c, c') on the other? If there is, then is it big enough to cause grammaticality difference, and how can we explain it compared with **naze** 'why'? Thirdly, if degradation of grammaticality of (6c') is due to **do** 'how' preceding another Wh-word **nani-o** 'what' in the same sentence, then is there any similarity in features between **naze** 'why' of (3b) and **do** 'how'? Takita et al. provides no explanation for the questions.

2.2.3 A New Analysis of Exceptional Cases to ASE in Korean and Japanese

Let's take a more careful look at each of Japanese adverbial wh-words in order to explore a clue to say something about featural differences among them. From Watanabe(1992) through Saito(2007) and Takita et al(2007) to Hirada(2015) all researches on ASE in Japanese have been focusing (a) on structural difference (or precedence) of adverbial wh-words against nominal wh-words in a sentence and (2) on abstract feature

properties in order to explain the appropriate word order in a sentence. However, there are some clear morphological differences among Japanese adverbial wh-words. Consider:

(7) Morphological Analysis of Japanese Adverbial Wh-words

a. **naze** ‘why’ ⇔ {**naze**}_N ‘which reason’ + {**∅**}_{CM}

b. **itsu** ‘when’ ⇔ {**i**}_{IN} ‘some time’ + {-**tsu**}_{CM} ‘at/in’

c. **dokode** ‘where’ ⇔ {**doko**}_{IN} ‘which place’ + {-**de**}_{CM} ‘at/in’

(*_{IN} for Indefinite Pronoun, *_{CM} for Case Marker(=Suffix))

Morphological analysis of three Japanese adverbial wh-words, except **do** ‘how’, in (7) shows that there is a clear morphological difference between (7a) **naze** ‘which reason’ and (7b&c) including **itsu** ‘when’ and **dokode** ‘where’. (7a) does not show any CM(= Case marker) attached to the stem **naze** ‘which reason’, while (7b&c) clearly do to each stem respectively. Very interestingly, morphological difference of this kind could provide us with a clue to explain the grammatical difference between (3) and (6).

Let’s do further exploration of Korean adverbial wh-words in the same way as we do for Japanese adverbial wh-words of (7). Consider:

(8) Morphological Analysis of Korean adverbial Wh-words

a. **wæ** ‘why’ ⇔ {**wæ**}_N ‘why’ + {**∅**}_{CM}

b. **ændʒe** ‘when’ ⇔ {**æn-dʒək**}_N ‘which time’ + {-**e**}_{CM} ‘at/in’

c. **ədiesə** ‘where’ ⇔ {**ədi**}_N ‘which place’ + {-**esə**}_{CM} ‘at/from’

d. **əddəke** ‘how’ ⇔ {**əddəha**}_A ‘how’ + {-**ke**}_{CM} ‘-ly’

(*_{IN} for Indefinite Pronoun, *_{CM} for Case Marker(=Suffix))

As we can observe in (8), four Korean adverbial wh-words can be divided into two sub-groups: one with no case marker(CM) of (8a) **wæ** ‘why’ and the other with clear case markers of (8b, c, & d) of **ændʒe** ‘when’, **ədiesə** ‘where’, and **əddəke** ‘how’.

As the data of (7) and (8) show, it is very interesting to find that 4 adverbial wh-words in both languages can be divided into two groups: one with no morphological case marker (or suffix) and the other with full realization of morphological case marker. In addition, the one group with no case marker includes a member with the same meaning for both languages: **wæ** ‘why’ for Korean in (8a) and **naze** ‘why’ for Japanese in (7a). To add up a more stronger piece of evidence for further analysis, let’s consider the grammaticality pattern of multiple Wh-constructions in Korean.

(9) Sets of Korean Multiple Wh-Constructions

a. Tom-i **muət-il** **ændʒe** sa-t-ni?
Tom-Nom what-Acc when buy-P-Q
“What did Tom buy when?”(Lit. meaning)

a’. Tom-i **ændʒe** **muət-il** sa-t-ni?
Tom-Nom when what-Acc buy-P-Q
“When did Tom buy what?”(Lit. meaning)

b. Tom-i **muət-il** **ədiesə** sa-t-ni?
Tom-Nom what-Acc where buy-P-Q
“What did Tom buy where?”(Lit. meaning)

b'. Tom-i ədiesə muət-il sa-t-ni?
 Tom-Nom where what-Acc buy-P-Q
 "Where did Tom buy what?" (Lit. meaning)

c. Tom-i muət-il ə ddəke sa-t-ni?
 Tom-Nom what-Acc how buy-P-Q
 "What did Tom buy how?" (Lit. meaning)

c'. Tom-i əddəke muət-il sa-t-ni?
 Tom-Nom how what-Acc buy-P-Q
 "How did Tom buy what?" (Lit. meaning)

Three Japanese sets of multiple Wh-constructions in (6) are almost exactly corresponding to those of Korean data in (9). The grammaticality pattern is almost the same to each other, just except the marginal case of Japanese construction of (6c'). That is, relative placement of two wh-words are the same. Just putting aside the controversial case of Japanese (6c'), all the adverbial wh-words used in both languages are analyzed as {stem} + {CM}.

Let's consider the exceptional cases to ASE in both languages. (10a&b) is re-quoted from (4a&b) in Korean and (10b&b') from (3a&b) in Japanese.

(10) Exceptions to ASE in Korean and Japanese

a. Tom-i muət-il wæ sa-t-ni?
 Tom-Nom what-Acc why buy-P-Q
 "What did Tom buy why?" (Lit. meaning)

a'. *Tom-i wæ muət-il sa-t-ni?
 Tom-Nom why what-Acc buy-P-Q
 "Why did Tom buy what?" (Lit. meaning)

b. Taro-wa nani-o naze kat-ta-no?
 Taro-Nom what-Acc why buy-P-Q
 "What did Taro buy why?" (Lit. meaning)

b'. *Taro-wa naze nani-o kat-ta-no?
 Taro-Nom why what-Acc buy-P-Q
 "Why did Taro buy what?" (Lit. meaning)

Both (10a') and (10b') show that in Korean and Japanese, adverbial wh-word for reason 'why' cannot precede the other nominal wh-word in the same sentence, which means Korean **wæ** 'why' and Japanese **naze** 'why' must check Q-primary, so that both of them should be placed posterior to the other nominal wh-word in a sentence. At this point of discussion, can we answer the question of why adverbial wh-words for reason 'why' in both languages should stay lower than the other nominal wh-words? Probably yes. It is because, compared with the other three adverbial wh-words in two languages which can either precede or post-cede the other nominal wh-word in a multiple Wh-construction, both Korean **wæ** 'why' and Japanese **naze** 'why' lack case markers (or inflections) attached to the stem respectively, and so they cannot be freely moving in a sentence. They should be as close to their associate verb as possible.

Note that both Korean and Japanese belong to the agglutinative languages whose typical linguistic

characteristics is free word-order based on the rich inflectional system. Taking a clue from this linguistic characteristics on word-order based on empirical evidence of inflections (or case markers as we discussed in (7) and (8)), we can draw a more plausible explanation than Takita et al.(2007) and Saito(2004) on the exceptional cases to the ASE in both languages as follows:

(11) Explanation on the Exceptional Cases to ASE in Korean and Japanese

- (a) ASE is obeyed in Korean and Japanese multiple Wh-constructions.
- (b) Exceptions to ASE in both languages are accountable morpho-syntactically.
- (c) Adverbial wh-words with case markers attached keep ASE
- (d) Adverbial wh-words with no case markers should stay to its associate verb as closely as possible.
- (e) Covert Wh-movement and the feature checking system (Saito 2004) are obeyed.

3. Conclusion

Exceptional cases to ASE in Japanese have been studied since Watanae(1992), through Saito(2004), Takita et al.(2007), and recently by Harada(2015). But all of them are focusing on parsing them through purely syntactic relations. Recently Takita et al.(2007) tries to explain the exceptional cases to ASE mainly by feature checking in MP. Their attempt can explain the phenomena, but they suggest no empirical evidence on why only the Japanese adverbial wh-word **naze** ‘why’ among 4 such words should check the Q-primary feature in the feature checking mechanism.

In this paper, I introduced Korean exceptional cases to ASE, and suggested a new theory which can answer the fundamental question of why Korean **wæ** ‘why’ and Japanese **naze** ‘why’ must be dealt with differently from the other 3 adverbial wh-words in both languages. My theory on the different feature checking properties of Korean **wæ** ‘why’ and Japanese **naze** ‘why’ is fully based on the empirical morphological evidence, not just on speculation of abstract feature checking.

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