The Types of Korean As-Parenthetical Constructions

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Mija Kim. 2015. The Types of Korean As-Parenthetical Constructions. Language and Information 19.1, 37-57. This paper is primarily intended to provide a new insight on which the structural properties of As-Parenthetical constructions shown by Potts (2002) might be regarded as crosslinguistically common one. As a first attempt, it introduces the characteristics of Korean As-Parenthetical by carefully investigating them through the data, focusing on the similarities or differences between two languages with a constructional theoretical perspective. The paper here provides three properties of Korean as-clauses in the morphological and syntactic aspects. First, the morpheme 'as' in English as-clause would be realized as three different morphemes as a bound one. Korean as-clauses can be introduced by three different morphemes, '-tusi, -chelem, -taylo' and unlike that in English as-clauses, they behave as bound morphemes which do not stand alone. Even though they are attached into different morpho-syntactic stems, they do not make any meaning change only under this clause. Secondly, two syntactic types of as-clauses can also be found in Korean, similarly to those of English: CP-As type and Predicate-As type, depending on which types of gap they involve in. English has one more subtype of Predicate-As type (called inverted Predicate-Asclause), while Korean does not show this subtype. Thirdly, the various mismatches attributed by the gap and the antecedent come from the constructional restrictions of as-clauses in Korean. In addition, the paper attempts to display various ambiguities from the as-clauses through disjoint references or negative sentences in As-Parenthetical constructions. (Kyung Hee University)

Key words: As-Parenthetical, Korean, Two Types of As-Clauses, Gap, Constructional Restriction

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1. Introduction

English As-Parentheticals in (1), which are inserted into a sentence with comma intonation as a separate element, show some prominent features different from other parenthetical expressions. They require a morpheme 'as' in the initial position, which allows the as-Parentheticals to occur rather freely in the positions similar to other adverbial modifiers. This as-clause has to contain a missing constituent which is closely related to part of a main clause, and the interpretation of the missing constituent, thus, is dependent on material elsewhere in the context of discourse. The as-clause in (1a) can be paraphrased as 'as the president said that the campaign would be about the future'. It means that the missing constituent in as-clause corresponds to the total of a main clause, which is part of being commonly shared with the two clauses. These phenomena can also be seen in Korean, as in (1b).

- (1) a. As the president said, the campaign will be about the future. (COCA, 1999 SPOK)
 - b. Cheli-ka malhan-kes chelem, Yengi-ka cengcik-hay-ss-ta. Cheli-NOM said-as, Yengi-NOM honest-COP-PST-DECL. 'As Cheli said, Yengi was honest'

In the example (1b), the bound morpheme -(kes) chelem corresponding to the English free morpheme 'as', leads the as-clause and takes a clause which contains a missing constituent. When this clause as a separate constituent is inserted into a sentence, it will be interpreted as 'Cheli-ka Yengi-ka cengcik-ha-yss-ta-ko malha-yss-ta (as Cheli said that Yengi was honest)', as in (1b).

From the examples in (1b), we find that Korean also has the as-Parentheticals, even though any previous researches on them have almost never found so far. In contrast, Emonds (1976) and Culicover (1980, 1992) have paid their attention to the parentheticals in English, and recently two prominent approaches on As-Parentheticals under a transformational perspective have been provided by Potts (2002a, b), which attempts to investigate the syntax and semantics of cross-linguistically common parenthetical construction, and LaCara (2012) and Feria (2010), which focus on the syntactic aspect of this construction. In addition, Arnold and Sadler (2010, 2011) made an attempt to present their insight of semantic aspect of as-clauses within a LFG framework. Yoo (2012) also tried to analyze a Predicate-as clause type, which is one type of English as-clauses, under the HPSG theory.

Among these previous analyses, Potts (2002b: p.624) classified the As-Parentheticals into two different syntactic types, 'CP-As' and 'Predicate-As', as in (2a)-(2c) and provided the analysis of the syntax and semantic properties of the gapped elements by the movement of a syntactically empty VP pro-form, against a VP ellipsis analysis of as-paretheticals. LaCara (2012) and Feria (2010) argued against his analysis that the Predicate-As type should be separated into two different subtypes, Inverted Predicate-As and Noninverted Predicate-As, in the sense that these two subtypes show different behavior in argument structure mismatches between

as-clauses and their antecedents, ultimately resulting in three different types of As-Parentheticals.

- (2) a. Ames, as the FBI eventually discovered, was a spy. 'CP-As'
 - b. Ames stole important documents, as the FBI said he had.

'Predicate-As'

c. The plums were delicious, as were the durians. 'Predicate-As'

This paper intends to help provide a new insight on which structural properties of As-Parenthetical construction shown by Potts (2002) could be regarded as crosslinguistically common one. In addition to this goal, the paper makes an attempt to introduce the detailed syntactic characteristics of as they occur in Korean and also to identify how many different types Korean has, by investigating them through the data with a construction-based perspective, focusing on clarifying the prominent differences and some similarities between the two languages. In the process of doing this, this paper searches Korean data, by using as a search engine Sejong Corpus and Google searches. In the following sections, the paper provides an overview of (a) which morphemes introduce as-clauses in Korean and their relation to English as-Parentheticals as described by Potts (2002a); (b) the syntactic properties of as-Parentheticals, including their syntactic distribution in larger clauses and syntactic properties of the missing constituents inside of as-Parentheticals; and (c) the interpretation of negation inside of as-Parentheticals, despite the lack of overt morphological negation. The paper describes two kinds of as-Parentheticals: one kind that takes CP antecedents, and one that takes VP antecedents, similar to observations made for English by Potts (2002a).

2. As-Parentheticals in English

2.1 Issues

One of the issues on parentheticals (for instance, I think, I guess, etc.), a particular type of pragmatic marker, traditionally, is to find out how they can be treated as being in the process of grammaticalization. That is, we need to judge on whether they can be a grammatical element inside a sentence. In this respect, as-Parentheticals led by morpheme 'as' will be considered as an instance of identifying how closely they are connected to main clauses as a parenthetical element. As-Parentheticals contain a missing constituent which is a complement of the morpheme 'as'. This gapping element links the as-clause as a parenthetical constituent to the host inside the main clause. One issue here is an as-clause as being separate from the rest of the sentence, which makes it different from other types of as-clauses or adverbials. The next issue is how the gapping element can be syntactically matched to host. Lastly, the issue is how the as-clauses are semantically combined with it. This paper will focus on the two former issues.

First, the parentheticals in general as well as as-clause in particular, exhibit their distinctive characteristic, comma intonation. Potts (2002b) points out that the comma intonation in as-clauses triggers the meaning difference, as in (3): Potts

(2002b: 650-651). The examples (a), (c) and (e) give the interpretation of parentheticals, whereas it is impossible to get the exactly same interpretations from the examples (b), (d) and (f). For example, the sentence (e) gives an interpretation as a parenthetical expression, but the as-clause of the example (f) expresses the manner interpretation, which Juan and Sven solved the problem as well as they solved it in a common manner, in the sense that (e) engages in Predicate-As and (f) involves VP-ellipsis within the complement of Adjunct-As (a non-parenthetical adverbial relativizer).

- (3) a. Eddie, *I think*, crashed his unicycle.
 - b. I think Eddie crashed his unicycle.
 - c. Eddie crashed his unicycle, stupidly.
 - d. Eddie crashed his unicycle stupidly.
 - e. Juan solved the problem, as Sven did.
 - f. Juan solved the problem as Sven did.

In addition to this, we need to look at the properties which distinguish the as-Parentheticals from other kind of as-clauses. The following examples in (4) have various kinds of as-clauses which may not contain obligatory gaps with various adverbial readings. Among them, the example (4a) corresponds to as-Parentheticals, in the sense that (1) it only contains a syntactic gap, (2) the meaning does not contribute to part of the main assertion of a sentence, but it provides the speaker's commitment on the content of the main assertion.

- (4) a. Jody speaks German as Klaus speaks English with a foreigner's accent. (Potts 2002b) Manner
 - b. As Mary bought some lettuce, Tom decided to make a salad. Reason
 - c. As the door closed behind Possum, Rabbit sprang into her kitchen. (COCA, 2011 FIC) Temporal

Secondly, Potts (2002b, 2005) classified the English As-Parentheticals into two different types, in terms of the syntactic properties that the gapping constituent is matched to the host: CP-As clause type which the gap is clausal, and Predicate-As clause type which the gap occurs in the position of predicate, as illustrated in (2) above. Meanwhile, LaCara (2012) and Feria (2010) proposed three different types by exhaustively classifying the Predicate-As clause into inverting Predicate-As clause and noninverting one, comparing their different syntactic properties, in particular voice mismatch, in the sense that inverting as-Parentheticals permit voice mismatch but noninverting ones do not, as shown in (5).

- (5) a. The plums were delicious, as were the durians. 'Predicate-As(inverted)'
 - b. Mary kissed John, as Sally might. 'Predicate-As(noninverted)'

From this classification that these previous researches make, we know that the types of *as*-clauses are totally determined by the syntactic category of missing elements, without any further consideration of some semantic aspects. This approach, however, can have difficulty in identifying the type of *as*-clause inside the following sentence, in the sense that it may be ambiguous.

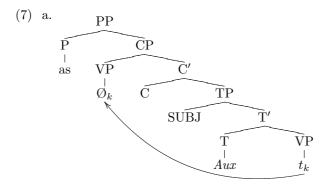
(6) She and her husband bought a home in Walnut Creek, California. "We bought that property, as the name suggests, to cultivate the walnut". (COCA, 1991 MAG)

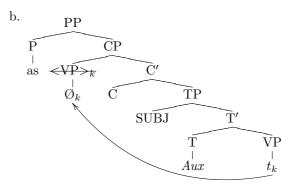
Although the verb in as-clause 'suggests', presumably, requires a complement of clausal type, we may judge that the as-clause inserted into such position as in (6), will take a nonfinite verb phrase, 'to cultivate the walnut (more precisely, we will cultivate the walnut)', rather than 'we bought that property to cultivate the walnut' as complement, when we try to identify it semantically. This as-clause is positioned in front of the secondary predication, resulting in the effect that it is more related to the infinitival clause than the main clause.

In addition, we might have another alternative: from the interpretation that we can get from context, we can assume that this as-clause may take a clausal complement, 'it would be a good place for us to cultivate the walnut.'

2.2 Theoretical Approaches

The previous researches on as-Parentheticals can be split up into two directions. One approach is that as-Parenthetical construction can be grouped as nonrestrictive relative clause, while the other tries to analyze this construction as a special type of modifier. The latter focuses on divulging the close relationship between the gapping elements in as-clause and part of the main clause, under the transformational framework. In this theoretical approach, three different viewpoints were proposed. As shown in (7a), Potts (2002) assumes a syntactically empty VP proform, and argues that this VP pro-form is on the gaps in as-clause and it moves into the CP position of the as-clause. Merchant (2007) proposes a VP ellipsis analysis of as-paretheticals. Otherwise, LaCara (2012) and Feria (2010) propose a hybrid analysis that there must be a shared full element in the gapping position with internal syntactic structure, and that this missing element deletes at PF, as in (7b).





In fact, this paper attempts to analyze this as-Parentheticals construction with a perspective of construction-based grammar which is quite different from the previous approaches above, even though its main goal is not to provide the theoretical analysis.

3. Korean As-Parentheticals

3.1 Morpheme 'as' in Korean As-clauses

The first sign to indicate the As-Parentheticals in English would be said to be the morpheme 'as' which has necessarily to contain gaps. Interestingly, this 'as' morpheme in Korean is realized differently from that of English. As shown in (8), the three different morphemes, '-tusi, -chelem, -taylo', lead the as-Parentheticals in Korean, and unlike the as-clause in English, they behave as bound morphemes which do not stand alone and are attached to other free morphemes. Even though they are added into the different morpho-syntactic stems, they do not make any meaning change under this construction. The three as-clauses in (8) do not give us any meaning changes. The example (9) shows that they are not used as free morphemes.

- (8) a. ku-ka cwucangha-*tusi* He-NOM insists-as 'As he insists'
 - b. ku-ka cwucanghan-keschelem
 - c. ku-ka cwucanghan-taylo
- (9) *ku-ka (cucanghass-ta) tusi/keschelem/taylo

Let us now check out whether these three morphemes can also be used similarly with as-clauses. The examples in (10) tell us that under the other circumstance where they are added to the bound noun 'pa', only the two morphemes are allowed to be combined. The bound noun 'pa' can occur with these morphemes in other contexts, as in (10). In this situation, the verb 'ttusha-ta (to intend)' combines with bound noun 'pa' plus another morphemes. In this context, the two morphemes, -taylo and -chelem, can be attached to the bound noun 'pa', whereas the morpheme

'-tusi' is not allowed to combine with it, as in (10c). Here I will not be addressing whether there is any particular reason that 'tusi' cannot combine with 'ttushan-pa', because that is beyond the topic of this paper.

- (10) a. ttushan-pa-taylo Intend-as 'as (we) intend to do'
 - b. ttushan-pa-chelem
 - c. *ttushan-pa-tusi

From these examples in (8) and (10) above, we come to the conclusion that Korean *as*-clauses allow three different morphemes, which lead the *as*-Parentheticals and that their similar behaviors can be witnessed only in this *as*-clause.

As for the role of comma (intonation) in as-Parentheticals, the examples in (11) display that Korean as-clauses do not mandatorily show this characteristic.

- (11) a. Yengi-ka ha-yssten-taylo(,) Cheli-ka kong-ul tencye-ss-ta. Yengi-NOM do-PST-as, Cheli-NOM ball-ACC throw-PST-DECL. 'As Yengi did, Cheli threw the ball'
 - b. Yengi-ka hayssten-keschelem(,) Cheli-ka kong-ul tencyessta.
 - c. Cheli-ka kong-ul(,) Yengi-ka ha-yssten-keschelem(,) tencye-ss-ta. Yengi-NOM ball-ACC Yengi do-PST-as throw-PST-DECL. 'Cheli, as Yengi did, threw the ball'
 - d. Cheli-ka(,) Yengi-ka hayssten-keschelem(,) kong-ul tencye-ss-ta.
 - e. Yengi-ka hayss-tusi(,) Cheli-ka kong-ul tencye-ss-ta.

The optional comma (intonation) in the initial position of as-clauses in (11a) and (11b), and the intermediate position in (11c) and (11d) are allowed, in particular without any meaning change. Thus, unlike English as-clauses, the absence of the comma (intonation) in Korean does not affect the grammaticality or the meaning change of the sentence.

3.2 Syntactic Characteristics

This section will investigate the syntactic properties of as-Parentheticals in Korean, focusing primarily on the syntactic distributions, the constructional types classified on the basis of the data, and the relationship between the antecedent and the gap in as-clauses. This paper will introduce them with a perspective of constructional grammars.

3.2.1 Distribution of *As-*Clause. To help understand the grammatical function of the *as-*Parentheticals in a sentence, we need to examine the positions available to them within a sentence. Korean *as-*clauses can occur in initial or middle positions in a sentence, but the final position of the sentence is not allowed, which is also one of the syntactic properties of Korean adverbials because Korean is a head-final language.

- (12) a. [kunye-ka yeysangha-yssten-**taylo**], ku-nun sanglyuchung She-NOM expect-PST-as he-TOP wealthy kaceng-ey ipyang-toy-ess-ta.
 - family-LOC adopt-PASS-PST-DECL.
 - 'As she expected, he was adopted by a wealthy family.'
 - b. ku-nun, [kuney-ka yeysangha-yssten-**taylo**], sanglyuchung kaceng-ey ipyangtoy-ess-ta.
 - c. #?ku-nun sanglyuchung kaceng-ey ipyangtoy-ess-ta, [kuney-ka yeysangha-yssten-taylo].
 - d. ku-nun sanglyuchung kaceng-ey ipyangtoy-ess-ta. [Kuney-ka yeysangha-yssten-taylo].

The examples in (12) tell us that the as-clause 'Kunye-ka yesanghayssten-taylo' ('as she expected') in (12a) can occupy the sentence-initial position, or be inserted after the subject, as in (12b). On the other hand, the as-clause in (12c) cannot be allowed at the end of a sentence as a canonical position, even though Korean displays free word order variation. Sometimes, this final position might be allowed as a noncanonical position, especially in metaphorical uses. The as-clauses in this noncanonical position were not found among about 1.5 million sentences that this paper has searched in the corpus. The findings of the data also demonstrate that the sentence (c) becomes a grammatical sentence, as in (d), if this as-clause forms another new sentence in the position of the immediately subsequent to the sentence (c). This sentence is hard to consider as as-Parentheticals, in light of the definition of Potts (2002b).

3.2.2 Syntactic Types of Gapped Elements and Their Syntactic Restriction. Keeping these properties of *as*-Parentheticals in mind, this paper will attempt to sort out Korean *as*-Parentheticals by extensively investigating the data. The findings of retrieving the data show that Korean *As*-Parentheticals also have two types similarly to those of English that Potts (2002b) divides as the categories of *As*-Parentheticals: CP-*As* type and Predicate-*As* type.

The first type, corresponding to the examples (13), can be classified as CP-as clauses in Korean, in which the syntactic gap is a clausal type. The verb 'yesanghata (to expect)' in the as-clause of (13a) has a clausal gap and the antecedent of the missing constituents is matched to the main clause, inevitably corresponding to the whole main clause. The slight difference between the missing elements and the antecedent in (13a) is only one element inside the VP such as tense or auxiliaries, in the sense that the verb in as-clause is expected to have the CP complement which has an auxiliary verb as in (13a'), whereas the auxiliary verb does not occur in the main clause. Otherwise, this difference is not found in the sentence (13b), in which the syntactic gap in as-clause is exactly the same with the whole main clause. That is, the verb 'nukki-ko-issta (to feel)' in as-clause contains a clausal gap and this gap corresponds to the whole main clause.

- (13) a. [kuney-ka yeysangha-yssten-taylo], ku-nun sanglyuchung She-NOM expect-PST-as he-TOP wealthy kaceng-ey ipyang-toy-ess-ta. family-LOC adopt-PASS-PST-DECL.

 'As she expected, he was adopted by a wealthy family'.

 (Jihye Kim, 2001)
 - a'. As-clause: Kuney-ka yeysanghayssten-taylo
 - ⇒ kuney-ka [ku-nun sanglyuchung kaceng-ey ipyang-toy-ess-ul-kesulo] yeysangha-yss-ta.

 'She expected that he would be adopted by a wealthy family'
 - b. [kemchal-to ppyecelikey nukkiko-issnun kes-**chelem**], kemchal-ey Prosecutor also deeply feel-PROG-as prosecutor tayhan pwulsin-i kuk-ey talhay-issnun kes-ita. toward distrust-NOM culminate-PST-NMLZ-DECL 'As prosecutors also feel deeply, the distrust on them reached a peak'

We now need to make sure whether the missing elements in the as-clause of the CP-as clause type should be a CP type, because the verb which takes the gapped elements as the complement, may lexically require both CP and NP. Korean as-clauses provide a piece of the evidence that this gapped constituent is a CP, not VP through the case makers.

- (14) a. wuli-nun ku-ka haksayng-ila-ko/*-ul cwucangha-yss-ta.
 We-TOP he-NOM student-COP claim-PST-DECL.
 'We insisted that he is a student'
 - b. wuli-ka cwucanghankes-**chelem**, ku-nun haksayng-i-ta. We-NOM claim-PST-as, he student-COP-DECL. 'As we insisted, he is a student'
 - c. ku-nun, wuli-ka cwucanghankes-chelem, haksayng-ita.

The lexical verb 'cwucanghata (to insist)' in (14) can take two types of category as the complement: CP or NP. When the verb combines with the CP complement, the case marker which indicates clausal complements is preferably realized as '-ilako', whereas the case marker '-ul' should be attached to NP in the object position. However, the case marker '-ul' is not allowed to attach to the sentence (14a), which means that the as-parenthetical in (14a) is clausal and not of a nominal category. From this declarative sentence, the as-Parentheticals can be derived, as in (14b) and (14c), which leads to the claim that the syntactic gaps in as-clauses be a CP.

The second type is VP-as clauses, which will be categorized as Predicate-As clauses of Potts (2002b), as shown in examples (15). The syntactic gap in the as-clause of (15a) can be calculated as part of VP, which matches up with part of the VP in main clause, as seen in (15a) and (15a'). The difference between two VPs involves an aspect, in the sense that the VP in as-clause would be 'has not

given', while that in main clause is 'decided not to give'. Likewise, the example (15b) exhibits the mismatch in tense, that is, as-clause needs the present perfect tense, while the main clause takes just a past tense. The verb of the as-clause in (15c) needs the clause complement including an auxiliary verb like would, whereas the main clause does not require the auxiliary verb.

- (15) a. Ryu Hyunjin-un hankwuk-eyse ha-yssten-kes-chelem, Dodgers-eyse-to Hyunjin Ryu-TOP Korea-LOC do-PST- as, Dodgers-Loc-also pwulpheyn phiching-ul haci-anhkiloha-yss-ta. bullpen pitching-ACC not do-PST-DECL.

 'As Hyunjin Ryu has in Korea, he decided not to throw in the bullpen session in Dodgers'. (The Kyunghyang Shinmun, 2013)
 - a'. As-clause: Ryu Hyunjin-un hankuk-eyse ha-yssten-kes-chelem
 - ⇒ Ryu Hyunjin-un hankuk-eyse pulphen piching-ul haci-an-ass-ta 'Hyunjin Ryu has not thrown in the bullpen session in Korea'
 - b. Ochang hyukyeyso-to maynyen ha-yass-tusi, olhay-to Ochang Highway Service Area every year do-as, this year-also sel-ul maca noin-tul-eykey ssal 20 potay-lul New Year's day the old man-PLU-BEN rice 20 sacks-ACC kicungha-yss-ta. (Ccdailynews, 2013) donate-PST-DECL.
 - 'As Ochang Highway Service Area has every year, they donated 20 sacks of rice to the old on the day of the New Year, this year'
 - c. yeysangha-yssten-taylo, epmwupwucang Ahn Myungkyu-nun expect-PST- as, business manager Ahn Myungkyu-TOP chwulkun-hacamaca Se Tongsoo-lul pwull-ess-ta. (Munhwa ilbo, 2012) show up at the office Se Tongsoo-ACC call-PST-DECL.

 'As one expected, the business manager called out to Se Tongsoo as soon as showing up at the office in the morning'

In a previous section, this paper shortly mentioned two different subtypes of Predicate-as clauses, which LaCara (2012) and Feria (2010) argued that the Predicate-As type should be divided into Inverted Predicate-As and Noninverted Predicate-As, as in (16), in the sense that these two subtypes show different behavior in argument structure mismatches between as-clauses and their antecedents. The as-clauses in English optionally show an inverted form that only the operator, rather than the whole verb phrase, is placed in front of the subject noun phrase, as in (16a). On the contrary, Korean as-clauses do not display this inverted form, as in (17), which contains a modal auxiliary 'could'. From the fact that Korean as-clauses do not need to distinguish inverting as-clauses from noninverting ones, we can judge that inverting as-clauses type might be regarded as one of the English particular properties.

- (16) a. My mother would be proud to support the Colorado civil-unions bill, as would my father_.
 - b. My mother would be proud to support the Colorado civil-unions bill, as my father would_. (COCA, 2011 News)

- (17) a. wuli apeci-ka halswuiss-ess-tusi, na-to halapeci-uy
 We-POSS father-NOM can-PST-as, I also grandfather-POSS
 kaep-ul cal iekal-swu issulkesi-ta.
 family business-ACC well take over will-DECL
 'As our father could, I will also take over my family business well.'
 - b. * halswuiss-ess-tusi wuli apeci-ka, na-to halapeci-uy can-PST-as we-POSS father-NOM, I also grandfather-POSS kaep-ul cal iekal-su issulkesi-ta. family business-ACC well take over will-DECL 'As our father could, I will also take over my family business well.'

From the linguistic behaviors of the two types of as-clauses investigated so far, we come to a conclusion that the antecedents of the syntactic gaps in as-clauses would partly or totally be shared with the main clauses. The scope of this difference here does not seem to go beyond the base form of the verb in VP. From this conclusion, we can assume that this difference would come from some syntactic restriction which exists in the verbs of as-clauses and that the antecedents of the syntactic gaps should obey some structural restrictions assigned by the verb in as-clauses, which will be discussed in detail in the subsequent sections.

3.2.3 Distance Between Gaps and Antecedents. As briefly mentioned in the previous section, three different analyses under a transformation approach were proposed: by deletion, movement and mixed one. Potts (2002b) argues that the position of a gap occupies a null VP pro-form and that the relationship between antecedents and gaps is generated by the movement operation of this null VP proform. He showed four pieces of evidence for his argumentation: island sensitivity, locality restrictions on the antecedent, interpretation and Irish complementizers.

This paper, of course, will not provide any theoretical analysis in Korea. But Potts (2002b) argues the movement analysis where the gaps in as-clauses are created by the movement and in the process of doing it, he proposes that the antecedent of the gap must be able to be found within a non-local phrase, which is cross-linguistically common in as-Parentheticals. In order to provide an insight on this property, the paper here will briefly review the locality property in as-clauses. That is, one of the syntactic characteristics in as-Parentheticals is that there exists an island in this construction. This property can be found in the sisterhood restriction and extraction boundary. They say that the constituent to be extracted as the gap's meaning in as-clauses must be the most local phrase within the appropriate type: Williams (1977), Kennedy (1998) and Potts (2002b). According to this restriction, we can find that the scope of the antecedent of the gap would be a VP which they are adjacent to, and the antecedent of the gap in (18) should absolutely be (a), as in (18).

- (18) The fact that Sue read the map carefully probably means that she stayed on the trails, as we know Chuck did VP.
 - a. As-clause gap = stay on the trails
 - b. As-clause gap \neq read the map carefully

This restriction on the locality between the antecedent and the gap can also

be seen in Korean as-Parentheticals, as in (19), in which the as-clause happens within the subordinate clause. Under this circumstance, the antecedent of the gapped constituent which the verb 'kangcohata (to emphasize) would be expected to take, does not go beyond the scope of subordinate clause, as in (19b) and (19c). The reading such as (19c) makes this sentence unacceptable. Thus, Korean as-Parentheticals also show that the antecedent must be the most local phrase.

- (19) a. [ko Park taythonglyeng-i hangsang kangcoha-yss-tusi], hyekmyeng-uy
 Late Park president-NOM always emphasize-PST-as, revolution-POSS
 kongkwa-nun hwusey-uy yeksaka-tul-i phyengkahal-kesimulo
 result-TOP posterity historian-PLU-NOM evaluate-FUT
 yekisenun enkuphaci anhkeyss-ta.
 here mention not.

 'We would like not to mention here because next historians, as the
 late president Park always emphasized, will evaluate on the revolution'
 (Kyeycin Lee, 1991)
 - b. as-clause = ko Park taythongleyng-i [hyekmyeng-uy kongkwa-nun hwusey-uy yeksaka-tul-i phyengkahal-kes-ilako] hangsang kangcoha-yss-ta. "The late president Park always emphasized that next historians will evaluate on the revolution".
 - c. *as-clause = ko Park taythonglyeng-i [hyekmeyng-uy kongkwa-nun hwusey-uy yeksaka-tul-i pyyengkahal- kesimulo yekisenun yenkuphaci anhkeyss-tako hangsang kangcoha-yss-ta].
 'The late president Park always emphasized that we would like not to mention that next historians will evaluate on the revolution".

As for the restriction on island boundary, Korean as-Parentheticals also display the same wh-island effect: the gap of the as-clause is not extracted across the wh-boundary. That is, the distance between the gap and the antecedent does not go beyond the wh-clause. This fact can be observed by the examples (20), where the verb 'mutta (to ask)' takes wh-clause as the complement and the that-complement in the object position of the verb 'alta (to know)' within the wh-clause cannot be the antecedent of the as-clause, as in (20b).

- (20) a. sensayngnim-un Cheli-ka kyelsekhan-kes-ul emma-ka anunci Teacher-TOP Cheli-Nom absent-NMLZ-ACC Mother-NOM know mwulepo-ass-ta ask-PST-DECL.
 - 'The teacher asked whether his mother knew that Cheli was absent'
 - b. as-clause = ko Park taythongleyng-i [hyekmyeng-uy kongkwa-nun hwusey-uy yeksaka-tul-i phyengkahal-kes-ilako] hangsang kangcoha-yss-ta.
 'The late president Park always emphasized that next historians will evaluate on the revolution".
 - c. *as-clause = ko Park taythonglyeng-i [hyekmeyng-uy kongkwa-nun hwusey-uy yeksaka-tul-i pyyengkahal- kesimulo yekisenun yenkuphaci anhkeyss-tako hangsang kangcoha-yss-ta].
 'The late president Park always emphasized that we would like not to mention
 - 'The late president Park always emphasized that we would like not to mention that next historians will evaluate on the revolution".

The gap of the as-clause in the following sentence (21) occurs within the relative clause and its antecedent is realized as the main clause, where the interpretation of the sentence is unacceptable.

(21) *mwulepon sensayngnim-kwa iyaki-lul han-kes-chelem, Cheli-ka Ask-PST teacher-OBL story-ADD do-as, Cheli-NOM kyelsekha-yss-ta. absent-PST-DECL.

'Cheli was absent, as the teacher who asked spoke to his mother.'

From the two restrictions witnessed in this section so far, we could perceive that the distance between the gap and the antecedent in Korean as-Parentheticals must absolutely be the most local phrase and never go beyond the wh-clause as well.

3.3 Ambiguities

This section will examine ambiguous readings that the syntactic features of as-Parentheticals can make.

- **3.3.1 Disjoint Reference.** It is traditionally said that there can be three possible relations between an antecedent and a pronoun, given that arguments are associated with variable and that the variable is assigned to entities. One is the case where both the antecedent and the pronoun are associated with one variable. Another is that different variables are assigned to the same entity. The last is where different variables are associated with distinct entities. This last situation is called disjoint references. The as-Parentheticals construction in Korean has this disjoint reference readings, but the previous researches on English as-clauses have never mentioned the disjoint reading. This paper could come across the readings of disjoint reference in Korean as-clauses through the data. Like other elliptical constructions, the as-Parentheticals have a gapped constituent, which creates ambiguous interpretations. The potential antecedent of the gap constituent in (22a) can be the whole main clause, but the exact reading cannot be copied from the whole clause. The meaning interpretation would be that 'as each grandmother took special care of their grandson, our grandmother also took special care of me'. Thus, the pronoun 'me' in the main clause do not copy into the gapped constituents in as-clause, and it should identify its antecedent in the subject of the as-clause.
 - (22) a. motun halmeni-ka hasinun-kes-chelem, wuli halmeni-to Every grandmother-NOM do-HON-as, we-POSS grandmother also na-eykey hana-te chayngkyecwu-si-lye hasye-ss-ta. (Ablenews, 2012) I-BEN one more take-good-care-of do-PST-DECL.

 'As other grandmothers did, our grandmother also took special care of me'
 - b. As-clause=
 As other grandmothers took special care of their grandson.
- **3.3.2** Negative Meaning within the As-Clause. The negation of the antecedent can affect that of as-clauses, because the gapping elements in as-clauses have the antecedent the main clause and they are totally or partially involved in it. We, reversely, need to think of the negative meaning in the as-clauses.

The declarative sentence (23a) here can take four possible examples with negative meanings, as in (23b)-(23d). Among them, the sentence (23c) can be accepted as a grammatical one, whose *as*-clause does not have negative meaning, whereas

the examples (23b) and (23d) with negative meaning look like they are not allowed, in that it is absolutely impossible for us to understand the meaning of the sentences, and the sentence (23e) looks as if it violates the basic assumption as an implication of as-clauses. These examples deserve our notice that there is one type of restrictions in meaning that the as-clauses are not inclined to include negative meanings.

- (23) a. Cheli-ka malhan-kes-chelem, Yengi-nun khika-kh-ess-ta. Cheli-NOM say-PST- as, Yengi-TOP tall-COP-PST-DECL. 'As Cheli said, Yengi was tall'
 - b. *?Cheli-ka pwucenghan-kes-chelem, Yengi-nun khika-kh-ess-ta. Cheli-NOM deny-PST-as, Yengi-TOP tall-COP-PST-DECL. 'As Cheli denied, Yengi was tall'
 - c. Cheli-ka malhan-kes-chelem, Yengi-nun khi-ka- khuci-anh-ass-ta. Cheli-NOM say-PST-as, Yengi-TOP tall-not-PST-DECL. 'As Cheli said, Yengi was not tall'
 - d. *?Cheli-ka pwucenghan-kes-chelem, Yengi-nun khi-ka-khuci-anh-ass-ta. Cheli-NOM deny-PST-as, Yengi-TOP tall-not-PST-DECL. 'As Cheli denied, Yengi was not tall'
 - e. *?Cheli-ka malhaci-anhunkes-chelem, Yengi-nun khi-ka-khuci-anh-ass-ta. Cheli-NOM say-not-PST- as, Yengi-TOP tall- not-PST-DECL. 'As Cheli did not say, Yengi was not tall'
- **3.3.3** Negation Between the Gap and the Antecedent. In the immediately previous section, we observed that the *as*-clauses are not apt to give negative meanings. As a next step, we need to turn our attention to the event that the main clauses corresponding to the antecedents of the gap contain negative meanings from a negator 'not', in order to more accurately judge whether the negator 'not' in the antecedent can create ambiguity or not.

The examples in (24) have the negative meanings in main clauses, which can make the sentence ambiguous. At first glance, these sentences might have ambiguous meanings. That is, we can get two different interpretations from these sentences, in that the as-clauses may or may not have negative meaning, especially if we are not familiar with the information on them. Therefore, we can understand the sentence (24a) in either way that 'Hyunjin Ryu would not have thrown in between starts in bullpen, or that he would have thrown in'. Likewise, it is hard for us to perceive the idea of the sentence (24b) about whether Mencius highly emphasized the ethics, or not.

(24) a. Ryu Hyunjin-un, hankwuk-eyse ha-yssten-kes-chelem, Dodgers-eyse-to Hyunjin Ryu-TOP Korea-LOC do-PST-as, Dodgers-LOC-also pwulphen phiching-ul haci-anhkilo- ha-yss-ta. bullpen pitching-ACC do-not-PST-DECL.

'As Hyunjin Ryu has in Korea, he decided not to throw in the bullpen session in Dodgers'

b. wiuy tayhwa-eyse po-ass-tusi, mayngca-ka mwucoken Above talks see-PST- as, Mencius-NOM without any reason totekman-ul kangcohan-kes-un ani-ta. ethics-ACC emphasize-PST not-DECL.

'It is not the case that Mencius emphasized the ethics without any reason, as we saw in the above talks,' (Taehak: Kyobin Kim, 1993)

From the examples above, we can assume that the negative 'not' in main clauses causes ambiguous meaning. From now on, we need to check out whether different type of negator can also show the same effects to them, and whether the different position of as-clauses or other factor can make this ambiguity. A subtle difference between (24) and (25) is that we are likely to be far more familiar with the information that the sentence (25) gives us. Even though the negative sentences in (25) have the similar structures of as-clauses with those in (24), this background knowledge with the sentence (25) does not lead us to perceive that they may be ambiguous. The different position of as-clauses in (25a) and (25b) does not create meaning difference.

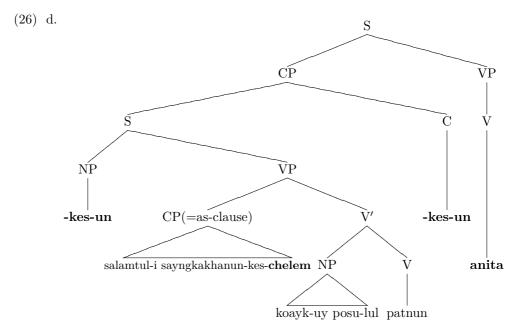
Korean has two different forms of negator, 'anita' and 'anhta'. Even under the same syntactic environment, 'anhta' seems as if it might not create ambiguous reading. That is, 'anhta' in (25a) and (25b) would give far clearer reading than 'anita' in (25c) and (25d).

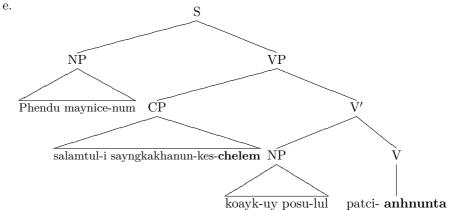
- (25) a. phentu maynice-nun [pothong salamtul-I sayngkakhanun-kes-chelem], Fund manager-TOP people-NOM think- as, koayk-uy poswu-lul patnun-kes-un-ani-ta. (JoongAng Ilbo, 2000) higher salary-ACC receive- not-DECL 'It is not the case that the fund managers are highly paid, as people think'
 - b. [pothong salamtul-i sayngkakhanun-kes-chelem], phendu maynice-nun people-NOM think-as, fund manager-TOP koayk-uy poswu-lul patnun-kes-un-ani-ta. higher Salary-ACC receive- not-DECL.
 'It is not the case that the fund managers are highly paid, as people think'
 - c. phendu maynice-nun [pothong salamtul-i sayngkakhanun-kes-chelem],
 Fund manager-TOP people-NOM think-as,
 koayk-uy poswu-lul patci-anhnun-ta.
 higher Salary-ACC receive-not-DECL.
 - 'The fund managers are not highly paid, as people think'
 - d. [pothong salamtul-i sayngkakhanun-kes-chelem], phendu maynice-nun People-NOM think-as, Fund manager-TOP koayk-uy poswu-lul patci-anhnun-ta. higher Salary-ACC receive-not-DECL.

 'As people think, the fund managers are not highly paid'

We can easily see the ambiguities from this relationship of negation between the gap and the antecedent with the following diagrams (26d) and (26e) as the syntactic structures of (25a) and (25b) respectively. In (26d), the verb 'anita (not to be)' combines with the CP that contains the as-clause, and judging from the syntactic restriction called the sisterhood, we can guess that it is not easy for this verb to affect the as-clause positioned in the embedded clause. On the other hand,

in (26e) the distance between the gap and the antecedent is within the local phrase and the antecedent involves in the negative meaning, and under this context, the as-clause can naturally give the negative reading.¹





3.4 Constructional Restrictions

This section will discuss three constructional restrictions that can be imposed on the structures of Korean *as*-Parentheticals with a perspective of construction-based grammars: the role of *as*-clauses, mismatches, and the local restriction.

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¹ This paper now provides the tree structures in (26) with a perspective of nontransformational grammar, with which this paper will analyze this *as*-parenthetical construction in what follows this study. Thus, this paper does not provide IP or TP analysis.

The three morphemes '-tusi, -chelem, -taylo', corresponding to English asmorpheme in as-clauses, play a different role in other contexts, but when they are used in the environments leading the clause that has a syntactic gap and that the gapping constituent is associated with part of the main clause, they have an equal role in introducing an adverbial clause that comments on what we are saying.

As for the function of as-clauses, Potts (2002a: 652) proposes, in the process of giving the interpretation of as-clause, that the denotation property of the English morpheme 'as' is said "to conventionally implicate that its complement is true". In addition to this property, the function of the as-clause is assumed to express the speaker's attitudes, like other modal adverbials and thus its presence does not affect the truth value of the whole sentence. Korean 'as' morphemes also function as obviously indicating the relationship between the gap in the as-clause and the antecedent. The insertion of the as-parenthetical means that the antecedent would become the repetitive utterance, and the lexical verb in as-clause would play a role in describing the situation where the gap is first mentioned, more specially whether it previously uttered, imagined, assumed, thought, and etc. For instance, the morpheme 'chelem (as)' in (27) denotes the relationship between the as-clause and the main clause; what Cheli said is the same to the information which the speaker wants to deliver, that is, the information that Yengi is tall. Therefore, according to Potts (2002b), the truth conditional meaning of the sentence (27) is determined by that of main clause.

(27) Cheli-ka malhan-kes-chelem, Yengi-nun khi-ka-khuta. Cheli-NOM say-PST-as, Yengi-TOP tall-DECL. 'As Cheli said, Yengi is tall'

As a second restriction on as-Parentheticals, we have mismatches in tense, voice and modal between gapping constituents and antecedents, as Potts (2002b), LaCara (2012) and others tried to analyze them under a transformational theory². Korean also show these mismatches in tense, modal, and voice, as in (28). In the following examples (28a-c), we see that the gapping elements of as-clauses cannot be matched to the constituent corresponding to the antecedent in main clause, in modal and tense. The time of the main verb 'keylsimhayssta' ('decided') in (28a) is a past, whereas the gapping elements of as-clause can be interpreted as a clause with a modal auxiliary as in (28a'). Similarly, the antecedent of (28b) is a future event, while the gapping constituent is a present tense as in (28b'). In (28c), in addition to the tense and modal, we can see the mismatches in negation, which the gapping constituent, unlike the antecedent, does not contain the meaning of negation 'not'.

(28) a. Kim, JongPil chongli-nun imi salam-tul-i Kim, Jongpil Prime Minister-TOP already people-PL-NOM

 $^{^2}$ This paper is mainly intended to introduce the as-Parentheticals in Korean, with a perspective of nontranformational theory. Under this theoretical framework, it does not matter if the gapping elements should be analyzed by a movement or a deletion. More important is the question on what are the gapping elements.

yeykenha-yssten-taylo naykakcey kayhen phoki-lul predict-PST-as constitutional amendment abandonment-ACC kyelsimha-yss-ta-ko cenhan-ta. (Chosun Ilbo 1999) decide-PST-DECL-that report-DECL 'Prime Minister JongPil Kim, as people already predicted, reportedly decided to give up constitutional amendment.'

- a'. As-clause = many people already predicted that he would give up.
- b. Hyunjin Choi-un 2 kun-eyse haten-taylo nay kong-ul Hyunjin Choi-TOP Minor League-LOC do-as I-POSS ball-ACC tencil-swuisstolok hakeyss-tako malha-yss-ta. (Sports Chosun 2012) throw-can will-that say-PST-DECL
 - 'Choi said that **he will be able to throw** a ball with his own style, as **he does** in a Minor League.'
- b'. As-clause = he throws a ball with his own style in Minor League.
- c. Han chongcang-un caytan-i uysimhanun-kekchelem Han President (of University)-TOP foundation-NOM doubt-as ku nay oyong-ul oypwu-ey yuchwulhan that-DEM message-ACC outside-LOC reveal sasil-i epsta-ko cwucanghan-ta. (NEWDAILY 2012) fact not-that argue-DECL 'President Han argued that as the foundation doubts, he has never revealed the message outside.'
- c'. As-clause = the foundation doubts that **he would reveal** the message outside

More interestingly, the example (29) tells us that the mismatching constituents can be in a voice or unaccusativity. The main clause of the sentence (29) has an unaccusative verb, whose subject is not an agent, but a patient. In this case, the antecedent of the *as*-clause will typically be an interpretation of a passive clause (29b), which is a copy of the main clause, but we can see another type of clause as in (29c), which is an active clause. Intuitively, the original clause which is recoverable might be the meaning of (29c).

- (29) a. cengpwu-ka palphyohan-**taylo**, tampaykaps-i khukey Government-NOM announce-as cigarette price-NOM dramatically oll-ass-ta.
 - 'As the government announced, the price of cigarette dramatically increased.'
 - b. As-clause = the government announced that the price of cigarette would dramatically be increased.
 - c. As-clause = the government announced that they would dramatically increase the price of cigarette.

From these data, this paper proposes that the matching elements between gaps and antecedents would be maximally permitted as a base form of verb, which can be a matching restriction in Korean. Focusing on this restriction, we can account for several mismatches that *as*-clauses show above. The elements as a candidate of the antecedent of sentence (28a) would be a base form of verb 'keylsimhayssta' ('decided'), which should meet the requirement on tense and voice in each separate

clause. This requirement causes the mismatches between the gapping elements and the antecedent.

Lastly, we can see the locality restriction on the syntactic distance between gaps in as-clause and antecedents in main clause. That is, the as-clauses can find antecedents in the places to which they are adjacent. The syntactic distances between the gap and the antecedent are determined, depending on whether the verbs in the main clause take as its complement the clause which includes the as-clauses, or they are modified by the as-clauses. The examples are found in the previous sections.

4. Conclusion

This paper intends to provide a new insight on which the As-clause types shown by Potts (2002) might be regarded as cross-linguistically common one. At first, the paper introduces the characteristics of Korean As-clauses by carefully investigating them through the data, focusing on the similarities or differences between Korean and English with a constructional theoretical perspective. The paper discovered the morphological properties of the morpheme 'as' as a bound morpheme, one of which the three different morphemes in Korean commonly show one of the constructional properties as the as-clause, in the sense that they take the clausal complement and the gapped constituent. They are '-tusi, -chelem, -taylo' and unlike that in English as-clauses, they behave as bound morphemes which do not stand alone. Even though they are attached into different morpho-syntactic stems, they do not make any meaning change only under this clause.

Secondly, with the findings of thoroughly scrutinizing the data, this paper proposed two different types of Korean as-parenthetical construction, depending on which category the gap constituent is; CP as-type and VP as-type. English has one more subtype of Predicate-As type (called inverted Predicate-As clause), while Korean does not show this subtype. In addition, we have witnessed that Korean as-clauses also exhibit the properties of sisterhood and extraction boundary, and the fact that the as-clauses also show the disjoint reference between the gap and the antecedent as the clauses also are of elliptical construction. Thirdly, the various mismatches emerged from the gap and the antecedent are attributed by the constructional restrictions which are imposed by the lexical verb in as-clause as well as the structural distribution of as-clauses. That is, such mismatches happen in the process of satisfying their separate requirements assigned by the restrictions. This paper closed the studies on Korean as-clauses by describing the constructional restrictions. The paper attempted to display various ambiguities from the as-clauses through disjoint references or negative sentences in As-Parenthetical constructions. Yet this paper needs to formalize these restrictions within a particular theoretical framework.

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