Abstract

This paper is intended to investigate the linguistic behaviors of the Korean as-parenthetical constructions with the aim of devoting to distinguishing universal properties of as-parentheticals. This paper shows three prominent behaviors in Korean as-parenthetical constructions. First, the Korean as-clause displays that the syntactic gap in asclauses must be realized as CP, through the variations on case marker. Secondly, the Korean as-parentheticals tend to have two types of asclauses; CP or VP as-clause types. In addition, they are sensitive to the syntactic restrictions which can be noticed in as-parenthetical constructions: the sisterhood restriction and the Island boundary. Thirdly, the Korean as-parenthetical constructions reveal that they would require some pragmatic information which is combined with semantic meaning, in the process of getting the interpretation of as-clauses.¹

1 Introduction

As-parentheticals are considered as a type of parenthetical insertions in English which include nonrestrictive relative clauses, appositions, adverbial clauses, etc., and whose functions are highly controversial issue. A lot of researches on these expressions have tried to describe their linguistic characteristics, focusing on their syntax and semantics. They have made an attempt to clarify their syntactic structures, under the consideration of how closely they are related to their host structure (Haegeman 1991, Emonds 1979, McCawley 1982, Corver & Thiersch 2002, Potts 2002, 2005, Ackema & Neeleman 2004, D'Avis 2005, Burton-Roberts 2006, etc.).

This paper endeavors to investigate the linguistic behaviors of asparentheticals in Korean and to provide an opportunity to contribute effectually toward identifying their universal characteristics. In order to achieve this goal, this paper focuses on searching for grammatical phenomena of Korean as-parentheticals, basically in terms of corpus data², and describing their syntactic types. The main issues which this paper brings

¹ I want to thank the anonymous reviewers for helpful comments, discussion, and pointers. Of course, I alone am responsible for any errors or inaccuracies.

 $^{^{2}\,}$ The Korean data sources that I used in this paper are Sejong corpus and the Google corpus engine.

up will be how many as-parenthetical constructions there are in Korean and which factors trigger their differences. This research is not intended to provide any analysis within a theoretical framework.

2 'As' morphemes

The first element which consists of an as-parenthetical clause is 'as' morpheme in English. Through the corpus data, this paper could identify three different morphemes, which lead the Korean as-clauses. They are -(kek) chelem, -taylo, -tusi, which correspond to 'as' morpheme of English. They exhibit the same (morpho-)syntactic behaviors and their different morphemes do not carry any change of meaning at least under the context of asparenthetical clauses in Korean. They can all be attached to the same verbal expressions. For instance, the verb verb 'yesanghata (to expect)' in (1) can freely be combined with these three morphemes without any change in meaning.

- (1) a. Kutul-i yesangha-*tusi*they-Nom expect as
 'As they expect,'
 - b. Kutul-i yesanghankek-*chelem*
 - c. Kutul-i yesanghan-taylo

3 Syntactic Properties

This section will be examined the syntactic aspects of Korean as-parentheticals. First, we will explore the syntactic distribution of as-clauses and the gap in as-clauses. We will also consider how many syntactic types can be realized in the Korean as-clauses.

3.1 Distribution

In order to understand the syntax of the Korean as-clauses, it is meaningful to survey their syntactic distribution in a sentence. We find the as-clause in the initial or after the subject positions. The as-clause 'ap-eyse-to kangsa-ka

enkuphayss-tusi' ('as an instructor mentioned previously') in (2) occurs in a sentence-initial position or is inserted after the subject in a sentence, like (2b). Unlike English, the sentence-final position is not allowed in Korean, as in (2c)

(2) a. [ap-eyse-to kangsa-ka enkuphayss-**tusi**], tokhay-uy picung-un previously lecturer-Nom mentioned-**as**, reading portion-Nom kalsulok nopacikoiss-ta.

more and more increasing.

- 'As an instructor mentioned, the portion of reading is more and more increasing'
- b. tokhay-uy picung-un, [ap-eyse-to kangsa-ka enkuphayss-tusi],
 kalsulok nopacikoiss-ta.
- c. *tokhay-uy picung-un kalsulok nopacikoiss-ta, [ap-eyse-to kangsa-ka enkuphayss-**tusi**]

3.2 Syntactic Gaps in As-Clauses

In order to clarify the syntactic types of as-clauses, it is important to look into the characteristics of syntactic gaps within the as-clauses. First, we can consider the possible syntactic categories of syntactic gaps in as-clauses. One of the typical properties in English as-clauses is that the as-clause has the syntactic gap which is expected to be realized as CP or VP. Although the verb can lexically take CP or NP as the complement, the CP should be realized under the environment of as-parenthetical constructions. This property can also be found in Korean as-clauses.

The Korean language takes different case markers, depending on which types of complements a verb takes; a CP or NP complement in this topic here. When a verb takes a NP complement, the accusative case marker '-ul' is attached, whereas the clausal marker '(ta)ko' is attached when the verb takes a CP complement. The verb 'alko-iss-ta (to be aware of)' in (3a) can usually take two types of category, CP or NP as the complement. Especially when the verb takes CP complement, the case marker '-(ta)ko' is preferred, whereas the case marker '-ul'' is allowed in NP complement.

(3) a. Wuli-nun ciku-ka tungkulta-**ko**/*-**ul** alko-iss-ta.

We-Top earth round know

We know that the earth is round.

b. Wuli-ka alko-iss-**tusi**, ciku-nun tungkulda.

We-Nom know-as, earth-Top round

As we know, the earth is round.

c. Ciku-nun, Wuli-ka alko-iss-tusi, tungkulda.

Earth-Top We-Nom know-as, round

The earth is, as we know, round.

From the declarative sentence (3a), which has the clausal maker '-tako', the as-parentheticals can be derived, as in (3b) and (3c). Thus, we can claim that the syntactic gap in as-clauses is CP, not NP.

Second, we can think of how many different syntactic gaps in asclauses we have. The Korean as-parentheticals can be classified into two types³: CP as-clause type and VP as-clause type, depending on the syntactic gaps in as-clauses: their gaps are clausal gaps or VP gaps, as in (4) and (5). A prominent feature of both VP and CP type As-clauses is their missing constituents (gaps). We can see the CP As-clause type in (4). The verb 'unkuphayss-ta (to mention)' can take CP complement, which is realized as a syntactic gap in as-clause, in (4a). The antecedent of this CP gap would be the same to a whole main clause. So the As-clause gap in (4a) can get its interpretation from the whole main clause, as in (4a').

(4) a. [Ap-eyseto kangsa-ka enkuphayss-**tusi**], [tokhay-uy picung-un previously also lecturer-Nom mentioned-as, reading portion-Top kalsulok nopacikoiss-ta.]

³ Potts (2002) provides two types of as-parentheticals, CP-as type and Predicate-as clauses. These two terms are somewhat ambiguous or overlapped. The first term, CP in CP-as clause type, is used to refer to the grammatical form (categories), whereas the second one, 'predicate' in Predicate-as clause type, is used as the grammatical function. Thus CP can sometimes

function as a predicate in a sentence. This paper avoids borrowing these terms.

_

more and more increasing.

- 'As an instructor mentioned, the portion of reading is more and more increasing'
- a'. As-clause = [[Ap-eyse-to kangsa-ka [tokhay-uy picung-un kalsulok nopacikoiss-ta-ko]] enkuphayss-ta]
- b. [[kunye-ka yeysanghayssten-taylo], [ku-nun sanglyucung kaceng-ey
 She-Nom expected as, he-Top wealthy family ipyangtoyess- ta]].
 adopted

The syntactic gaps of as-clauses in (5) are all VPs and the antecedents of these gaps can be found within the VP of main clause. The as-clause in (5b) has a VP gap, which corresponds to the part of the VP in main clause. Thus, the aspect (present perfect) of verb in (5b), does not exactly match (equal to) with that of the main clause (future tense). So we can get the interpretation of the gap in a VP as-clause from part of VP in the main clause.

Here we can see that unlike those of the first CP type of asparentheticals, the gaps in the VP type are not easy to identify in main clauses, in the sense that the antecedent of the gap can be parts of the verbal expressions in main clause. That is, in VP as-clause type, the information on tense and aspect, negation from the main clause can easily be ignored in asclauses.

(5) a. [nukulato kuleha-**tus**], [tu salam-un ches tanchu-lul cal
Anyone did as, two persons first button-Gen well
kkiuko sipul kes-ita.]
fasten want-tense

'As anyone does, two persons will want to fasten their first button well.'

b. [kutongan haywassten-taylo], [kincang-uy kkun-ul

^{&#}x27;As she expected, he was adopted by a wealthy family.'

during the time have done as, (he)tension-Gen loose
nohci anhko mokpyo-lul talsengha-keysstako kangcohayss-ta.]]
not goal-Acc achieve-future tense emphasized

'(He) emphasized that as he has done, he would achieve his goal
without loosening it up.'

b'. as-clause = [kutongan kincang-uy kkun-ul nohci anhko mokpyolul talsenghaywass-ta]

3.3 The Syntactic Characteristics of As-clauses

In this section, we will examine the syntactic properties of two types of asclauses which discussed in the above section. We need to investigate two syntactic properties: sisterhood restriction and extraction boundary. First, the sisterhood restriction says that the constituent to be extracted as the gap's meaning in the as-clause must be the most local phrase within the appropriate type: Williams (1977), Kennedy (1998), Potts (2002).

Here we can closely look at this sisterhood behavior of the Korean asclauses in the examples (7) and (8). First of all, the sentence (7) is ambiguous. The gap in as-clauses should be able to find its antecedent in a local phrase. In the sentence (7a) with as-clause in initial position of a sentence, the main clause has an embedded clause. The main verb takes CP complement within the main clause. This structure causes ambiguous meanings. It can either assert that Suci said that Chelsu claimed that his secretary is not guilty, as in (7b), or that Suci said that his secretary is not guilty, as in (7c).

(7) a. Suci-ka malhan-**taylo**, Chelsu-nun pise-ka mucoyla-ko Suci-Nom said-as, Chelsu-Top his secretary-Nom not guilty cucang-hayss-ta.

claimed

"As Suci said, Chelsu claimed that his secretary is not guilty."

b. Suci-ka Chelsu-nun pise-ka mucoyla-ko cucang-hayss-ta Suci-Nom Chelsu-Top his secretary-Acc not guilty claimed

ko malhaess-ta.

said

- = Suci said that Chelsu claimed that his secretary is not guilty.
- c. Suci-ka Chelsu-nun pise-ka mucoyla-ko malhaess-ta.

Suci-Nom Chelsu-Top his secretary-Acc not guilty said

= Suci said that his secretary is not guilty.

Meanwhile, the sentence (8) is unambiguous. This sentence (8a) has the as-clause after the subject position. The sentence (8) asserts only that Suci said that his secretary is not guilty, as in (8c). This sentence (8a) is hard to get the interpretation of (8b). This behavior in Korean as-clauses supports the sisterhood requirement of as-clauses, like English.

(8) a. Chelsu-nun Suci-ka malha-taylo, pise-ka mucoyla-ko

Chelsu-Top Suci-Nom said-as, his secretary-Acc not guilty cucang-hayss-ta.

claimed

"Chelsu claimed that his secretary, as Suci said, is not guilty."

b. Suci-ka Chelsu-nun pise-ka mucoyla-ko cucang-hayss-Suci-Nom Chelsu-Top his secretary-Acc not guilty claimed ta-ko malhayss-ta.

said.

≠ Suci said that Chelsu claimed that his secretary is not guilty.

c. Suci-ka pise-ka mucoyla-ko malhayss-ta.

Suci-Nom his secretary-Acc not guilty said

= Suci said that his secretary is not guilty.

Thus, we can conclude that Korean As-clauses must structurally adjoin to the constituent from which they obtain their meaning.

The second syntactic property is about extraction boundary. This

syntactic property on extraction boundary displays that though rare, we can find the situations where *as* is separated from the gap beyond the boundary of one or more clause: long CP as-clause: Ross (1967), McCloskey (1989), Lapointe (1991), Postal (1997), Potts (2002).

As-clauses (especially, CP) are sensitive to Island boundaries. The sentence (9) shows that the gap of the as-clause cannot be extracted across the *wh*-boundary. Thus from the sentence (9a) with the *wh*-complement, the as-clause cannot be derived across the *wh*-boundary, as in (9b).

| (9) a. Kyengchal-i ellon-ı | ın Chelsu-ka supai-eyss- | tanun-kekul | alko issess- |
|--|--|--------------|-----------------|
| Police-Nom press-Top Chelsu-Nom spy | | | knew |
| nunci mulepoass-ta | ı. | | |
| whether asked | | | |
| "The police asked whether the press knew that Chelsu was a spy." | | | |
| b. *Kyengchal-i ellon | -un alko issess-nun | nci mulepon | -kek-chelum, |
| Police-Nom press | -Top knew wheth | ner asked | as, |
| Chelsu-ka supai-e | yss-ta. | | |
| Chelsu-Nom was | spy | | |
| "As the police asked whether the press knew, Chelsu was a spy." | | | |
| As for the as-cla as-clause with the relative | nuse with the relative cla e clause gap is not allowe | 0 1 | |
| (10) *Cucang-hays | s-tun sangin-kwa iyaki-l | ul nanu-ess- | ten kek-chelum |
| t claimed | grocer-with talk | to | as |
| sakwa-num masi | ss-ta. | | |
| apple-Top delici | ous. | | |
| "An apple is delic | ious, as Chelsu spoke wi | ith a grocer | who claimed t." |

4 Semantic Interpretations

In this section, we will consider the elements to be contributed to the proper interpretations of as-parenthetical constructions (especially, of as-clauses). In the process of doing this, two factors will be reviewed: the relationship between as-clause and main clause in negative scope, and the semantic function of as-clause in the whole sentence.

4.1 Negation Scope

In the semantics of Korean as-clauses, we can discover the behaviors of the negations of main clause and as-clause. The sentences in (11) display that there is a kind of semantic relation between main clauses and As-clauses. The positive declarative sentence (11a) is grammatical. Meanwhile, if the As-clause has a negative meaning and the main clause is positive meaning, the whole meaning of the sentence is ungrammatical, as in (11b). The sentence in (11c) is also ungrammatical, even though it has negative as-clause and negative main clause. Lastly, we can deduct the negative main clause with a positive as-clause in the same way, as in (11d). It is interesting that the last case triggers ambiguity in the process of semantic interpretation. We can derive two meanings as the gap's meaning in as-clause; first, the whole main clause can be the gap's meaning, and secondly, only the main clause without the negative meaning can also be the complement of the verb 'claim'.

(11) a. Suci-ka cucangha-tusi, Chelsu-nun wuliu yengung-ita.

Suci-Nom claim as, Chelsu our hero.

"As Suci claims, Chelsu is our hero."

b. *Suci-ka pucengha-tusi, Chelsu-nun wuliu yengung-ita.

Suci-Nom deny as, Chelsu our hero.

"As Suci denies, Chelsu is our hero."

c. ?##*Suci-ka pucengha-tusi, Chelsu-nun wuliu yengung-i ani-ta.

Suci-Nom deny as, Chelsu our hero not.

"As Suci denies, Chelsu is not our hero."

d. Suci-ka cucangha-tusi, Chelsu-nun wuliu yengung-i ani-ta.

our hero

not.

as, Chelsu

"As Suci claims, Chelsu is not our hero."

From these data, we can see that the negative meaning in as-clauses does not produce the natural sentences. Thus as the claim of Potts (2002), the as-clauses might implicate that their complement is true.

4.2 Meaning of As-clauses

Suci-Nom claim

According to the semantic analysis of English as-clauses in Potts (2002), the lexical denotations for as-morphemes are semantically that they implicate that conventionally their complement is true. Thus, the semantic contribution of as-clauses is said to be a conventional implicature, not a presupposition, because as-clauses can be used to create new information without any need for accommodation of the sort associated with presuppositional predicates. That is, they carry out the function of expressing kind of the speaker's attitudes, like other modal adverbials, probably, etc., and thus their presence does not have influence over the truth value of the whole sentence.

If we apply this claim to Korean as-clauses, we can judge whether Korean As-clauses should also behave similarly with respect to basic truth conditional meaning: both the whole sentence and the simple assertion denote the same proposition. That is, the sentences in (12a) and (12b) all denote the same proposition. This research is not intended to provide the semantic analysis here.

[[Kunye-ka yeysanghayssten-taylo], [ku-nun sanglyucung kaceng-(12) a. She-Nom expected as, he-Top wealthy family ey ipyangtoyess- ta]]. adopted

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

[Ku-nun sanglyucung kaceng-ey ipyangtoyess- ta] he-Top wealthy family adopted

- 'He was adopted by the wealthy family'
- (13) a. It conventionally implicates that she expected that he was adopted by the wealthy family.
 - b. It asserts only that he was adopted by the wealthy family.

As we have witnessed in the previous section, under the environ-ment where the as-clause is positive and the main clause is negative, the as-clauses cause ambiguities in interpretation of both CP and VP As-clauses. As in (14), the as-clause appears to ignore the negation in the main clause. The sentence (14) with negated main clause can give ambiguous interpretations, which can be shown in (15a) and (15b).

- (14) [Wi-eyse poass-tusi, Mayngca-ka mucoken totekman-ul
 Above saw as, Mencius-Nom flatly morality-Acc
 kangcohankek-un ani-ess-ta.]
 emphasized
 - 'As seen in the above, Mencius did not flatly emphasize the morality.'
- (15) a. As-clause = It is seen that Mencius flatly emphasized the morality.b. As-clause = It is seen that Mencius did not flatly emphasize the morality.

Some information on tense and aspect can also be ignorable, especially in the interpretation of VP as-clause type. The reading of sentence (16) is expected as (17a), not (17b). In this reading, tense and modality information is ignored.

(16) [Uli-nun cikumkkaci haywassten-taylo, ancengcekin kyengki-lul WeTo up to now have done as, reliable game-Acc will play
halkekila-ko malhayss-ta.]
said

'As we have done up to now, (it is said that) we will play a reliable

game.'

(17) a. As-clause = As we have played a reliable game up to now.

b. *As-clause = As we will play a reliable game up to now.

5. Other Factors

In addition to syntactic and semantic aspects of as-parentheticals that we have examined so far, we can calculate other factors on getting more exact interpretation of the gaps in as-clauses.

From the syntactic and semantic properties of as-parentheticals which we have examined, we can easily see that it is not easy to identify the syntactic gaps in as-clauses, because the as-parentheticals can show ambiguous meanings, which are triggered by negation and tense and aspect, etc. This research has reviewed that the sisterhood requirement and semantic aspects have to be considered, in order to get the desirable interpretation of as-clauses in Korean.

In addition to these factors, we will discover that we have to consider other factors, for example, the contextual information on the knowledge of the world in some society. That is, the crucial meaning of As-clauses can sometimes be determined by the world knowledge in some communities. These behaviors can be seen in the following example (18a), which has a negative main clause. So even though this sentence structurally has ambiguous meaning, we do not get the ambiguous meaning. That is, the asclause in this sentence does not give non-negated interpretation. This phenomenon makes us look at other kinds of factors that are involved in this interpretation.

Generally in our society, the fund manager is regarded as one of the highest payers. From our knowledge on this, we judge that the antecedent of this gap never contain the negated meaning of the main clause.

(18) a. [pendu maynice-nun potong salam-tuli sayngkakhanun-kes-chelum,

fund manager-Top people-pl-Nom think as,

koayk-uy posu- lul paknun-kes-un anita.

higher salary-Acc is paid not

'The fund manager, as the people think, is not highly paid.'

b. [seysang-uy motun halmeni-ka uleha-tus(i), uli halmeni-to world-Gen every grandmother-Nom do as, our na-yekye hana te chayngkyecusilye hasyessta. grandmother also me-Gen one more to give tried.

'As every grandmother in this world does, my grandmother tried to give me more.'

Interestingly, the verb in the main clause 'cu-ta' (to give) take as the complement two NPs, and the referring individual who are realized as the genitive NP appeared as a different syntactic element: the person in as-clause will be her grandson and that of the antecedent will be 'me', the grandson of our grandmother, even though it should be realized as her grandson, separately.

Therefore, we can conclude that the essential factors for tracing back the antecedents of the gap are the syntactic sisterhood and more crucially the contextual factors including the knowledge on the world.

6 Conclusion

This paper focused on observing the linguistic behaviors of the Korean asparenthetical constructions with the aim of devoting to distinguishing universal properties of as-parentheticals. This paper showed three prominent behaviors which could be observed in Korean as-parenthetical constructions. First, the Korean as-clause displayed through the variations on case marker that the syntactic gap in as-clauses must realize as CP (more exactly, verbal predicates), not NP. Secondly, the Korean as-parentheticals, at least, tend to have two types of as-clauses; CP or VP as-clause types. In addition, they obey (or sensitive to) the syntactic restrictions which can be noticed in asparenthetical constructions: the sisterhood restriction and the Island boundary. Thirdly, the Korean as-parenthetical constructions revealed that they would require some pragmatic information which is combined with semantic meaning, in the process of getting the interpretation of as-clauses.

References

- Acuna-Farina, Juan. 1999. On apposition. *English Language and Linguistics* 3.1: 590-81.
- Acuna-Farina, Juan. 2009. Aspects of the grammar of close apposition and the structure of the NP. *English Language and Linguistics*. 13.3: 453-481.
- Arnold, Doug. 2007. Non-restrictive relative clauses are not orphans. *Journal of Linguistics* 43(2): 271-309.
- Asher, N., 2000. Truth and discourse semantics for parentheticals. *Journal of Semantics* 17, 31–51.
- Blakemore, Diane. 2005. And-parentheticals. *Journal of Pragmatics* 37, 1165–1181.
- Blakemore, Diane. 2007. Or-parentheticals, that is-parentheticals and the pragmatics of reformulation. *Journal of Linguistics* 43(2): 311-339.
- Culicover, PeterW. and Ray Jackendoff. 1997. 'Semantic Subordination Despite Syntactic Coordination', *Linguistic Inquiry* 28, 195–217.
- Culicover, Peter W. and Robert D. Levine. 2001. 'Stylistic Inversion in English: A Reconsideration', *Natural Language and Linguistic Theory* 19, 283–310.
- Haegeman, Liliane. 2009. Parenthetical Adverbs: The radical orphanage approach. *In Dislocated Elements in Discourse*, B. Shaer, P. Cook, W. Frey and C. Maienborn, eds., 331-347. New York: Routledge.
- Heringa, H. (2007), Appositional constructions: coordination and predication. In: M. E. Kluck & E. J. Smits (eds.), *Proceedings of the Fifth Semantics in the Netherlands Day*. Den Haag, RS Staten Kopie, 67-82.
- Goldman-Russell Lee. 2012. Supplemental relative clauses: Internal and external syntax. *Journal of Linguistics*. October 2012, pp. 1-36
- Karttunen, Lauri and Stanley Peters. 1979. 'Conventional Implicature', in C.-K. Oh and D. Dinneen (eds.), *Syntax and Semantics* 11: Presupposition, Academic Press, New York, pp. 1–56.
- Ladusaw, William A. 1992. 'Expressing Negation', in Chris Barker and David Dowty (eds.), Proceedings of SALT II, *OSU Working Papers in Linguistics*, Ohio State University, Columbus, pp. 237–259.
- Levine, Robert D., Thomas E. Hukari, and Michael Calcagno. 2001. 'Parasitic Gaps in English: Some Overlooked Cases and Their Theoretical Implications', in Peter W. Culicover and Paul M. Postal(eds.), *Parasitic Gaps*, MIT Press, Cambridge, pp. 181–222.
- McCawley, James D. 1982 'Parentheticals and Discontinuous Structure',

- Linguistic Inquiry 13, 91–106.
- Postal, PaulM. 1994. 'Parasitic and Pseudo-Parasitic Gaps', *Linguistic Inquiry* 25, 63–117.
- Postal, Paul M. 1998. *Three Investigations of Extraction*, MIT Press, Cambridge, MA.
- Potts, Christopher. 2002. 'The Lexical Semantics of Parenthetical-As and Appositive-Which', *Syntax* 5, 55–88.
- Potts, C., 2005. *The Logic of Conventional Implicatures*. Oxford University Press, Oxford.
- Potts, Christopher. 2007. Conventional Implicatures, A Distinguished Class of Meanings. *In the Oxford Handbook of Linguistic Interfaces*, eds. Gillian Ramchand and Charles Reiss, 475-501. Oxford: Oxford University Press.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik. 1985. *A Comprehensive Grammar of the English Language*, Longman, Essex, England.
- Vries, M. de (2009), Specifying Coordination: An Investigation into the Syntax of Dislocation, Extraposition and Parenthesis. In C. R. Dryer (ed.) *Language and Linguistics*: Emerging Trends, 37-98. New York: Nova.