

# Verbal Conjunctions in Korean, English and Japanese\*

Chisung Oh  
(Sangmyung University)

## ■ ABSTRACT ■

This paper compares sequential and non-sequential verbal conjunctions in Korean, English, and Japanese by looking at how sequential verbal conjunction is treated in each language. It first reviews verbal conjunctions in Korean, where sequential conjunction is treated as subordination and non-sequential conjunction is treated as coordination, and looks at verbal conjunctions in English and Japanese to see whether or not sequential conjunction in those languages is subordination. According to Oh (2010), sequential and non-sequential conjunctions in Korean behave quite differently with respect to the tense and negation in the final conjunct. Also, Cho (1995, 2005) and Kwon (2004) show that syntactic operations such as extraction and scrambling clearly distinguish sequential conjunction from non-sequential conjunction. The purpose of this paper is to see how sequential and non-sequential conjunctions are analyzed in English and Japanese and to compare those languages with Korean, especially focusing on whether or not sequential conjunctions in English and Japanese are treated as subordination. For this purpose, I first investigate how tense and negation, which provided crucial evidence for concluding that Korean sequential conjunction is subordination, is interpreted in sequential and non-sequential verbal conjunctions in English and

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Japanese. Also, I investigate the syntactic properties of sequential and non-sequential conjunctions with respect to syntactic operations such as extraction and scrambling in those languages. The results of the investigation show that in Japanese, which is considered typologically similar to Korean, the sequential conjunction is a case of subordination, while in English, which is considered typologically different from Korean, both sequential and non-sequential conjunctions are treated as coordination.

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Key Words

sequential conjunction, non-sequential conjunction, coordination, subordination

## 1. Introduction

It has been observed that Korean has two types of verbal conjunction, namely tensed and tenseless. In tensed verbal conjunctions, the tense marker appears in both conjuncts, and it has been generally accepted that tensed verbal conjunction is a case of coordination (Cho & Morgan (1987), Joh & Park (1993), Yoon (1993, 1994)). On the other hand, in tenseless verbal conjunctions, the tense marker appears only in the final conjunct. Tenseless verbal conjunctions are again divided into two types, namely sequential and non-sequential conjunction, according to their semantic interpretation. As their names indicate, sequential conjunction describes sequential events, while non-sequential conjunction describes parallel and non-sequential events. Consider the following examples, where tensed<sup>1)</sup> (1a, b) and both sequential (1c) and non-sequential (1d) tenseless verbal conjunctions are illustrated:

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1) Tenseless verbal conjunction has been regarded as describing two independent events (Yoon (1993, 1994)), and they need not be ordered in any specific way: the two events can occur in either order. Because tensed conjunction is not necessarily interpreted as sequential, we can say that the tensed conjunction is a kind of non-sequential conjunction.

- (1) a. John-i chinkwutul-ul manna-ss-ko kohyang-ul ttena-ss-ta  
 J-Nom friend-Acc meet-Pst-Conj hometown-Acc leave-Pst-Dcl  
 ‘John met his friends and left his hometown.’
- b. John-i koyangi-lul coahay-ss-ko kay-lul silehay-ss-ta.  
 J-Nom cat-Acc like-Pst-Conj dog-Acc dislike-Pst-Dcl  
 ‘John liked cats and hated dogs.’
- c. John-i chayk-ul ilk-ko phyenci-lul ssu-ess-ta.  
 J-Nom book-Acc read-Pst-Conj letter-Acc write-Pst-Dcl  
 ‘John read a book and wrote a letter.’
- d. John-i wuwulha-ko hwakana-ess-ta  
 J- Nom be-gloomy-Conj be-angry-Pst-Dcl  
 ‘John was gloomy and angry.’

Sequential and non-sequential tenseless conjunctions can be distinguished by the properties associated with their predicate types. If the predicate of each conjunct of the conjunction is non-stative, usually the sentence describes a sequential event, and if the predicate is stative, the sentence containing the conjunction describes a non-sequential event. In (1c) above, the predicates are non-stative and the sentence has a sequential meaning, and in (1d), the predicates are stative, and the sentence has a non-sequential meaning.

While it has been generally admitted that the non-sequential tenseless conjunction has coordination structure, there has been much debate on whether sequential tenseless conjunctions should be treated as coordination or subordination in Korean. Some argue that both sequential and non-sequential tenseless conjunctions should be treated as coordination (e.g. Yoon (1994)). (I will call this approach "coordination analysis.") However, more recently, many researchers have argued that tenseless verbal conjunction should be treated as a case of subordination, in which the initial conjunct plays the role of an adverbial adjunct (Kwon (2004), Cho (1995, 2005), Oh (2010)). In an earlier paper (Oh 2010), I argued

that the initial conjunct of sequential conjunction (henceforth ICSC) should be an adverbial adjunct, specifically a time adverbial clause. To support this view, in that paper, I presented semantic characteristics of ICSC in relation to tense and negation, which are clearly distinguished from those of the initial conjunct of non-sequential conjunction, and following Cho (1995, 2005) and Kwon (2004), I also showed different syntactic behaviors of sequential and non-sequential conjunctions in regard to syntactic operations such as extraction from a conjunct and scrambling.

In this paper, I will compare sequential and non-sequential verbal conjunctions in Korean to those in English and Japanese, which could be thought to be typologically different from and similar to Korean, respectively, and see how sequential conjunctions can be analyzed in those languages. The focus will be especially on whether it is a case of coordination or subordination. In comparing those three languages, I will see how tense and negation, whose interpretations played a crucial role in distinguishing sequential and non-sequential conjunctions in Korean, are interpreted in English and Japanese. Also I will apply syntactic operations such as extraction and scrambling, which also showed that the syntactic structure of sequential conjunction is different from that of non-sequential conjunction in Korean, to English and Japanese to see whether sequential and non-sequential conjunctions in English and Japanese behave differently with respect to those syntactic operations. By looking at those languages, we can raise questions about whether languages in general treat sequential conjunction as subordination.

## 2. Interpretation of Tense and Negation in Korean Tenseless Verbal Conjunctions

In order to support the view that sequential tenseless conjunction is not coordination but subordination, Oh (2010) showed how these two types

of conjunctions behave with respect to tense and negation in the final conjunct. In this section, I will briefly review the arguments against the coordination analysis, which were presented in Oh (2010).

According to the coordination analysis (cf. Yoon 1994), there is no structural distinctions between sequential and non-sequential conjunctions since both of them are regarded as true coordination, and the tense and negation in the final conjunct range equally over both the initial and final conjuncts. Consequently, both conjuncts have their tense interpretation from the tense marker in the final conjunct and are equally in the scope of the negation in the final conjunct.

However, the initial conjunct of sequential tenseless conjunction, unlike that of non-sequential tenseless conjunction, can have a different tense interpretation from the tense marker in the final conjunct. Let us see the following examples from Oh (2010:317), in which sequential conjunction is illustrated in (2a, b), and non-sequential conjunction is illustrated in (3a-c).

- (2) a. John-i ecey canti-lul kkak-ko cikum yakwu-lul sicakha-n-ta.  
 J-Nom yesterday grass-Acc mow-Conj now baseball-Acc begin-Pres-Dcl.  
 ‘John mowed the grass yesterday and is starting to play baseball now.’
- b. John-i canti-lul kkak-ko yakwu-lul sicakha-ess-ta.  
 J-Nom grass-Acc mow-Conj baseball-Acc begin-Pst-Dcl.  
 ‘John mowed the grass and started playing baseball.’
- (3) a. ?\*John-i ecey hwakana-ko cikum wuwulha-Ø<sup>2</sup>-ta.  
 J-Nom yesterday be-angry-Conj now be-gloomy-Present-Dcl.  
 ‘John was angry yesterday and is now gloomy.’
- b. John-i ecey hwakana-ss-ko cikum wuwulha-Ø-ta.  
 J-Nom yesterday be-angry-Past-Conj now be-gloomy-Present-Dcl.  
 ‘John was angry yesterday and is now gloomy.’
- c. John-i (ecey) hwakana-ko wuwulhay-ss-ta.

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2) Adjectives have no overt present tense marker in Korean.

J-Nom yesterday be-angry-Conj be-gloomy-Pst-Dcl.  
 ‘John was angry and gloomy (yesterday).’

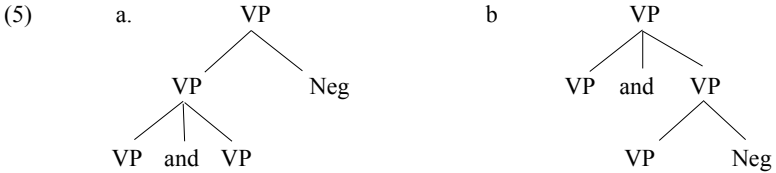
In (2a), the adverb *ecey* (‘yesterday’) requires its verbs to be interpreted as past. If the first conjunct is really under the influence of the present tense marker in the final conjunct, there should be a clash between the two tenses (i.e. past and present), and as a result, the sentence should be ungrammatical. However, it is still grammatical, and this means that the ICSC does not have its tense interpretation from the tense marker in the final conjunct. This clearly indicates that the tense of the first conjunct is not structurally decided by the tense marker in the final conjunct. Instead, it is determined by the temporal relation between the two conjuncts; the event expressed by the first VP should happen earlier than the one expressed in the final conjunct. Sentence (3a) is an example of non-sequential conjunction, which shows the clash of the two tenses. This indicates that the initial and final conjuncts in the non-sequential conjunction should have the same tense with the tense marker in the final conjunct. Clearly, the above data show that the ICSC can have a different tense interpretation from the tense in the final conjunct.

Now, let us turn to the negation patterns, and look at how sequential and non-sequential tenseless conjunctions are distinguished regarding the negation in the final conjunct. First, consider the following non-sequential conjunction:

- (4) John-i horangi-lul cohaha-ko kom-ul sileha-ci anh-ass-ta  
 J-Nom tiger-Acc like-Conj bear-Acc hate-Comp Neg-Past-Dcl  
 Interpretation A: ‘John did not like tigers and hate bears.’ ( $\sim(p \wedge q)$ )  
 Interpretation B: ‘John liked tigers and did not hate bears.’ ( $p \wedge \sim q$ )  
 (Oh 2010:325)

According to the coordination analysis, negation should equally range over both VP conjuncts with the whole VP conjunction in its scope.

However, the sentence is actually ambiguous: the negation in the final conjunct negate either the whole conjunction or only the final VP. The ambiguity of the sentence (4) arises from the following structures:



In (5a), the negation ranges over both conjuncts and the whole VP conjunction is in the scope of the negation, and in (5b), only the second conjunct is in the scope of the negation.

However, there is no such ambiguity with respect to negation in sequential conjunctions. Also, unlike in the non-sequential conjunction, the reading where the negation equally ranges over both conjuncts is not possible in sequential conjunction. Consider the following sentences:

- (6) a. John-i pap-ul mek-ko theynisu-lul  
 J-NOM meal-ACC eat-Conj tennis-Acc  
 chi-ci anh-ess-ta. (neutral stress pattern)  
 play-Comp Neg-Pst-Dcl  
 ‘John ate the meal and did not play tennis.’ ( $p \wedge \sim q$ )  
 ≠ ‘John did not eat the meal and play tennis.’ ( $\sim(p \wedge q)$ )
- b. John-i pap-ul mek-ko theynisu-lul  
 J-NOM meal-ACC eat-Conj tennis-Acc  
 chi-ci(n) anh-ess-ta. (accent on mek-ko)  
 play-Comp Neg-Pst-Dcl  
 ‘It is not after eating the meal that John played tennis.’  
 (Oh 2010:327)

The above examples show that the interpretation of negation in sequential conjunction is quite different from that of non-sequential conjunction;

ICSC in the sequential conjunction is either clearly negated or not negated, depending on whether or not its verb is accented. In a neutral stress pattern (6a), only the final verb is negated, but the ICSC is not actually negated. However, when the ICSC receives an accent in the sentence, usually on its verb (6b), it is negated. The sentences (6a) and (6b) thus have different interpretations.

So far, it has been shown that non-sequential and sequential conjunctions have different negation patterns. The non-sequential conjunction has ambiguity due to the two different structures. The sequential conjunction does not have such ambiguity, and the ICSC in the sequential conjunction is either negated or not depending on whether or not it receives an accent. So the different negation patterns between sequential and non-sequential conjunctions we have seen above also raise the question of whether sequential tenseless conjunction is true coordination.

From the observations discussed so far, which are related to the tense and negation interpretations, Oh (2010) suggested that sequential conjunction cannot be treated as a case of coordination and that we have to posit a different structure, namely subordination for it. In the following section, I will discuss Cho (1995, 2005), in which the ICSC in the sequential conjunction is treated as an adverbial adjunct.

### 3. Different Syntactic Properties between Sequential and Non-Sequential Tenseless Conjunctions in Korean

Cho (1995, 2005) gives two different structures for sequential and non-sequential tenseless conjunctions. He argues that the different interpretation of the sequential and non-sequential readings of tenseless conjunctions is syntactically based. His argument is based on the fact that extraction of an element from the second conjunct of sequential conjunction is possible in Korean while extraction is impossible in



non-sequential conjunction. Consider the following examples:

- (7) a. ppang-uli Kim-i pap-ul mek-ko t<sub>i</sub> mek-ess-ta  
 bread-Acc K-Nom meal-Acc eat-Conj eat-Past-Dcl  
 Kim ate the meal (rice) and then ate bread.’
- b. \*ppang-uli Kim-i pap-ul cohaha-ko t<sub>i</sub> silhehay-ss-ta  
 bread-Acc K-Nom meal-Acc like-Conj dislike-Past-Dcl  
 ‘Kim liked the rice and hated the bread.’ (Cho 1995: 158)

In (7a), which is an example of sequential conjunction, the extraction of the object from the second conjunct is possible, while in (7b), which is an instance of non-sequential conjunction, extraction is not allowed. Based on this observation, Cho argues that the ICSC in (7a) should be treated as an adverbial adjunct and that (7b) is VP coordination. As argued by Cho, this also means that the Coordinate Structure Constraint (CSC), which prohibits extraction from a conjunct in a coordinate structure, is a purely syntactic constraint in Korean; the non-sequential conjunction, which constitutes coordination structure, never allows violation of CSC.

A second syntactic operation that distinguishes sequential tenseless conjunction from non-sequential tenseless conjunction is scrambling of ICSC. ICSC in Korean can appear in initial, medial (before and after object) and final positions in a sentence (Cf. Kwon (2004)). This property is shown in the following examples:

- (8) a. John-i<sub>j</sub> [Ø<sub>j</sub> canti-lul kkak-ko] yakwu-lul sicakha-ess-ta.  
 BJ-NOM grass-ACC mow-Conj baseball-ACC begin-Pst-Dcl.  
 ‘John mowed the grass and then started playing baseball.’
- b. [Ø<sub>j</sub> canti-lul kkak-ko ] John-i<sub>j</sub> yakwu-lul sicakha-ess-ta.
- c. John-i<sub>j</sub> yakwu-lul [Ø<sub>j</sub> canti-lul kkak-ko] sicakha-ess-ta. .
- d. John-i<sub>j</sub> yakwu-lul sicakha-ess-ta [Ø<sub>j</sub> canti-lul kkak-ko].

But the initial conjunct of non-sequential conjunction does not show such

a property. It can only occur between the subject and the second conjunct, as shown in (9):

- (9) a. John-i [ton-ul salangha-ko] kwenlyek-ul kalmangha-ess-ta.  
 J-NOM money-ACC love-Conj power-ACC crave-Pst-Dcl.  
 ‘John loved the money and craved political power.’  
 b. \*[ton-ul salangha-ko] John-i kwenlyek-ul kalmangha-ess-ta.  
 c. \*John-i kwenlyek-ul [ton-ul salangha-ko] kalmangha-ess-ta.  
 d. ?\*John-i kwenlyek-ul kalmangha-ess-ta[ton-ulsalangha-ko].

Based on the semantic and syntactic evidence presented above, Oh (2010) concluded that sequential tenseless conjunction is subordination in Korean and that ICSC is a kind of adverbial adjunct. The different scope behaviors of tense and negation in sequential and non-sequential conjunctions can now be explained by their different structures. These results are in line with the claim that CSC is purely syntactic in Korean, as argued in Cho (1995). We have seen that CSC does not apply to the sequential conjunction because it is an instance of subordination. CSC applies only to real syntactic coordinations (i.e. tensed and non-sequential tenseless conjunctions).<sup>3)</sup> In the next section, I will deal with similar constructions in English and Japanese, which is the main topic of this paper. As mentioned earlier, English and Japanese could be thought to be typologically different from and similar to Korean, respectively. To see how sequential and non-sequential conjunctions can be treated in those languages, I will look at the interpretations of the tense and negation as well as the syntactic operations in such conjunction constructions in English and Japanese, which play a crucial role in distinguishing sequential and non-sequential conjunctions in Korean.

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3) Tensed conjunction, as a coordination, also cannot violate CSC:

- (i) \*Theynisu-lul<sub>j</sub> Chelswu-ka pap-ul mek-ess-ko t<sub>j</sub> chi-ess-ta.  
 Tennis-Acc C-Nom rice-Acc eat-Past-Conj play-Past-Dcl

#### 4. Verbal Conjunctions in English

Let us first see if the sequential conjunction can be analyzed as subordination in English. We have seen that sequential and non-sequential conjunctions behave differently with respect to tense and negation in Korean and that this has led us to conclude that the sequential conjunction is subordination in Korean. I expect that tense and negation in English will also play an important role in deciding whether sequential conjunctions are coordination or subordination in English.

Sequential and non-sequential conjunctions in English are thoroughly discussed in Goldsmith (1985) and Lakoff (1986). According to Lakoff, there are three major types of conjunctions which allow extraction from one of their conjuncts. All of these types can be regarded as sequential, and Lakoff argues that these are all coordinations. In the first type (10a), the conjunction describes cause and result relation, and in the second one<sup>4)</sup> (10b), *and* is interpreted as ‘and nonetheless.’ The third type of conjunction (10c) involves a notion of natural course of event. In the following data, I include both sequential (10) and non-sequential conjunctions (11) in English:

- (10) a. That’s the kind of firecracker<sub>j</sub> that I set off t<sub>j</sub> and scared the neighbor.  
 b. How much<sub>j</sub> can you drink t<sub>j</sub> and still stay sober?  
 . c. What<sub>j</sub> did Harry go to the store and buy t<sub>j</sub>?
- (11) a. Mary liked Democrats and hated Republicans.  
 b. Did John make a sandwich and eat an apple?

Now, let us see if sequential and non-sequential conjunction behave differently with respect to tense and negation in English.<sup>5)</sup> First of all,

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4) In Goldsmith (1985), this type of conjunction is analyzed as subordination, which is rejected by Lakoff (1986).

we see that in (10a), which is a sequential conjunction, tense is specified on both conjuncts. So, each conjunct should be an IP in (10a). In (11a), we also see that each conjunct of non-sequential conjunction is tense marked. In this way, the English sequential conjunction (10a) does not show any difference from the non-sequential conjunction (11a) with respect to tense. In (10b) and (10c), tense is marked on the auxiliary preceding the conjunction, so the main verbs in conjuncts do not have any tense marking. In this case, the tense interpretation of each conjunct should be exactly the same as that of the auxiliary. In (11b), we also see that the tense interpretation of each conjunct is the same as that of the auxiliary. So again, (10b, c) and (11b) show that English sequential conjunction does not behave differently from non-sequential conjunction with respect to tense.

The following examples also show that in English, sequential conjunctions and non-sequential conjunctions behave similarly with respect to negation:

- (12) a. Harry did not go to the store and buy the food.  
 b. Mary did not like Democrats and hate Republicans.

In both sequential (12a) and non-sequential (12b) conjunctions, both conjuncts are equally under the domain of the negation, which is shown by the bare form of the verb in each conjunct, so in each construction, the whole conjoined VP is negated. Unlike sequential and non-sequential

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5) There are some differences between the English sequential conjunctions in (10a-c) and Korean sequential conjunctions with respect to tense marking. In Korean, when tense is marked in both conjuncts, the conjunction does not necessarily have a sequential reading. That is, the two events described by the two conjuncts need not be ordered in any specific way. And, this construction does not allow extraction from its conjuncts (see footnote 3). But in English, we see that in (10a), in which tense is specified in both conjuncts, the conjunction still gets a sequential interpretation and allows extraction.

conjunctions in Korean, the two conjunctions in English do not show any difference with respect to tense and negation, and this may support the claim that sequential conjunction is real coordination in English.

Also, Lakoff (1986) argues that sequential conjunctions in (10) are cases of real coordination. His argument is based on the assumption that across-the-board extraction is possible only in true coordinations. According to him, in English, sequential conjunctions as in (10) allow across-the-board extraction. See his examples below:

- (13) a. What did he go to the store, buy, load in his car, drive home and unload?  
 b. How many courses can you take for credit, still remain sane, and get all A's in? (p.153)

In sentences (13a, b), VPs are iterated and extraction applies in the iterated VPs. In (13a), extraction applies in the second, third and fifth conjuncts and, in (13b), it applies in the first and third conjuncts. Lakoff argues that the very existence of across-the-board extraction in these cases shows that they are instances of true coordination. He also acknowledges that an alternative account is offered, in which the single-gap sentences (10a, b, c) are analyzed as containing adverbial clauses and the multiple-gap constructions (13a, b) as sentences with a sequence of adverbial subordinate clauses in which non-initial gaps are treated as parasitic gaps. But he refutes this idea based on a number of observations. First, some of the conjunctions cannot be paraphrased by a sequence of existing subordinate clauses. For example, sentence (13a) cannot be paraphrased because English has no subordinating conjunction which indicates the next term in a sequence of events. At the very least, the alternative suggestion has to postulate an abstract subordinating conjunction with this meaning. Second, according to the alternative suggestion, the second VP in sentence (14a) is analyzed as an adverbial subordinate clause as paraphrased in (14b), and this requires

extraction from the subordinate clause; however, extraction is not allowed:

- (14) a. Who<sub>j</sub> did he sit there and listen to t<sub>j</sub>?  
b. \*Who<sub>j</sub> did he sit there while listening to t<sub>j</sub>?

Third, in general, parasitic gaps in the subordinate clause are not possible where there is a gapless clause intervening between the clause with the gap and the element that the gap is parasitic on. This is shown in the following example:

- (15) \*How many courses can you take for credit, while still remaining sane, without getting bad grades in?

In (15), there is an intervening gapless clause “while still remaining sane” before the clause with the parasitic gap “without getting bad grades in”, so the sentence is ungrammatical. But, consider the sentence in (16):

- (16) How many courses can you take for credit, still remain sane, and not get a bad grade in?

In (16), which is well-formed, there is a gapless clause between the first and the final clauses, which have a gap. If the gap in the final clause is indeed a gap that is parasitic on the gap in the first conjunct, it should not allow the gapless clause to occur between the first and final clauses in (16), but the gapless clause occurs between them. This means that the final clause is not a parasitic gap. By using all of the points presented above, Lakoff (1986) argues that the sequential conjunctions in (10) are true coordinations, even though they allow extraction from one of their conjuncts.

So far, we have seen that, unlike sequential conjunction in Korean, sequential conjunction in English should be treated as real coordination.

This implies, as Lakoff (1986) argues, that CSC is not a pure syntactic constraint in English and that extraction in the coordinate structure is constrained by semantic factors.

## 5. Verbal Conjunctions in Japanese

Just as Korean and English, Japanese has sequential and non-sequential conjunctions. The distinction between sequential and non-sequential conjunctions in Japanese is related to the verbal types as in Korean. When VPs headed by a non-stative predicate are conjoined, the conjunction gets the sequential interpretation, but when VPs headed by stative predicates are conjoined, the conjunction gets the non-sequential interpretation. Let us look at Japanese examples:

- (17) a. John-wa tomodachi-ni at-te mati-o de-ta  
 J-Top friend-Dat meet-Conj hometown-Acc leave-Pst  
 'John met his friends and left the hometown.'
- b. John-wa neko-ga suki-de inu-ga kiraidat-ta  
 J-Top cat-Nom like-Conj dog-Nom hate-Pst  
 'John liked cats and hated dogs.'

In the above examples, (17a) shows a case of non-stative VP conjunction, which is sequential, and (17b) shows a case of stative VP conjunction, which is non-sequential. Morphologically, these examples look quite similar to Korean examples shown above, but the Japanese conjunction structure is different from that of Korean in a very important respect: the tense morpheme cannot appear in the first conjunct. Unlike corresponding sentences in Korean (cf. 1a, b), the following sentences with the tense morpheme in the first conjunct are ungrammatical.

- (18) a. \*John-wa tomodachi-ni at-ta-te mati-o de-ta

- J-Top friend-Dat meet-Pst-Conj hometown-Acc leave-Pst  
 b. \*John-wa neko-ga suki-ta-te inu-ga kiraidat-ta  
 J-Top cat-Nom like-Pst-Conj dog-Nom hate-Pst

According to Lee (1999), there are only two tense morphemes in Japanese, past *ta* and non-past *ru* (*i* or *da*).<sup>6)</sup> There is no special tense marking for present and future. Instead, the non-past tense morpheme can be used as both present and future. All non-stative verbs in Japanese, when they have a non-past morpheme, are interpreted as future as an unmarked tense, if there is no specific tense adverb in the sentence, while the unmarked temporal interpretation of stative verbs with a non-past morpheme is present. When the speaker assumes the event expressed by the stative verb will happen definitely in the future, the stative verb with non-past tense can have a future interpretation. Generally, stative verbs express future meaning with the modal *daroo* ('probably'). Consider the interpretation of tense in the following sentences in Japanese:

- (19) a. John-wa mati-o de-ta  
 J-Top hometown-Acc leave-Pst  
 'John left the hometown.'  
 b. John-wa mati-o de-ru  
 J-Top hometown-Acc leave-nonPst  
 'John will leave his hometown.'  
 c. John-wa neko-ga suki-dat-ta  
 J-Top cat-Nom like-Pst  
 'John liked cats.'  
 d. John-wa neko-ga suki-da.<sup>7)</sup>

6) The non-past tense forms are selected according to the type of the predicate; if the predicate is a verb it takes *ru*, if it is an adjective it takes *i*, and if it is a nominal predicate, it takes *da*.

7) *Suki* is used as a kind of nominal predicate (its literal meaning is something like 'liking') here, so it occurs with *da* when it expresses a non-past tense. We can also see that, unlike the non-past tense marking *ru* for verbs, *da*



- J-Top      cat-Nom      like-nonPst  
 ‘John likes cats.’
- e. John-wa    asita            neko-ga    suki-Ø-daroo  
 J-Top      tomorrow    cat-Nom    like-nonPst-Probably  
 ‘John will like cats tomorrow.’
- f. John-wa    asita            neko-ga    suki-da.  
 J-Top      tomorrow    cat-Nom    like-nonPst  
 ‘John will (definitely) like cats tomorrow.’

In the above data, (19a) is an example of a non-stative verb with past tense, and (19b) shows that the unmarked tense interpretation of the non-past tense with non-stative verb is future. (19c) is an example of a stative verb with past tense, and (19d) shows that the unmarked tense interpretation of the non-past tense with stative verb is present. (19e) and (19f) show that the construction can be interpreted as future when the stative verb occurs with *daroo* and that stative verbs can also express future without *daroo* when the speaker is sure that the event will happen in the future.

With the basic morphology of Japanese tense given above, we are in a position to determine whether sequential and non-sequential conjunctions show any difference with respect to tense in Japanese. Consider the following examples:

- (20) a.(=17a) John-wa    tomodachi-ni    at-te            mati-o            de-ta  
           J-Top      friend-Dat    meet-Conj    hometown-Acc    leave-Pst  
           ‘John met his friends and left the hometown.’
- b. John-wa    kinoo            tomodachi-ni    at-te            asita  
           J-Top      yesterday    friend-Dat      meet-Conj      tomorrow  
           mati-o                            de-ru.  
           hometown-Acc      leave-nonPst  
           ‘John met his friends yesterday and will leave his hometown

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still exists with the past tense morpheme *ta* in the past tense and that it is deleted, when it occurs with the modal *daroo*.

tomorrow.'

c.(=17b) John-wa neko-ga suki-de inu-ga kirai-dat-ta  
 J-Top cat-Nom like-Conj dog-Nom hate-Pst  
 'John liked cats and hated dogs.'

d. John-wa kinoo neko-ga suki-de asita inu-ga  
 J-Top yesterday cat-Nom like-Conj tomorrow dog-Nom  
 kirai-Ø-daroo.  
 hate-nonPst-Probably  
 'Probably, John liked cats yesterday and will hate dogs tomorrow.'

Unlike sequential and non-sequential conjunctions in Korean, the two conjunctions in Japanese show no difference with respect to tense in the final conjunct. That is, in (20a, c), both conjuncts have the same past tense interpretation under the past tense marker in the final conjunct, while in (20b, d), the first conjunct has a different tense interpretation from that of the final conjunct. In Korean, only sequential conjunction shows this property.

The fact that the first conjunct in (20b, d) has a different tense interpretation from that of the final conjunct raises one question at this point: how can the first conjunct of (20b, d) have past tense interpretation? If we assume both of them are real coordinations, the first conjunct should get its tense from the tense morpheme in the final conjunct because it does not have a tense marker. But, at the same time, it should not be under the influence of the non-past morpheme in the final conjunct, because there should be a clash between this morpheme and the time adverbial *kinoo*. Here is a problem, and there might be two possible solutions to this problem. First, as no overt tense morpheme is allowed in the first conjunct, there can be a zero tense morpheme in the first conjunct, which allows past tense interpretation in the first conjunct. Second, past tense can be contextually recovered as a last resort, which is common among languages without grammatical tenses (e.g., Chinese).<sup>8)</sup> But whatever approach we take, we cannot find any clue to treat sequential conjunction

differently from non-sequential conjunction, at least with respect to tense. That is, tense in Japanese cannot be used as a property to distinguish sequential and non-sequential conjunctions.

We now turn to the scope of negation, extraction and scrambling in Japanese because they may help to determine whether sequential conjunction in Japanese should be treated as adjunction. First, consider the negation in sequential (21a) and non-sequential (21b) conjunctions. Note that in these examples, the negation marker *nakat* is placed between the root verb and the tense marker, just like the Korean negation marker *anh*.

- (21). a. John-wa tomodachi-ni at-te mati-o de-nakat-ta  
 J-Top friend-Dat meet-Conj hometown-Acc leave-Neg-Pst  
 ‘John met his friends and did not leave the hometown.’  
 b. John-wa neko-ga suki-de inu-ga kiraija-nakat-ta  
 J-Top cat-Nom like-Conj dog-Nom hate-Neg-Pst  
 Interpretation A: ‘John did not like cats and hate dogs.’  
 Interpretation B: ‘John liked cats and did not like dogs.’

In the sequential conjunction (21a), only the final verb is negated, but the interpretation of (21b) indicates that the Japanese negation *nakat* creates ambiguity in the non-sequential conjunction. It can take scope over either the whole conjunction or only the final conjunct. Note that this was exactly the case with Korean negation *anh*, which creates the same kind of ambiguity in non-sequential conjunctions. But this kind of ambiguity does not arise in the case of sequential conjunction. In

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8) According to Norman (1988), in Chinese, which does not have any grammaticalized tenses, past tense should be recovered based on the presence of a time adverbial as in the following sentence. We can also note that there is no aspectual marker indicating completion of the event in the sentence.

- (i) zoutian wanshang wo kan shu.  
 yesterday evening I read book  
 ‘I read a book yesterday evening.’

sequential conjunction in Japanese, in a neutral context, where none of the elements of the sentence gets an accent, only the final verb is negated, but if the verb of the first conjunct has an accent, the first conjunct is negated. See the following:

- (22) a. (=21a) John-wa tomodachi-ni at-te mati-o de-nakat-ta  
 J-Top friend-Dat meet-Conj hometown-Acc leave-Neg-Pst  
 ‘John met his friends and did not leave the hometown.’
- b. John-wa tomodati-ni at-te mati-o  
 J-Top friend-Dat meet-Conj hometown-Acc  
 de-nakat-ta. (accent on *at-te*)  
 leave-Neg-Pst  
 ‘John left his hometown, but he did without meeting his friends.’

We see that in (22a), where no part is accented, only the final verb is negated, while in (22b), where the verbal part of the first conjunct has an accent, the first conjunct is actually negated. The negation in Japanese sequential conjunction thus show the same patterns as the negation in Korean sequential conjunction.

The second area that may help to determine whether or not sequential conjunction is a case of subordination is extraction. Consider the following examples, in which extraction applies in sequential (23a) and non-sequential (23b) conjunctions:

- (23) a. Mati-o<sub>j</sub> John-wa tomodachi-ni at-te t<sub>j</sub> de-ta  
 hometown-Acc J-Top friend-Dat meet-Conj leave-Pst  
 ‘John met his friends and left the hometown.’
- b. \*Inu-ga<sub>j</sub> John-wa neko-ga suki-de t<sub>j</sub> kiraidat-ta  
 dog-Nom J-Top cat-Nom like-Conj hate-Pst  
 ‘John liked cats and hated dogs.’

In (23a), the object of the second conjunct is extracted, but in (24b),

the object cannot be extracted. Just as in Korean, sequential conjunctions in Japanese allow extraction from their conjuncts, but non-sequential conjunctions do not allow extraction from their conjuncts.

Finally, as in Korean, the initial conjunct of the sequential conjunction in Japanese (24a-c) can move to various positions in the sentence like a single unit, while that of the non-sequential conjunction (24d-f) cannot:

- (24) a. [tomodachi-ni at-te]<sub>i</sub> John-wa t<sub>j</sub> mati-o de-ta.  
           friend-Dat meet-Conj J-Top hometown-Acc leave-Pst  
           ‘John met his friends and left the hometown.’  
       b. John-wa t<sub>j</sub> mati-o [tomodachi-ni at-te]<sub>i</sub> de-ta.  
       c. John-wa t<sub>j</sub> mati-o de-ta [tomodachi-ni at-te]<sub>i</sub>.  
       d. ?\*[neko-ga suki-de] John-wa inu-ga kirai-dat-ta.  
       e. \*John-wa inu-ga [neko-ga suki-de] kirai-dat-ta.  
       f. ?\*John-wa inu-ga kiraidat-ta [neko-ga suki-de.]

From the above data, we see that the sequential conjunction allows its initial conjunct to move to various positions in the sentence (initial, final and after the object), while the initial conjunct of non-sequential conjunction cannot undergo this kind of movement. Thus, (24a-c) are grammatical, but (24d-f) are ungrammatical.

Though the tense-related facts in Japanese shown above do not tell us much about whether or not sequential conjunction is an adjunct clause, the other three tests examined above have shown that sequential conjunction and non-sequential conjunction in Japanese behave quite differently; while non-sequential conjunction is coordination, sequential conjunction should be treated as subordination. Thus, we have some evidence to support the claim that sequential conjunction is an instance of adjunction in Japanese.

The similarities between Japanese and Korean noted above tell us that Korean is not the only language whose sequential conjunction can be analyzed as a case of subordination. In further research, we may find that, in many other languages, sequential conjunction is actually

subordination not coordination. Based on the admittedly limited data presented here, it seems that the differences between Korean and English and the similarities between Korean and Japanese suggest that whether or not the sequential conjunction is analyzed as adjunction is closely related to language typology.

## 6. Conclusion

In this paper, I have discussed two types of verbal conjunctions, i.e. sequential and non-sequential conjunctions in Korean, focusing on their syntactic and semantic differences. I have shown that sequential and non-sequential tenseless conjunctions have different properties with respect to the tense and negation markers in Korean. Also, considering the different syntactic behaviors of sequential and non-non sequential conjunctions related to extraction and scrambling, I have shown that the ICSC is an adjunct adverbial clause and that sequential conjunction is subordination in Korean.

Based on the observations made from Korean, I have examined sequential and non-sequential verbal conjunctions in English and Japanese, especially focusing on the semantic properties in relation to tense and negation and syntactic operations such as extraction and scrambling, and it has been suggested that sequential conjunction of English is coordination as Lakoff (1986) argues, while that of Japanese is subordination. Consequently, we have seen that Korean is not the only language in which sequential conjunction can be analyzed as subordination.

The similarities between Korean and Japanese that we have noticed in this paper have shown that whether or not sequential conjunction in languages is subordination may be closely related to the language typology. I have not looked into this issue here; however, to draw a firm conclusion regarding the relation between the treatment of sequential conjunction

and the language typology, it is necessary to consider more languages from various typological groups in the future study.

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