

TEMPORAL PHENOMENA IN THE KOREAN CONJUNCTIVE CONSTRUCTIONS

DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAI'I AT MĀNOA IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

EAST ASIAN LANGUAGES AND LITERATURES (KOREAN)

AUGUST 2015

By

Dongmin Kim

Dissertation Committee:

Ho-min Sohn, Chairperson
Mee-Jeong Park
Sang Yee Cheon
William O'Grady
Kamil Ud Deen

Keywords: conjunctive construction, connective, temporality, tense, aspect, acquisition

ACKNOWLEDGEMENTS

For the Lord giveth wisdom: out of his mouth cometh knowledge and understanding.

Proverbs 2:6

I would like to express my gratitude to all the people who made this dissertation possible.

I owed so much to my advisor and dissertation chair, Dr. Ho-min Sohn, who guided and encouraged me to continue on this journey through the entire process of obtaining a doctoral degree. He has personally shown me what an ideal scholar is. I will always remember his warm-hearted guidance.

I want to extend my sincere appreciation to Dr. Mee-Jeong Park for her insightful comments and unfailing support. Professor Park showed me how to be a good KFL educator and researcher at the same time. I would also like to thank Dr. William O'Grady for his various types of assistance and support. I was able to expand my background knowledge of linguistics and language acquisition when I was taking his classes. I am very grateful to Dr. Sang Yee Cheon for her support for and contribution to the completion of my doctorate study. The enthusiasm of Dr. Cheon inside and outside classroom always inspired me. I also appreciate Dr. Kamil Ud Deen for his valuable feedback at various stages of experiment designs and data analysis.

I am also grateful to Dr. Dong-Kwan Kong for his support and encouragement to finish the dissertation. I want to give my hearty thanks to Dr. Mary S. Kim and Dr. Sumi Chang who never stopped encouraging my academic journey.

My deep appreciation goes to my fellow colleagues: Cheol-Rin Park, Jason Sung, Hye-Seung Lee, Joungmok Lee, Ok-sim Kim, Na-Young Kim, Yoon Hwa Choi, Jiyoung Kim, Jae Rim Yoon, So-Young Lee, Sumire Matsuyama, Hui-Ju Chuang, Seung-Hye Yu, Hyunsun Chung, Eun Jung Lee, Kyoung Won Oh, Sang Hee Lee, Sooran Pak, Jee Hyun Lee, Kyaee-Sung Park, and Qiaona Yu.

It is difficult to express in words how deeply grateful I am to my wife and family. I would like to thank my parents who poured out blind love and support. Through this journey, I have been thinking my two brothers, especially the youngest one, who are traveling their own way of life in Korea. I am also thankful for my parent-in-law, who had faith in me and supported me with patience. I also would like to thank my son Hakyoung and my daughter Hannah. Last, but never least, there is my wife, Sook-Yung, who deserves special appreciation for her never failing love.

I would like to attribute this glory to God who is my strength and my refuge.

ABSTRACT

The goal of this study is to characterize the temporal phenomena in the Korean conjunctive constructions. These constructions consist of three components: a verbal stem, a clause medial temporal suffix, and a clause terminal suffix. This study focuses on both the temporality of the terminal connective suffixes and the grammatical meanings of the non-terminal temporal suffix *-ess* in conjunctive constructions. The analysis presented here is based on corpus data of informal discourse. The study seeks to understand the interaction between the three components and the effect of context on the temporal/aspectual meaning of the conjunctive constructions.

Across languages, sentence structures can be typologically classified into two main types: “co-ranking” structures and “chaining” structures (Longacre, 2007, p. 374). When Indo-European languages combine clauses, the clauses may contain several verbs of the same rank, usually referred to as independent verbs. On the other hand, various verb-final languages such as Korean, Japanese, some languages of Papua New Guinea, and some Philippine languages, in which subject, object, adverbial, and other elements are followed by the predicate, do not connect two verbs of same rank in a sentence, but “chain” a preceding clause to a following clause. The predicate of the final clause generally carries the grammatical information for the whole sentence; that is, the clause-chaining languages make a distinction between non-final (medial) verbs and final verbs in terms of how they are inflected. Often, the final verb is fully marked for participant, temporality, modality, and sentence type, while the inflection of the medial verb may be morphologically deficient in part.

In the Korean conjunctive constructions, the non-final clauses cannot take sentence terminal suffixes that determine illocutionary force. That is, they cannot be used to mark an utterance as one of the four sentence types—declarative, interrogative, propositive, and imperative—or as one of the six speech levels—plain, intimate, familiar, blunt, polite, and deferential (H.-M. Sohn, 1999, pp. 234–236). In addition, the non-final clauses of conjunctive sentences are deficient or dependent in tense/aspect marking, which may be related to the grammatical behavior of the connectives in general.

The specific focus of this study is the optional suffixation of tense/aspect marker, and how it is affected by the temporality of clause terminal connective suffixes. The tense/aspect suffix looks irregular in distribution, while other suffixes including the subject/addressee honorific suffixes and the modal suffixes are decided by the speaker's communicative purposes. The presence/absence of the temporal marker *-ess* with the medial verbs may be deeply relevant to the complex relationship between verb stem, the semantics of the morpheme, and the connectives in terms of temporality.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
ABSTRACT	iv
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF ABBREVIATIONS.....	xi

CHAPTER 1 INTRODUCTION

1.1 Purposes of the research	1
1.2 Gaps in previous studies.....	4
1.3 Scope of the research.....	11
1.4 Organization of the dissertation	13

CHAPTER 2 CLAUSAL RELATIONS AND CLAUSAL CONNECTIVES

2.1 Description of verbal complexes in clauses	17
2.1.1 Clause non-final suffixes	17
2.1.1.1 Voice	18
2.1.1.2 Honorific suffixes.....	18
2.1.1.3 Temporal suffixes	19
2.1.1.4 Mood suffixes.....	20
2.1.2 Clause-final suffixes	21
2.1.2.1 Relativizers	22
2.1.2.2 Complementizers.....	22
2.1.2.3 Nominalizers	23
2.1.2.4 Connectives	24
2.2 Sentence operating system in complex constructions	26
2.2.1 Operators	32
2.2.2 Sentence operators in Korean.....	37
2.2.2.1 Illocutionary force	39
2.2.2.2 Tense	40
2.2.2.3 Aspect.....	41
2.2.2.4 Honorific suffix	42
2.2.2.5 Modal and Modality	43

CHAPTER 3 TEMPORALITY OF CLAUSAL CONNECTIVES

3.1 Background: Semantics of the connectives.....	47
3.2 Temporal properties of the connectives.....	51
3.2.1 Implicitness versus explicitness in temporality.....	55
3.2.2 Classification of the connectives by temporality	58
3.3 Connectives and the temporal morpheme <i>-ess</i>	65
3.3.1 Non-temporal connectives and <i>-ess</i>	65

3.3.2 Temporal connectives and <i>-ess</i>	67
3.3.2.1 Anterior connectives and <i>-ess</i>	68
3.3.2.1.1 Perfective connectives <i>-ess</i>	68
3.3.2.1.2 Non-perfective connectives and <i>-ess</i>	73
3.3.2.2 Overlapping connectives and <i>-ess</i>	78
3.3.2.3 Posterior connectives and <i>-ess</i>	80

CHAPTER 4 MULTIPLE USES OF *-ESS* IN CONJUNCTIVE CLAUSES

4.1 The concepts of tense and aspect.....	84
4.1.1 Tense.....	84
4.1.2 Aspect.....	87
4.1.3 Distinction between tense and aspect.....	91
4.2 Grammatical meanings of <i>-ess</i>	94
4.3 Historical development of <i>-ess</i>	99

CHAPTER 5 CORPUS STUDY

5.1 Corpus selection.....	109
5.2 Method: Data collection and processing.....	111
5.2.1 Three elements under analysis: verbs, <i>-ess</i> , and connectives.....	111
5.2.1.1 Verbs.....	111
5.2.1.2 Temporal suffix <i>-ess</i>	112
5.2.1.3 Connectives.....	113
5.2.2 Data collection.....	114
5.2.3 Data processing and encoding.....	117
5.3 The functions of <i>-ess</i> in spoken Korean.....	119
5.3.1 Time reference.....	120
5.3.2 Completedness and resultedness.....	123
5.3.3 Distribution of different functions of <i>-ess</i>	127
5.4 The relational use of <i>-ess</i> in spoken Korean.....	129
5.4.1 Temporal suffix <i>-ess</i> and lexical aspect of verbs.....	130
5.4.1.1 Distribution of verb types across positions.....	130
5.4.1.2 Distribution of lexical aspect with functions of <i>-ess</i>	134
5.4.2 Temporal suffix <i>-ess</i> and connectives.....	138
5.4.3 Lexical aspect of verbs and connectives.....	145
5.4.4 Lexical aspect of verbs, <i>-ess</i> , and connectives.....	148

CHAPTER 6 PEDAGOGICAL IMPLICATIONS

6.1 Introduction.....	151
6.2 Phenomena.....	152
6.3 Method.....	154
6.3.1 Research questions.....	154
6.3.2 Participants.....	155
6.3.3 Materials and procedure.....	156

6.3.4 Result.....	159
6.3.4.1 Acceptability rates for the three types of connectives.....	159
6.3.4.2 Comparison between heritage and non-heritage learners..	162
6.4 Discussion and conclusion	164
CHAPTER 7 CONCLUSION	
7.1 General remarks on the findings of the study.....	168
7.2 Further research	170
REFERENCES.....	172
APPENDIX A	178

LIST OF TABLES

Table 1 Conjunctive suffix subtypes by temporality, anaphoricity, and perfectivity ...	9
Table 2 Semantic types of connectives	50
Table 3 Classification of Korean connectives by temporality	64
Table 4 The features of lexical aspect.....	88
Table 5 Distribution of the suffix <i>-ess</i> with lexical aspect.....	99
Table 6 Numbers of originally collected and remaining concordance lines	117
Table 7 Function features of <i>-ess</i> under analysis	118
Table 8 Context features under analysis	119
Table 9 Distribution of <i>-ess</i> in the medial position.....	127
Table 10 The distribution of <i>-ess</i> in the final position	128
Table 11 Distribution of medial <i>-ess</i> and final <i>-ess</i>	129
Table 12 Frequencies of co-selection of <i>-ess</i> and each verb type in medial predicates	131
Table 13 Frequencies of co-selection of <i>-ess</i> and each verb type in final predicates ...	131
Table 14 Distribution of medial telicity and final telicity.....	132
Table 15 Distribution of verb lexical aspect types by functions of <i>-ess</i> in medial position.....	135
Table 16 Distribution of telicity by functions of the suffix <i>-ess</i> in medial position	136
Table 17 Distribution of telicity by functions of the suffix <i>-ess</i> in final position.....	137
Table 18 Frequencies of co-selection of <i>-ess</i> and temporal types of target connectives.....	139
Table 19 Distribution of the functions of <i>-ess</i> by the temporal type of connectives	140
Table 20 Distribution of the functions of <i>-ess</i> with <i>-ciman</i> and <i>-ko</i>	142
Table 21 Distribution of the functions of <i>-ess</i> with <i>-eto</i> and <i>-nikka</i>	143
Table 22 Distribution of telicity by the temporal types of the connectives	145
Table 23 Distribution of each connective by telicity	147
Table 24 Distribution of <i>-ess</i> by temporal type for atelic verbs.....	149
Table 25 Distribution of <i>-ess</i> by temporal type for telic verbs	149
Table 26 Three types of target connectives	157
Table 27 Target question items for the three types of connectives.....	158
Table 28 Acceptability rates for the three types of connectives	159
Table 29 Acceptability rates by language background	163

LIST OF FIGURES

Figure 1 Three types of clause linking.....	28
Figure 2 Classification of the connectives by temporality.....	60
Figure 3 Grammaticalization process of the connective <i>-ese</i>	71
Figure 4 Grammaticalization process of the suffix <i>-ess</i>	108
Figure 5 An example of a KWIC concordance (key word / <i>μ ε L / 77</i>)	116
Figure 6 Relationship between function of <i>-ess</i> and temporality of connectives	141
Figure 7 Relationship between functions of <i>-ess</i> and each connective.....	144
Figure 8 Acceptability rates for three types of connectives.....	161
Figure 9 Acceptability rates by levels.....	162
Figure 10 Acceptability rates by language background.....	164

LIST OF ABBREVIATIONS

AC	Accusative particle
AD	Adverbial suffix
AH	Addressee honorific
BACK	Background
CAUS	Causative
CL	Classifier
COM	Comitative
COMP	Complementizer
CONCESS	Concessive
COND	Conditional
CONN	Connective
CONT	Contrastive
COP	Copula
DAT	Dative
DC	Declarative
DET	Determinative
DL	Delimiter
DURA	Durative
GEN	Genitive particle
HON	Honorific
IMP	Imperative sentence-type suffix
IN	Indicative mood suffix
INF	Infinitive suffix
INT	Intimate speech level or suffix
INTRP	Interruptive

NECESS	Necessitive
NEG	Negative particle
NM	Nominative case particle
NOM	Nominalizer suffix
PAS	Passive
Pf	Perfect(ive) aspect suffix
POL	Polite speech level, suffix, or particle
PR	Propositive sentence-type suffix
PROG	Progressive
PRS	Prospective modal suffix
Ps	Past tense suffix
PST	Past tense and perfect(ive) aspect suffix
PURP	Purposive
Q	Question marker (Interrogative sentence-type suffix)
QUOT	Quotative particle
REASON	Reason connectives
RL	Relativizer suffix
RT	Retrospective mood suffix
SEQ	Sequential
SH	Subject honorific suffix
SIMUL	Simultaneous
SUP	Suppositive
TC	Topic-contrast particle

CHAPTER 1

INTRODUCTION

1.1 Purposes of the research

The goal of this study is to characterize the temporal phenomena in the Korean conjunctive constructions. These constructions consist of three components: a verbal stem, a clause medial temporal suffix, and a clause terminal suffix. This study focuses on both the temporality of the terminal connective suffixes and the grammatical meanings of the non-terminal temporal suffix *-ess* in conjunctive constructions. The analysis presented here is based on corpus data of informal discourse. The study seeks to understand the interaction between the three components and the effect of context on the temporal/aspectual meaning of the conjunctive constructions.

Across languages, sentence structures can be typologically classified into two main types: “co-ranking” structures and “chaining” structures (Longacre, 2007, p. 374). When Indo-European languages combine clauses, the clauses may contain several verbs of the same rank, usually referred to as independent verbs. On the other hand, various verb-final languages such as Korean, Japanese, some languages of Papua New Guinea, and some Philippine languages, in which subject, object, adverbial, and other elements are followed by the predicate, do not connect two verbs of same rank in a sentence, but “chain” a preceding clause to a following clause. The predicate of the final clause

generally carries the grammatical information for the whole sentence; that is, the clause-chaining languages make a distinction between non-final (medial) verbs and final verbs in terms of how they are inflected. Often, the final verb is fully marked for participant, temporality, modality, and sentence type, while the inflection of the medial verb may be morphologically deficient in part.

In the Korean conjunctive constructions, the non-final clauses cannot take sentence terminal suffixes that determine illocutionary force. That is, they cannot be used to mark an utterance as one of the four sentence types—declarative, interrogative, propositive, and imperative—or as one of the six speech levels—plain, intimate, familiar, blunt, polite, and deferential (H.-M. Sohn, 1999, pp. 234–236). In addition, the non-final clauses of conjunctive sentences are deficient or dependent in tense/aspect marking, which may be related to the grammatical behavior of the connectives in general.

The specific focus of this study is the optional suffixation of tense/aspect markers, and how it is affected by the temporality of clause terminal connective suffixes (hereafter “connectives”). The tense/aspect suffix looks irregular in distribution, while other suffixes including the subject/addressee honorific suffixes and the modal suffixes are decided by the speaker’s communicative purposes. The presence/absence of the temporal marker *-ess* with the medial verbs may be deeply relevant to the complex relationship between verb stem, the semantics of the morpheme, and the connectives in terms of temporality.

This research explores three main issues: (1) the temporality of Korean connectives and the classification of the connectives according to their temporalities, (2) the syntactic-semantic properties of the temporal marker *-ess* in combination with the clause-terminal suffixes, comparing the clause-terminal suffixes with the sentence-terminal suffixes, and (3) the semantic analysis of *-ess* when it is positioned between the verbal stem and the connective suffix, as observed in the corpus data.

The first issue concerns the fact that the connectives themselves can denote temporal relations such as overlapping and succession (Longacre, 2007, pp. 399–400), controlling the appearance of *-ess* and affecting the semantics of the temporal marker. I categorize the connectives in terms of their temporal properties into anterior, overlapping, and posterior connectives in order to reveal their complex relationship with the temporal marker *-ess*.

To address the second issue, this study inquires into the manner in which the Korean language encodes the temporal marker *-ess* and the functional differences that depend on the marker's position, whether medial or final. Even though *-ess* is traditionally considered the past tense marker, in school grammars for example, its grammatical meaning is still in question because its semantic properties are too various to be covered by a single term. In this dissertation, I investigate the grammatical meaning of the suffix as determined by its location in sentences.

The third issue is the relationship between the lexical aspect of the verb stem, the temporal suffix, and the temporalities of the connectives in the corpus data.

With these three issues in mind, I investigate the temporal phenomena in conjunctive sentences in Korean. The investigation addresses problems arising from the complex interpretation of tense in the first conjunct and the temporal relationship between presence/absence of the temporal suffix and numerous Korean connectives regardless of the temporal orientation of an event. Furthermore, I approach the investigation from a pedagogical perspective, as learners of Korean as a second/foreign language often encounter difficulty in understanding how pastness is marked in a preceding clause for events that occurred in the past.

1.2 Gaps in previous studies

In the literature related to this topic, scattered studies from a variety of theoretical backgrounds have tried to account for the temporal phenomena in Korean conjunctive sentences. The majority of the existing works discuss how to interpret the semantics of the tense of a preceding clause, which is always embedded (conjunctive) in the main clause by means of various conjunctive suffixes.

Korean grammarians usually explain these temporal phenomena by borrowing from the relative tense theory of Comrie (1985), which considers that event time refers not to speech time but to a time that precedes or follows speech time. The relative tense theory supports the idea that the tense of the subordinate clause is decided by the tense of the main clause. D.-W. Hahn (1988) argued that Korean complex sentences may be subject to either a relative tense system or an absolute tense system, and it is the relative

tense system that operates on the complex sentences in which the preceding clause cannot take a tense suffix. In the conjunctive sentences, the conjunctive suffix denotes the tense of the preceding clause. Therefore, studies such as that of Hahn (1988) have tried to subcategorize the numerous conjunctive suffixes and explain the related phenomena according to the nature of the described events.

D.-J. Choi (1994) categorized the conjunctive suffixes into six subtypes developed on the basis of Hahn's (1988) two types. According to Choi (1994), an anaphoric phenomenon called "conjunction reduction" occurs when absolute tense is applied in the coordinate sentences, while relative tense is always applied to subordinate clauses. The author argued that the selection of *-ess* is determined by the semantic features of the conjunctive suffixes. These studies by Hahn (1988) and Choi (1994) both investigate the principles of the Korean relative tense system in which the tense of the preceding clause is determined by the main clause tense, and the tense markers are optional depending on the connectives.

On the other hand, B.-S. Hwang (2005) questioned the switching of the deictic center (Comrie, 1985) between the reference time of the main clause and the utterance time, stating that cognition time morphemes such as the retrospective *-te* and the indicative *-nul/Ø* must be the deictic center of the preceding clause.¹ The study is worthy

¹ This is the example provided by Hwang (2005):

wucheypwu-ka ceki ilha-nu-n nongpwu-eykey phyenci-lul cenhay-ess-ta.
 postman-NM there work-IN-RL farmer-DAT letter-AC deliver-PST-DC
 'The postman delivered the letter to the farmer who is working over there.'

of attention in that it brings the speaker’s perspective into the discussion, in spite of the problems that arise if mood markers apply to the first conjunct. S.-Y. Mun (2011) also argued that relative tense is not necessarily restricted to subordinate sentences and absolute tense does not correspond to coordinate sentences.

- (1.1) a. *kaytul-un* *sacengepsi* *cic-ke-na* *tallyetul-ess-ta*.
 dogs-TC severely bark-IN-or run into-PST-DC
 ‘The dogs barked or ran into (me).’
- b. *saysoli-ka* [*na-mulo/na-ess-umulo*] *sisen-ul* *olmki-ess-ta*.
 birdsong-NM [sound-so/sound-PST-so] eye-AC move-PST-DC
 ‘Birdsong sounds / sounded so I moved my eyes there.’
 (from S.-Y. Mun, 2011)

The absence of *-ess* in (1.1a) would not make any difference in the sentence’s meaning, and it would still be as natural as the sentence with *-ess*, although the sentence’s coordination must be interpreted with absolute tense. In the subordinate sentence in (1.1b), the presence or absence of *-ess* again does not create any difference in meaning (S.-Y. Mun, 2011). The studies of Hwang (2005) and Mun (2011) both demonstrated that the relative tense is not only inconsistent but also indeed complicated in Korean. There are also some other studies (N.-C. Baek, 2009; M.-Y. Kim, 2008; H.-O. Son, 2010) that have investigated the temporal phenomena in Korean complex or conjunctive sentences in terms of relative tense.

In this sentence, the indicative *-nu* is the deictic center, and the embedded clause is interpreted as absolute present tense, even though the main clause is interpreted as absolute past tense.

The relative tense theory (Comrie, 1985) has been used to account for the problem of tense interpretation in subordinate clauses embedded within past tense contexts in Korean. However, it is hard to establish a consistent rule for the explanation of these relative tense phenomena because the temporal marker is dependent on the temporality of the connective. Moreover, the common ground of the literature, unfortunately, is based on the idea that the suffix *-ess* is only a past tense marker. In contrast, I view the suffix *-ess* as a polysemous form, the function and meaning of which is confirmed by the discourse contexts in which it occurs, including factors such as time adverbials, verbs' arguments, the speaker's communicative purpose, and the verb's position as medial or final.

S.-O. Sohn (1988), who viewed the suffix *-ess* as two separate markers, a past tense suffix and a perfective aspect suffix, paid attention to aspect phenomena in conjunctive sentences. Sohn tried to generalize the temporal phenomena in various types of bi-clausal sentences, such as those with subordinate, coordinate, relative, complement, and nominalized clauses. The following claim is Sohn's main thesis, which is motivated by McCawley's (1971) work in the transformational approach, and by Enç's (1987) work within the framework of Government and Binding Theory:

- i) *-ess* is an R-expression subject to Binding Principle C.
- ii) *-Ø-* is a pronominal entering into the same interpretive pattern as *pro*.

That is, the tense suffix *-ess* has the properties of past relation and is an R-expression in that it has inherent reference, whereas the null form can receive either an interpretation from an antecedent like a pronominal, or a deictic interpretation in that it refers freely unless otherwise specified.

- (1.2) a. *John-i hakkyo-ey ka-Ø_i-se kongpwuhay-ess_i-ta.*
 John-NM school-to go-Ø_i-and study-ess_i-DC
 'John went to school and studied.'
- b. *John-i hakkyo-ey ka-ess-ciman nol-ess-ta.*
 John-NM school-to go-ess-but play-ess-DC
 'John went to school but played.'

Sohn explains that *-ess* in the matrix clause in (1.2a) c-commands the tense of the embedded clause in violation of Binding Principle C. In other words, the null form in the embedded clause refers to a past relation. Thus, the two tense categories can be co-indexed even though the two different events occur in different times: the first-clause event precedes the second-clause event. As for the presence of *-ess* in the embedded clause in (1.2b), Sohn explains this as free variation unaffected by its syntactic position but constrained by the temporality feature in the conjunctive suffix involved, indicating a disjoint reference to another tense category.

Based on the idea that free tense indexing is decided by the semantics of conjunctive suffixes, Sohn categorized the conjunctive suffixes into six types in terms of temporality, anaphoricity, and perfectivity, as shown in Table 1.

Table 1. Conjunctive suffix subtypes by temporality, anaphoricity, and perfectivity

[+temporal]				[-temporal]	
anterior		overlapping	posterior		
+perf. +anaph.	-perf. +anaph.	-perf. +anaph.	-perf. +/-anaph.	-perf. -anaph.	-perf. +/-anaph.
-ese -kose	-taka	-umyense -nulako	-ulyeko -key	-ciman -kena -eto	-ko -nikka

(from S.-O. Sohn, 1988, p. 94)

- (1.3) a. *John-i ecey wa-∅_i-se onul ka-ess_i-ta.*
 John-NM yesterday come-PST-and today go-ess_i-DC
 'John came yesterday, and left today.'
- b. *John-i cip-ey ka-∅_i/ess-∅_i-taka wa-ess_i-ta.*
 John-NM home-to go-∅_i/ess-∅_i-and come-ess_i-DC
 'John came back on his way/after he had been home.'
- c. *Hakkyo-ey ka-∅_i-myense, John-i Mary-lul manna-ess_i-ta.*
 school-to go-∅_i-while John-NM Mary-AC meet-ess_i-DC
 'While going to school, John met Mary.'
- d. *Hakkyo-ey ka-∅_{i/j}-lyeko, John-i Mary-lul manna-ess_i-ta.*
 school-to go-∅_{i/j}-to John-NM Mary-AC meet-ess_i-DC
 'In order to go to school, John met Mary.'
- e. *John-i ka-∅_{i/j}-kena, Mary-ka ka-∅_i-n-ta.*
 John-NM go-∅_{i/j}-or Mary-NM go-∅_i-IN-DC
 'Either John or Mary is going.'

- f. *John-i chwum chwu-∅/ess-ko, Mary-ka nolayhay-ess-ta.*
 John-NM dance dance-∅/ess-and Mary-NM sing-ess-DC
 ‘John danced and Mary sang a song.’

According to S.-O. Sohn (1988), all the non-temporal connectives (“coordinate constructions”) are allowed to have the past tense suffix *-ess*, because it has no index and is interpreted deictically as in (1.3e) and (1.3f). On the other hand, the temporal connectives (“subordinate constructions”) are not allowed to have any temporal suffix except the so-called transferentive *-taka* in (1.3b), because an overt tense form in the matrix clause has to be co-indexed in the embedded clause as in (1.3a–d). Exceptional cases in which *-taka* is allowed to have a temporal suffix can be explained with the idea that the temporal suffix is not a past tense marker but a perfective marker.

Sohn’s (1988) study is critical because it sheds light on the temporality of conjunctive sentences and takes a systematic approach to the conjunctive suffixes that addresses their multidimensional features. The study does, however, have some issues. First, the considerable dependence on the semantics of the conjunctive suffixes, not solely on Binding Principle C, leaves doubts about what actually determines the grammaticality of the presence and/or absence of *-ess* with regard to the conjunctive suffixes. It also undermines the claim because the conjunctive suffix *-ko* is treated as a temporal suffix for subordinate constructions and as a non-temporal suffix for coordinate constructions at the same time, as in (1.3f) (M. Choo, 1998). In addition, the

study is problematic because it treats the transferentive *-taka* as an exception, and it considers the connective *-nikka* ‘because (of)’ to be non-temporal, but it should be classified in the temporal category because it denotes inherent anteriority.

Finally, previous studies mostly focus on the syntactic and semantic features of the individual conjunctive suffixes, defining the temporal suffix *-ess* in terms of tense. On the other hand, there has been a lack of research on the temporal phenomena of Korean conjunctive structures that focuses on the relationship between the three elements of the verb, the temporal marker *-ess*, and the connective.

1.3 Scope of the research

In this section, I explain the scope of this dissertation’s subject matter and data. First, this study is devoted to characterizing the relationship between the constituents of Korean conjunctive structures, which consist of verb stem, past/perfective marker, and connective, in terms of temporality. To describe the organization of temporality in general, I consider the ways in which temporality is encoded in language. There are various linguistic means to express the concept of time (Dietrich, Klein, & Noyau, 1995, p. 17), notably:

- the temporal categories in grammar such as tense and aspect;
- various types of temporal adverbials;
- inherent lexical meaning of verbs such as achievement, accomplishment, activity, and state;

- periphrastic expressions with compound verbs such as English *to start eating* or Korean *mek-e pelita* (eat-COMP throw away) ‘to finish eating’

Another way to express temporality in Korean is to use the connectives. In this research, I investigate the temporal relations in the conjunctive constructions, bearing in mind the manner in which each element contributes to the expression of temporality.

Second, this research uses canonical data for the description and explanation of the temporal phenomena, and spoken data for the corpus study. The reason I use spoken data, not written data, is that the verbal suffixes such as the temporal suffix and the connectives are expressed with a much wider range of syntactic and semantic properties in spoken language than in written language.

In Korean, there is a great variety of connectives. Y.-K. Ko (1989), for example, lists more than eighty connectives that fall under the category of predicative suffixes proposed by H.-M. Sohn (2009). Sohn classified the Korean “conjunctive enders” into six types in terms of structural patterns: predicative suffixes (e.g., *-ko*, *-ese*, *-lyeko*), conjunctive particles (e.g., *manun*), relativized postpositional phrases (e.g., *-ul ttay*, *-un twuyey*), nominalized postpositional phrases (e.g., *-ki ttaymwuney*, *-kiey*, *-umulo*), conjunctive predicate phrases (e.g., *-ki wuyhay*, *-e/a poassca*, *-konase*), and extended conjunctive phrases (e.g., *-ulkkapoase*, *-umeyttalase*, *-ul ppwun anila*). In this dissertation, the connectives include the predicative suffixes and a few grammaticalized predicate phrases such as *-konase*, *-kiey*, and *-umulo*. I use this limited set, taken from the “Integrated Korean” textbook series from the University of Hawai‘i Press (Cho, Lee,

Schulz, Sohn, & Sohn, 2010 and 2012) because it is not feasible to cover all the suffixes in a single study.

Studies on the connectives commonly examine morphological, syntactic, and semantic properties of each morpheme. This study draws on the previous studies, but focuses in particular on the temporal properties of the connectives, considering their relation with the tense/aspect suffix and lexical aspect of verbs.

I narrow the focus even further to investigate the tense/aspect suffix *-ess* and the co-occurrence of this temporal suffix with the connectives. In Korean, the prospective modal suffixes *-keyss-* and *-li-* and the retrospective modal suffix *-te-* can have temporal meaning among their semantic properties, occurring with the connectives in some cases. However, these suffixes are regarded as mood markers in the literature, even though, pragmatically, they can signify temporality.

1.4 Organization of the dissertation

Following this introduction in Chapter 1, Chapter 2 surveys general theories of clause relations in the literature and presents the theoretical background of the dissertation's discussion of the temporal phenomena in the Korean conjunctive constructions. The first part gives a preliminary description of the Korean verbal system and its composition. The second part reviews and discusses some general theories of clause combining including those proposed by Bybee (1985), Foley and Van Valin (1984), Haiman and

Thompson (1988), Lehmann (1988), and Longacre (2007), among others. The review explains the general contexts of clause combining realized by connectives in grammatical theory and in terms of a general, typological perspective of clause relations. In the second part of Chapter 2, I discuss how these theories apply to the explanation of temporal phenomena in the Korean conjunctive constructions.

In Chapter 3, I outline the temporality of the connectives as necessary background for understanding the temporal phenomena in spoken data, providing some criteria for the classification of the connectives in terms of temporality. I then investigate the temporalities of the classified connectives with respect to temporal relations between the first conjunct and the second conjunct: non-temporal versus temporal, anterior versus non-anterior, perfective versus non-perfective, overlapping versus non-overlapping, and so forth.

Chapter 4 explores the grammatical properties of the temporal suffix *-ess*, which have been debated among Korean grammarians. I briefly introduce the concepts of tense and aspect, and then investigate the syntactic functions of *-ess* in synchronic distributions. I assume that the suffix is not homogenous but polysemous, that is, that the morpheme covers a wide semantic field. The question of why the suffix shows multiple grammatical meanings leads to the investigation of its historical background. Through examining diachronic changes, I show that the suffix comes from the resultative durative construction *-e/a isi*, which is the complementizer *-e* plus the existential verb *isi*.

In Chapter 5, I analyze corpus data from the 21st Century Sejong Project of the Korean National Language Institute. I investigate how the temporal suffix is used with verbs and connectives in spoken Korean. After explaining the selection, collection, processing, and encoding of the corpus data, the chapter illustrates in some detail the contexts and functions of the suffix found in the corpus. I search for relations between the inherent aspect of individual verbs and the suffix, the temporal types of the connectives and the suffix, and the verbs and the connectives.

Chapter 6 addresses pedagogical matters, suggesting some implications for teaching based on the results of an experimental study. This chapter's empirical analysis applies the discoveries from the previous chapters, which include the grammatical functions of the suffix and the temporalities of the connectives, to the language classroom context. This chapter points out the similarities and differences between real Korean as it is spoken, and school Korean as it is presented in textbooks, and suggests a new concept for teaching the Korean suffix *-ess* in conjunctive predicates. The pedagogical implications might present a challenge to linguists, textbook writers, and KFL teachers alike.

Chapter 7 summarizes the study's major findings and concludes the dissertation.

CHAPTER 2

CLAUSAL RELATIONS AND CLAUSAL CONNECTIVES

In Korean complex constructions, conjunction and embedding are syntactic operations. Clausal connectives allow two or more clauses to combine for conjunction, and there are several ways to carry out embedding, with a complementizer suffix, relativizer suffix, nominalizer suffix, or quotative particle. In addition, when two or more clauses become part of a complex construction, the clause-final suffixes are attached to a preceding predicate stem, except for the quotative particle, which occurs after the sentence-final suffix. In this chapter, I discuss clausal relations in terms of conjunctive sentences and the grammatical means of signifying the conjunctive relation: clausal connectives. I first introduce how the connectives inflect with the verb. The following section deals with the syntactic mechanism in the relationship between the clauses, introducing the basic notions of clausal operating systems and showing how the operators apply in the Korean language. In the third section, I discuss the semantic features of the connectives and their classification.

2.1 Description of verbal complexes in clauses

Korean is a morphologically agglutinative language, in which verbals form a complex that consists of a number of inflectional affixes following a verbal stem: non-final suffixes and final suffixes. Non-final affixes denote various types of voice, aspect, modality, and tense. Final affixes express clausal relations, clause types, and speech levels. Therefore, it is necessary to generally describe the Korean verbal system and the clausal types defined by verbal suffixes before we discuss the temporal phenomena in conjunctive clauses.

2.1.1 Clause non-final suffixes

Non-final suffixes are optional and can be divided into derivational non-final suffixes and inflectional non-final suffixes. Among the non-final suffixes, derivational suffixes such as causatives and passive come right after the verb stem. Derivational suffixes create new lexical items and can change the syntactic category of the verbal stem. However, they do not have a paradigmatic system because only a very limited set can affix to the verb stem. On the other hand, inflectional non-final suffixes form a distinct paradigm where every verbal stem can freely conjugate to specify the categories that inflectional suffixes express, including modality, temporality, and illocutionary force of situations.

2.1.1.1 Voice

The voice suffixes appear as allomorphic variants such as *-i-*, *-hi-*, *-li-*, and *-ki-*, which are used for both causative and passive constructions,² and *-wu-*, *-kwu-*, and *-chwu-*, which are used only for causative constructions. No element can intervene between the verb stem and voice suffix.

- (2.1) a. *emeni-ka aki-eykey pap-ul mek-i-n-ta.*
mother-NM baby-DAT rice-ACeat-CAUS-IN-DC
'The mother feeds her baby.'
- b. *ce melli pata-ka po-i-n-ta.*
that far sea-NM see-PAS-IN-DC
'The sea is seen far in the distance.'

The grammatical meaning of the allomorph *-i-* in (2.1) depends on whether there is an object (a) or not (b).

2.1.1.2 Honorific suffixes

There are two non-final suffixes that express honorification in inflection. The subject honorific suffix *-si-* marks the speaker's deference towards a referent of either the second or third person. Its position in the verbal complex is after the derivational suffix, and it freely occurs in nonfinite clauses, whereas the addressee honorific suffix *-(su)p* never occurs in nonfinite clauses. The addressee honorific suffix occurs after the modal

² The question of why the morphemes appear in these semantically distinct constructions is not the focus of this study, but there may be pragmatic reasons in terms of historical linguistics (see G-B. Park, 1986).

suffix (e.g., *-keyss*), as well as accompanying the deferential sentence-final suffixes, as in *-(su)p-ni-ta* (declarative), *-(su)p-ni-kka* (interrogative), *-(su)p-si-o* (imperative), and *-(su)p-si-ta* (propositive).

- (2.2) a. *apeci-kkeyse sinmwun-ul ilk-usi-n-ta.*
 father-NM newspaper-AC read-SH-IN-DC
 ‘My father is reading a newspaper.’
- b. *apeci-kkeyse hakkyo-ey o-si-*sup-nikka sensayng-nim-kkeyse kitali-p-ni-ta.*
 father-NM school-to come-SH-AH-REASON teacher-HT-NMwait-AH-IN-DC
 ‘The teacher is waiting for my father because he is going to come to school.’

2.1.1.3 Temporal suffixes

Following the subject honorific suffix, temporal suffixes occur optionally. The temporal morpheme *-ess* has been interpreted as marking either past tense or perfective aspect, which will be discussed in detail in Chapter 4. When we ask whether *-ess* is a homonym or a polysemous form, we can consider its distribution. The aspect suffix appears before the tense suffix. For example, the progressive aspect (*V-ko iss-* or *V-ko kyesysi-*) occurs right after subject honorific suffixes and before tense markers.

- (2.3) a. *apeci-kkeyse so-lul kilu-si-ko kyeyssi-ess-ta.*
 father-NM cow-AC raise-SH-COMP exist-PST-DC
 ‘My father was raising cows.’
- b. *apeci-kkeyse so-lul kilu-si-ess-ess-ta.*
 father-NM cow-AC raise-SH-PST-PST-DC

‘My father has once raised cows (but now he does not).’

In (2.3a), the progressive aspect, *-ko kyeyisi-*, occurs between the subject honorific suffix *-si-* and the past tense *-ess*, indicating that this slot is for aspect. Therefore, the first of the double *-ess* in (2.3b) can be hypothetically interpreted as a perfective marker (K.-S. Nam, 1972). The affixation order will be specifically discussed in Section 2.2.1.

2.1.1.4 Mood suffixes

As for inflectional mood suffixes, there are three types, which express (i) whether the event described is regarded as reality, (ii) whether the clause carries any illocutionary force, and (iii) certain manners such as obligation, potentiality, wish, or possibility. In Korean, a number of mood suffixes or periphrastic expressions function to denote various moods and are closely interconnected. The prospective modal suffix *-keyss* occurs after the aspect and tense slots. The mood suffixes (in a narrow sense) *-li* (prospective), *-n/nun/ni* (indicative), and *-te* (retrospective) appear after the modal slot and before clause-final suffixes or sentence-final suffixes, and they express various illocutionary forces such as declarative, interrogative, propositive, and imperative, or speech levels such as deferential, polite, blunt, familiar, intimate, plain, and neutral (H.-M. Sohn, 1999).

- (2.4) a. *chimmol-lo cwuk-ess-kyess-sup-ti-ta.*
sinking-for die-PST-PRS-AH-RT-DC
‘(He) may have died because of the sinking (ship).’

- b. *chimmol-lo chwuk-ess-keyss-ciman sal-ass-ta.*
 sinking-for die-PST-PRS-but live-PST-DC
 '(He) might have died because of the sinking (ship), but he survived.'

As shown in (2.4a), the modal suffix *-keyss* occurs after the past tense suffix *-ess* and prior to the retrospective mood suffix *-ti*, showing that the slot is for the modal. In the conjunctive construction in (2.4b), the modal suffix *-keyss* occurs in the first clause before the clause-final connective suffix *-ciman* 'but'; here, no mood suffix expressing illocutionary force can appear; the retrospective mood suffix *-ta* occurs in the second clause as the sentence-final suffix.

2.1.2 Clause-final suffixes

Final suffixes can be divided into clause-final suffixes and sentence-final suffixes.

Clause-final suffixes signify clause relations and sentence-final suffixes indicate illocutionary force. The clause-final suffixes usually specify the semantic relationship between clauses such as condition, temporal succession, addition, cause, result, and background, or grammatical relations such as nominalization, relativization, complementization, and conjunction. The clause-final suffixes include nominalizers *-ki*, *-um*, *-ko*, and *-ci* (nominalizer suffixes); relativizers *-(u)n* and *-(u)l* (attributive modifier suffixes); complementizers *-key* (adverbial suffix), *-e/a* (infinitive suffix), *-ko* (gerundive suffix); and connectives such as *-ko* 'and', *-ese* 'so', *-umyen* 'if', *-nikka* 'because', and *-taka* 'while' (H.-M. Sohn, 1999).

2.1.2.1 Relativizers

Korean relative constructions are formed by means of the suffixes *-(u)n* and *-(u)l*, which I call the “realis mood marker” and the “irrealis mood marker” respectively. The realis mood marker *-(u)n* is used for attributive clauses indicating that the situation described is real, as in (2.5a), while the irrealis mood marker *-(u)l* is used for attributive clauses that express that the situation described has not occurred yet, as in (2.5b).

- (2.5) a. *nay-ka manna-n yeca*
I-NM meet-RL woman
'the woman who I met'
- b. *nay-ka manna-l yeca*
I-NM meet-RL woman
'the woman who I am going to meet'

2.1.2.2 Complementizers

A complement clause complements the verb or adjective with the help of a set of complementizers such as *-key*, the adverbial suffix; *-e/a*, the infinitive suffix; and *-ko*, the gerundive suffix. The complementizers are, for the most part, used to form either the serial predicate construction or the auxiliary predicate construction, which manifest various aspects and modality meanings.

- (2.6) a. *aki-ka cal ca-key coyonghi kel-ess-ta*
baby-NM well sleep-COMP quietly walk-PST-DC
'(I) walked quietly for the baby to sleep well.'

b. *cwul-ul* *cap-a* *tangki-ess-ta*
 rope-AC take-COMP pull-PST-DC
 '(I) took and pulled the rope.'

c. *Mary-ka* *pap-lul* *mek-e* *pe-li-ess-ta*.
 M.-NM rice-AC eat-COMP throw away-PST-DC
 'Mary ate up the rice.'

In (2.6a), the complement clause *aki-ka cal cata* 'baby to sleep well' is modifying the verb 'walk' with the help of the complementizer *-key*. In (2.6b), the parts of the serial predicate *cap-a tangki-* retain independent lexical meaning while linked by the complementizer *-e*. In (2.6c), the complementizer *-e* of the auxiliary predicate *mek-e pe-li-* is used for the perfective aspect meaning. Semantic independence distinguishes the serial verb construction in (2.6b) from the auxiliary verb construction in (2.6c). In both, the two verbs are connected with suffixes, *-a* from *capa* 'take-COMP' in (2.6b) and *-e* from *meke* 'eat-COMP' in (2.6c), and it is not possible to insert a word between the verb compounds.

In terms of the compound verb constructions, some scholars treat the auxiliary verb differently, as either a main verb taking a complement clause (J.-S. Hong, 1990), or a main verb taking a verb phrase (J.-I. Kwon, 1977), depending on the studies' theoretical backgrounds. I follow Sohn's (1999) approach and consider the complementizer of a complement to be fossilized with the following main clause predicate; that is, the verbal constructions have been lexicalized, and now function as aspectual and/or modal markers.

2.1.2.3 Nominalizers

Korean nominalized constructions do not have a head noun but do have nominalizer suffixes such as *-ki*, *-um*, *-ko*, and *-ci* as in (2.7). With the help of the nominalizers, the nominalized clauses in complex sentences can carry grammatical case such as nominative, accusative, dative, genitive, and locative (H.-M. Sohn, 1999).

- (2.7) a. *John-un hakkyo-ey ka-ki-ka silh-ess-ta.*
 J.-TC school-to go-NOM-NM hate-PST-DC
 'John hated to go to school.'
- b. *John-un hakkyo-ey ka-ko siph-ess-ta.*
 J.-TC school-to go-NOM want-PST-DC
 'John wanted to go to school.'
- c. *John-un hakkyo-ey ka-ci anh-ass-ta.*
 J.-TC school-to go-NOM don't-PST-DC
 'John didn't go to school.'

2.1.2.4 Connectives

In this study, “connective” refers to conjunctive suffixes that express relationships between two clauses such as temporal succession, conditions, causes, purposes, contrasts, concessions, additions, manners, circumstances, and consequences, among others. The following list of connectives is not exhaustive:

-ko ‘and’, *-(u)na* ‘but’, *-eto* ‘but’, *-ese* ‘and then, so’, *-ko(se)* ‘and then’,
-(u)nikka ‘because’, *-(u)myense* ‘while’, *-(u)myen* ‘if’, *-taka* ‘while, and then’,
-key ‘so that’, *-tolok* ‘so that’, *-ciman* ‘but’, *-kena* ‘or’, *-ketun* ‘when’

- (2.8) a. *meri-ka* *apha-se* *hakkyo-ey* *an* *ka-ss-eyo*
 head-NM sick-REASON school-to NEG go-PST-POL
 ‘I had a headache, so didn’t go to school.’
- b. *pom-i* *wa-ss-nuntey* *nalssi-ka* *acik* *chwup-ta*.
 spring come-Pf-but weather-NM still cold-DC
 ‘Spring has come, but it is still cold.’

The connective *-ese* indicates that the situation of sickness precedes the situation of school absence in (2.8a). In (2.8b), the connective *-nuntey* indicates that the preceding clause provides the circumstance for the unexpected content of the following clause. The difference between the two connectives lies in whether they can occur with a temporal suffix that points towards past events. This is deeply related with the temporality of the connectives, which will be discussed in Chapter 3.

In addition, the complementizers that link two verbal complexes for grammatical constructions such as the “progressive” construction (e.g., *-ko iss-*), the “resultant state” construction (e.g., *-e/a iss-*) and the compound verb construction shown at the 2.1.2.2 are distinguished from the connectives, because the complementizers do not retain textual relations compared to the connectives. The distinction between the complementizers and the connectives, however, is not straightforward but a matter of degree in grammaticalization where a suffix has been generalized and lost its semantic substance (Hopper & Traugott, 2003). For example, the circumstantial connective *-nuntey* has been grammaticalized from the relative construction *-nu-* (IN) + *-n-* (RL) + *-tey* (place) which is more substantial and less abstract.

There are amount of the quasi-connectives that are undergoing the grammaticalization like *-nuntey* such as the relativized phrases (e.g., *-un hwuey* ‘after’, *-un/nun tonganey* ‘while’ etc.), nominalized phrases (e.g., *-ki ttaymwuney* ‘because of’, *-kiey* ‘as’ etc.), conjunctive predicate phrases (e.g., *-ko nase* ‘after’, etc.), and extended conjunctive phrases (*-(ul)kka poa* ‘for fear that’, *-(u)l ppwun anila* ‘not only~ but also’, etc.) (H.-M. Sohn, 2009). Also, I excluded those derived ones in this study.

To sum up, I described the Korean verbal suffixes focused on the clause non-final and clause-final suffixes. The non-final suffixes include causative/passive suffixes in the domain of derivational suffixes, and honorific, temporal, and modal suffixes. The clause-final suffixes include nominalizers, complementizers, relativizers, and connectives. These suffixes contribute to expressing the syntactic and semantic relations between clauses. In the next section, I discuss the sentence operating system that explains the classification of the clausal relations syntactically.

2.2 Sentence operating system in complex constructions

Traditionally, complex constructions are sharply divided between coordination and subordination; that is, whether they consist of two coordinated independent clauses or a main and a subordinate clause. In Korean, conjunctive clauses may be either coordinate or subordinate, while all other embedded constructions including relative, complement, nominalized, and quotative clauses are essentially subordinate. The subordinately embedded clauses function in grammar either as a complement to modify the main

predicate (Complement and Quotative clause), as a modifier to the head noun (Relative clause), or as a nominal constituent in a clause or sentence (Nominal clause).

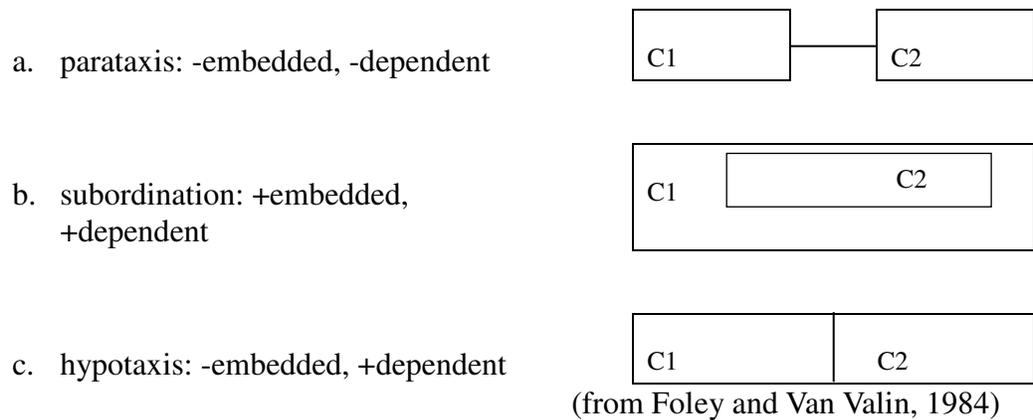
In this dissertation, I categorize the subordinate conjunctive construction as hypotaxis and the embedded construction as subordination, following several studies on non-Indo-European languages that, since the 1980s, have questioned the binary distinction based on evidence from spoken languages (Foley & Van Valin, 1984; Haiman & Thompson, 1988; Longacre, 2007). The common ground of these studies is the idea that syntactic relations among clauses show a continuum between coordination and subordination (see Haiman & Thompson, 1988 on the matter of cross-linguistic data). In other words, complex constructions range in type from a juxtaposition of independent clauses that can stand alone (Longacre, 2007) on one end of the continuum (parataxis), to a highly compressed relationship in which an independent and an embedded/dependent clause that cannot stand alone are combined, on the other end (subordination). Cluster points exist between the two ends, with a construction type's position on the continuum depending on the degree of dependency.

(2.9) If you keep smoking those cigarettes, you're going to start coughing again.

In (2.9), the preceding clause is dependent on the following clause because it cannot stand alone, but there is no embedding, which is called “cosubordination” (Foley & Van Valin, 1984), or “hypotaxis” (Haiman & Thompson, 1988). There are various clausal

relations in the types that fall between the two ends of the continuum.³ The three relations of parataxis, hypotaxis, and subordination can be represented as in Figure 1.

Figure 1. Three types of clause linking



In parataxis, two or more clauses are functionally independent, equivalent, and symmetrical, whereas they are asymmetrical and dependent in hypotaxis and subordination. The equivalence between the two clauses can be observed through testing with syntactic criteria, such as illocutionary force, permutability of conjuncts, and anaphoric phenomena, among others.

³ Following Foley and Van Valin (1984), Lehmann (1988, p. 7) proposed a continuum of “hierarchical downgrading” in which there is no hierarchy between the two clauses on the far left side, and the embedded clause is hierarchically downgraded within the main clause on the far right side.

parataxis	◀				▶	embedding
independent clauses		adjoined clauses	correlative diptych	medial clause	conjunction partitive	governed clause

First of all, paratactic conjunctive sentences can have anaphora only in limited cases, whereas hypotactic conjunctive sentences show quite free use of anaphora (H.-B. Im & S.-W. Chang, 1995, p. 330).

- (2.10) a. *caki any-ka apha-se John-un keylsekhay-ess-ta.*
 self wife-NM sick-so John-TC be absent-PST-DC
 ‘His wife was sick so John was absent.’
- b. **John-un yoli-lul cal ha-ko caki any-nun*
phiano-lul cal chi-n-ta.
 John-TC cook-AC well do-and his wife-TC
 piano-AC well play-IN-DC
 ‘John cooks very well and his wife plays piano very well.’

The reflexive anaphora *caki* in (2.10a) is able to refer to *John* because the preceding clause has a structural relationship with the main clause. In contrast, in (2.10b), the clause terminal suffix *-ko* combines two parallel clauses without a structural relation between them, and the anaphor is unacceptable.

- (2.11) a. *John-un caki-ka aph-ase kyelsekhay-ess-ta.*
 John-TC self-NM sick-REASON be absent-PST-DC
 ‘John was sick so he was absent.’
- b. *caki-ka aph-ase John-un keylsekhay-ess-ta.*
 self-NM sick-REASON John-TC be absent-PST-DC
 ‘He was sick so John was absent.’

- c. *John-un yoli-lul cal ha-ko ku-uy any-*
nun phiano-lul cal chi-n-ta.
 John-TC cook-AC well do-and he-GEN wife-
 TC piano-AC well play-IN-DC
 'John cooks very well and his wife plays piano very well.'
- d. **ku-uy any-nun phiano-lul cal chi-ko John-*
un yoli-lul cal ha-n-ta.
 his-GEN wife-TC piano-AC well play-and John-
 TC cook-AC well do-IN-DC
 'His wife plays piano very well and John cooks very well.'

In addition, both forward and backward anaphoras can be used freely in hypotaxis as either reflexives or pronominals, as in (2.11a–b), while only pronominal forward anaphora are accepted in parataxis, as in (2.11c–d) (H.-K. Yoo, 1986, pp. 8–9).

Second, one of the most remarkable features of the paratactic constructions is the symmetricity between the first junct and the second junct (H.-M. Sohn, 1999, p. 304). When the two clauses exchange positions, the truth-value of the sentence does not vary, as (2.12) demonstrates. However, this is not the case with hypotaxis.

- (2.12) a. *John-un nolay-lul pwulu-ko, Mary-nun phiano-lul*
chi-n-ta.
 John-TC song-AC sing-and Mary-TC piano-AC
 play-IN-DC
 'John is singing a song and Mary is playing the piano.'
- b. *Mary-nun phiano-lul chi-ko, John-un nolay-lul*
pwulu-n-ta.
 Mary-TC piano-AC play-and John-TC song-AC
 sing-IN-DC
 'Mary is playing the piano and John is singing a song.'

- (2.13) a. *pom-i o-myen kkoch-i pi-n-ta.*
 spring-NM come-if flower-NM blossom-IN-DC
 'If spring comes, flowers blossom.'
- b. *?kkoch-l pi-myen pom-i o-n-ta.*
 flower-NM blossom-if spring-NM come-IN-DC
 'If flowers blossom, spring comes.'

It is not the symmetrical relation alone that allows permutability, as shown by the contrast between the two example sets in (2.13). However, permutability does not provide a stable standard for classification because of exceptions such as that shown in (2.14). In spite of the hypotactic construction, the sentence is permutable.

- (2.14) a. *John-un khi-ka khe-to, Mary-nun khi-ka cak-ta.*
 J.-TC height-NM tall-bit Mary-TC height-NM small-DC
 'John is tall, but Mary is small.'
- b. *Mary-nun khi-ka cak-ato, John-un khi-ka khu-ta.*
 M.-TC height-NM small-but John-TC height-NM tall-DC
 'Mary is small, but John is tall.'

Furthermore, even though symmetricity and permutability are salient features of paratactic sentences, not all paratactic sentences are symmetrical and permutable.

Third, the nature of the clausal relation can be identified through the different behaviors of clauses with differing illocutionary force. For instance, a clause in a complex sentence may or may not be able to have a tag question, due to the structural differences between parataxis, hypotaxis, and subordination.

- (2.15) a. John read a book, and Mary will watch a movie, won't she?
- b. *John believes that Mary went to England, didn't she?

The sentence in (2.15a) is grammatical because the two independent clauses in parataxis have different illocutionary force. On the other hand, (2.15b) is ungrammatical because the embedded clause does not have illocutionary force.

To sum up, the question of why the nature of the syntactic relations of clauses in complex sentences varies can be addressed by examining the source of the differences in complex constructions. Each of the three representative relations in complex constructions has distinct syntactic features, which we can identify through testing with some specific criteria, so-called "operators." The "peripheral operators," such as illocutionary force, only apply to a main clause, and hypotactic and embedded clauses are not affected by it, while aspect is a "nuclear operator" (Foley & Van Valin, 1984, p. 208). The next section will discuss the operators with regard to Korean sentence structure in more detail.

2.2.1 Operators

In terms of grammatical units, Foley and Van Valin (1984, p. 77) proposed that there are three layers in the clause structure: nucleus, core, and periphery. The nucleus is the

innermost layer of the clause, containing more than one predicate. The core is a layer surrounding the nucleus consisting of one or two arguments of the predicate, which are traditionally called “subject” and “direct object.” The periphery is the outermost layer of the clause, containing constituents expressing the spatio-temporal setting of the event and the secondary participants (e.g., beneficiaries) as well.

The distinction between the three layers is evidenced by both morphological forms and syntactic behaviors. For example, the core arguments tend to be morphologically unmarked, as in English, whereas the peripheral arguments occur in marked forms with adpositions. There are languages, however, in which the marking properties alone are not sufficient to differentiate core from peripheral arguments (e.g., the distinction between accusative and dative NPs in German).⁴ No single criterion can differentiate core and peripheral arguments in all languages.

Operators are one of the syntactic criteria that make it possible to distinguish among the three layers, because each of the three layers has its own operator that has scope over it. The operators are not constituents of the layer but morphological devices such as affixes or clitics to the nucleus that operate on the whole layer (Foley & Van Valin, 1984, p. 208). The most common operators are the inflectional categories such as tense, aspect, and mood because they can apply to most events and states.⁵

⁴ In this case, it can be tested through passivization because the dative NP cannot become the nominative subject of a passive. Therefore, the direct object NP is a core argument.

⁵ In a cross-linguistic survey of 50 languages, Bybee (1985, p. 33) reported that 72% of the languages had inflectional tense, aspect, and mood.

Foley and Van Valin (1984) explained the contrast between tense and aspect in verbal inflection, saying that aspect is an operator over the nucleus while tense is a peripheral-layer operator. Tense, as a temporally deictic reference (Comrie, 1985) to a reported event, “characterizes the narrated event with reference to the speech act” (Jakobson, 1971, p. 135), whereas aspect “characterizes the event itself without involving its participants and without reference to the speech act” (Jakobson, 1971, p. 134), simply expressing the internal temporal structure (Comrie, 1976) without being oriented to anything else. Aspect is not concerned with the present speech act or the participants that are the core arguments in the event. Therefore, aspect’s scope only covers the predicate, and so it is a nuclear operator. Tense, in contrast, is much like adverbials that place NPs in time and space with respect to the speech act. Tense has scope over the entire layer, and so it is a peripheral operator.

The scope difference between tense and aspect is reflected in the sequence of verb inflection. Diverse cross-linguistic data show aspect occurring closer to the verb stem than tense (Foley & Van Valin, 1984; Bybee, 1985). In other words, tense, aspect, and mood each have different probabilities in their ordering with regard to each other. In terms of the ordering of the verbal inflection, Bybee (1985, p. 11) proposed three hypotheses based on typological surveys:

- (a) Meaning elements that are directly relevant to verb meaning are more likely to be fused or bound than those that are not.
- (b) The order in which they occur is partly correlated with their degree of relevance to the verb.

- (c) Among meanings relevant to the verb, the most general are likely to be expressed inflectionally.

Aspect is the most relevant to the verb, tense next, and mood is the least relevant. Through iconicity, the physical order of the operators reflects their relevance. Therefore, we would expect aspect to occur next to the verb stem.

- (2.16) a. Kewa
íra-paa-ru.
cook-Pf-Ps
'I finished cooking it.'
(Franklin, 1971 cited by Foley & Van Valin, 1984)
- b. Tiwi
ŋə-ru-untin-apa
I-Ps-DURA-eat
'I was eating it.'
(Osborne, 1974 cited by Foley & Van Valin, 1984)

In Kewa, as (2.16a) shows, the verb stem is suffixed with the aspect marker first, then the tense marker. In a typologically different language, Tiwi, as (2.16b) shows, the durative aspect suffix is closer to the verb stem than the past tense morpheme. There is no counter-example in which tense occurs closer to the nucleus verb stem (Foley & Van Valin 1984; Bybee, 1985; Bybee & Dahl, 1989).

Mood is another general operator. Although scholars have suggested various categories of mood, the three traditional subtypes of mood are illocutionary force, modal (or status), and modality. First, mood has been used to describe illocutionary force such as imperative, indicative, propositive, requestive, and suppositive, among others (Austin,

1975; Searle, 1969). In Korean, this is realized with integral components that indicate sentence types and speech levels. Second, modal often refers to the distinction between realis and irrealis in that when an event is expected to occur, the speaker may express the likelihood that the event will become a reality (Bybee, 1985, p. 167; “status” in Foley & Van Valin, 1984). The English modal, for instance, expresses distinctions with *may*, *can*, *will*, and *must*, while some languages have only a binary distinction. In Korean, the definite future suffix *-keyss*, the prospective *-li*, and the irrealis mood marker *-ul* are regarded as modals (H.-M. Sohn, 1994). Third, modality refers to the relationship between the event described and its actors with reference to the speaker (Jakobson, 1971, p. 135), that is, the way the speaker presents an attitude towards a proposition, such as whether an actor has the obligation, the intention, or the ability to perform it (Bybee, 1985, p. 28; Foley & Van Valin, 1984, p. 214).

All of the subtypes of mood are operators, but they are distinctive in the sentence operating system. Both illocutionary force and modals are peripheral operators, having no direct relation to the nucleus or to any of its core arguments, but having scope over the entire proposition, whereas modality is a core operator, because, as shown in Jakobson’s (1971) definition, it deals with the relationship between the event and its actor, thus having scope over both the nucleus and its core arguments. As with the order of tense and aspect, cross-linguistically the different scopes of the three mood categories are reflected in the sequences in which the relevant grammatical morphemes or periphrastic expressions appear in relation to the verb or verb stem.

In sum, scope differences are reflected in the ordering of the operators.

Illocutionary force, modals, and tense operators cover the periphery, which includes the nucleus and the core; illocutionary force operates on the outermost layer, with scope over all constituents including the other operators. Modality is a core operator and aspect has scope over only the nucleus. Bybee (1985) surveyed 50 languages and proposed a universal order of verbal affixes: voice, aspect, modality, tense, modal, illocutionary force. Next, I consider the Korean operators.

2.2.2 Sentence operators in Korean

In all Korean conjunctive constructions, the first clause, which ends with a connective, is followed by the main clause, which ends with a sentence-final suffix. Operators such as modality, modal, tense, and aspect can occur in both clauses in Korean, but illocutionary force cannot. However, the occurrence of the operators in the first clause is not always possible because the connectives may suppress them depending on their syntactic features.

Conjunctive sentences are divided into paratactic conjunctive and hypotactic conjunctive⁶ in terms of syntactic-semantic dependency, although the distinction is not clear-cut; rather, they fall on a continuum. Although closely related, the syntactic

⁶ I will use the terms “paratactic” for the coordinate and “hypotactic” for the cosubordinate, borrowing from Haiman and Thompson (1988), because the term “cosubordinate” is not yet much used in English; in addition, the terms “paratactic” and “hypotactic” demonstrate the distinction.

structure is not the same as the semantic structure (Culicover & Jackendoff, 1997). For example, a seeming parataxis (e.g., *You drink another can of beer and I'm leaving*), is regarded as a hypotaxis semantically. In this section, I will test some syntactic operators for Korean conjunctive sentences and then investigate the semantic relationship between clauses in terms of connectives.

As discussed in Section 2.2.1, the sentence operators play a critical role for establishing the cluster points that may be positioned on the continuum between parataxis and subordination, depending on the degree of dependency. Korean parataxis does not have exclusive paratactic suffixes or conjunctions, unlike English. In other words, the paratactic conjunctions are morphologically unmarked.

- (2.17) a. *John-i kyelhon-ul ha-ko Mary-ka yakhon-ul hay-ss-ta.*
 J.-NM marriage-AC do-and Mary-NM engage-AC do-PST-DC
 'John got married and Mary got engaged.'
- b. *John-i pap-ul mek-ko hakyoyey ka-ss-ta.*
 J.-NM rice-AC eat-and school-to go-PST-DC
 'John ate rice and went to school.'
- c. *John-i pap-ul mek-ko iss-ess-ta.*
 John-NM rice-AC eat-and stay-PST-DC
 'John was eating rice.'

In (2.17), all the sentences use the same morpheme, *-ko*, for conjunction although (2.17a) is parataxis and (2.17b) is hypotaxis. Even the auxiliary verb construction denoting the progressive aspect in (2.17c) is marked by the complementizer *-ko*. The

absence of exclusive grammatical markers for these relations makes it harder to distinguish between parataxis and hypotaxis in Korean than in Indo-European languages. However, the syntactic significance of the operators can help to differentiate hypotaxis from parataxis because the differences between them are reflected in the appearance and the order of the operators. In the next section, I look at how the operators apply to Korean complex sentences.

2.2.2.1 Illocutionary force

Illocutionary force operates only on a single final verb, which can be preceded by chains of verbs. The suffixes that indicate illocutionary force mark the end of complex sentences in which the preceding chained verbs may be reduced in their inflections for the peripheral operators such as modal and tense. Therefore, in Korean sentences, illocutionary force cannot help to clearly distinguish between parataxis, which has separate and autonomous operators, and hypotaxis, in which the first clause has nucleus and core operators and the following clause has all three operators. The following clause in parataxis may have a distinct illocutionary force, or the two independent clauses may share the same illocutionary force (H.-B. Im & S.-W. Chang, 1995). This is the reverse of the situation in English, as shown in (2.18).

- (2.18) a. *John-i kyelhonha-ko Mary-ka yakhon-ul hay-ss-ni?*
 J.-NM marry-and Mary-NM engage-AC do-PST-Q
 (i) 'Did John get married and Mary get engaged?'
 (ii) 'John got married and did Mary get engaged?'

- b. *John-i kyelhonhay-se Mary-ka yakhon-ul hay-ss-ni?*
 J.-NM marriage-so Mary-NM engage-AC do-PST-Q
 'Did Mary get engaged because John got married?'

In (2.18a), the paratactic sentence is ambiguous as to whether the illocutionary force of the question has an effect on the whole sentence or only on the final clause. That is, two interpretations are possible. On the other hand, the illocutionary force of the question affects only the main clause in hypotaxis, as in (2.18b). Because the two clauses in parataxis are connected not by overt conjunction but by a connective, the illocutionary force usually affects the final clause in either parataxis or hypotaxis. In addition, in Korean, illocutionary force is generally expressed by relying on the sentence-final suffixes such as *-ni* (interrogative), *-ca* (propositive), *-la* (imperative), and *-ta* (declarative). Therefore, Foley and Van Valin's (1984) suggestion that illocutionary force can be used to differentiate hypotaxis from parataxis does not apply in Korean.

2.2.2.2 Tense

Tense is often confused with aspect because, for example, a completed event usually happens in the past. As observed in Section 2.2.1, however, tense and aspect are distinctive by definition. Accordingly, they can be identified based on their definitions and with the additional help of information from their contexts even in seemingly ambiguous sentences. In addition, their scopes are reflected in different layers: tense for the periphery, and aspect for the nucleus. Therefore, the tense operator can show the distinction between parataxis and hypotaxis.

- (2.19) a. *John-i kyelhonhay-ss-ko Mary-ka yakhonhay-ss-ni?*
 J.-NM marry-PST-and Mary-NM engage-do-PST-Q
 (i) 'Did John get married and did Mary get engaged?'
 (ii) 'John got married and did Mary get engaged?'
- b. **John-ikyelhohay-ss-ese Mary-ka yakhonhay-ss-ni?*
 J.-NM marry-PST-REASON Mary-NM engage-PST-Q
 'Did Mary get engaged because John got married?'

The presence of *-ess* in the preceding clause in (2.19a) does not generate any semantic difference from (2.18a), because the past tense of the preceding clause is interpreted as either absolute or relative in parataxis. On the other hand, the presence of *-ess* in the dependent clause in (2.19b) causes the sentence to be ungrammatical. In this way, the tense operator may function as a touchstone for judging whether the clausal relation is paratactic or hypotactic.

2.2.2.3 Aspect

While the question of whether Korean has a grammatically distinct morpheme for aspect remains open (see Chapter 3), Korean does observably express aspect in verb serialization. When the aspect is expressed by the auxiliary predicate construction with a verb like 'throw away' for perfective aspect or 'go' for progressive aspect, the inflectional ordering, aspect before tense, does not vary.

- (2.20) a. *pap-ul ta mek-e peli-ess-ta.*
 rice-AC all eat-INF throw away-PST-DC
 '(I) ate the rice up.'

b.	<i>elum-i</i>	<i>nok-a</i>	<i>ka-n-ta.</i>
	ice-NM	melt-INF	go-IN-DC
	'The ice is melting.'		

In (2.20a), there is a nucleus with the two verbs *mek-* 'eat' and *pe-li-* 'to throw away'.

The transitivity is expressed by *mek-* 'to eat', not by *pe-li-* 'to throw away', semantically.

The latter verb, *pe-li-* 'to throw away', is an operator, indicating perfective aspect. In

(2.20b), the operator *ka-* 'to go' occurs right after the nucleus, *nok-* 'to melt', and

indicates progressive aspect. The ways for aspect to be indicated by an auxiliary verb

construction⁷ are extensive in Korean: *-e nayta* 'do all the way', *-ko malta* 'end up', and

-e nohta 'put' express perfective; and *-ko issta* 'exist', *kelita* 'keep doing', and *-e tayta*

'do a lot' express progressive aspect. All the auxiliary constructions for aspect are used

as nucleus operators and precede the core and/or peripheral operators like tense or mood.

2.2.2.4 Honorific suffix

Korean has an honorific system in which various linguistic forms encode the speaker's

attitude towards his/her socio-cultural relationship with the referent. The addressee

honorific suffix, *-(su)p*, is employed right after the modal suffix and prior to the

illocutionary suffix, which is accordingly a peripheral operator. On the other hand, the

subject honorific suffix, *-si-*, which occurs right after the voice suffix, may function as

an operator with scope over the core layer. E.-K. Yi (1996, p. 107) suggested that the

more independent the preceding clause is, the more natural the honorific suffix appears.

⁷ Aspect consists of perfective and imperfective in the narrow meaning. The term is also used, however, to include punctual, durative, continuative, inceptive, perfect, and semelfactive, among others (Dixon, 2012, p. 35). Both *-e pelita* and *-e kata* mark aspect in this broader sense.

- (2.21) a. *apeci, halapeci-kkeyse ka-?Ø/si-ese, halmeni-to ka-si-ess-sup-ni-ta.*
 father grandfather-NM go-?Ø/SH-so grandmother-also go-SH-PST-AH-IN-DC
 ‘Father, grandfather went, so grandmother went too.’
- b. *apeci, halmeni-kkeyse sicang-ey ka-?si/Ø-ese kwail-ul sa-si-ess-sup-ni-ta.*
 father grandmother-NM market-to go-?SH/Ø-so fruit-AC buy-SH-PST-AH-IN-DC
 ‘Father, grandmother went to a market and bought fruit.’
- c. *apeci, halmeni-kkeyse aphu-?si/Ø-ese nwu-si-ess-sup-ni-ta.*
 father grandmother-NM sick-SH-REASON lie down-SH-PST-AH-IN-DC
 ‘Father, grandmother was sick, so she lay down.’

The addressee honorific suffix in the sentences in (2.21) never occurs in the first clause, due to its status as a peripheral operator. However, it is more natural to use the subject honorific suffix on each clause in (2.21a), while in (2.21b), where both verb phrases share the same subject, it is more acceptable for them to share the suffix. In general, argument-sharing increases the dependency between the clauses (H.-B. Im & S.-W. Chang, 1995). This is recognized in (2.21c), in which no other element exists between the two verb phrases.

2.2.2.5 Modal and Modality

Although modals are deeply related with modality, there is a distinction: modality characterizes the speaker’s feeling about the relation between an actor and an event, while modals encode the speaker’s inference about the reality of the event. In terms of

deontic and epistemic meanings of modals (Lyons, 1977), for example, epistemic modals correspond to the category of modals, and deontic modals to the category of modality.

- (2.22) a. *John-un hankwuk-ul ttena-ya ha-l-ci-molu-n-ta.*
 J.-TC Korea-AC leave-INF do-RL-fact-don't know-IN-DC
 'John may have to leave Korea.'
- b. *na-un hankwuk-ul ttena-ya ha-keyss-ta.*
 I-TC Korea-AC leave-INF do-PRS-DC
 'I may have to leave Korea.'

In the English translation of the example sentence in (2.22a), 'may' has the epistemic reading, expressing the realis-irrealis state for the category of modal, whereas 'have to' denotes the deontic meaning that corresponds to the category of modality. The Korean periphrastic expressions for both modality *-ya ha-* 'have to' and modal *-l ci molu-* 'don't know' correspond to the English version. What matters despite their typological irrelevance to each other, however, is the order of the mood expressions following the verb 'leave'. That is, modality is closer than modal to the verb. In (2.22b), as well, the modal suffix, *keyss*, follows the periphrastic modality expression *-ya ha-* 'have to'.

So far, this section has described the operators in Korean sentences. Next, the discussion delves into the relative ordering of tense and modal, which are both peripheral operators. Foley and Van Valin (1984, p. 216) indicated that the establishment of their order is rather difficult, and much more research is needed in a wide variety of languages. In Korean, tense may occur closer to the verb than modal.

- (2.23) a. *John-i ku il-ul machi-ess-keyss-ta.*
 J.-NM the work-AC do-PST-PRS-DC
 'John may have done the work.'
- b. *pi-ka wa-ess-eya hay-ess-ta.*
 rain-NM come-PST-NECESS do-PST-DC
 'It should have rained.'

In (2.23a) the past tense marker *-ess* is followed by the modal marker *-keyss*, which is not reversal. Even when grammaticalized modal predicates such as *-ul ci moluta* 'RL-way-don't know', *-ul swu issta* 'RL-way-stay', *-ul ttalum-ita* 'RL-compliance-be', *-ul man hata* 'RL-value-do', and many others, occur with a tense morpheme, the tense suffix is generally attached not to the preceding verb but to the auxiliary verb. However, there are instances such as (2.23b) in which both verbs have the same morpheme, *-ess*; in the preceding clause, it is inserted before the expression of deontic modality *-e ya ha-* 'should'. Grammaticalized predicates behave as a single auxiliary verb denoting the speaker's modality. Thus, the first occurrence of *-ess* may not be a past tense marker, because the deontic modal is a core operator and tense is a peripheral operator. The following verbs of the auxiliary and/or serial verb constructions are regarded as a single modal or modality. First, the relation between the two verbal clauses is not symmetrical. Second, the two verbs must share the same subject. Third, no words are permitted between the two. The presence of *-ess* in the preceding verbal complex seems to be mobilized by the speaker's intention to denote the perfectiveness of the event.

As the discussion thus far makes clear, the differences between the types of syntactic relations between clauses, including parataxis (*-dependent*, *-embedding*),

hypotaxis (+dependent, -embedding), and subordination, (+dependent, +embedding) are not clear cut. These distinctions are deeply related to the scope of the various operators over the layers of the clause structure, as the clauses in parataxis have individual peripheral layers, while those in hypotaxis each have a core layer and a peripheral layer in Korean conjunctive constructions.

CHAPTER 3

TEMPORALITY OF CLAUSAL CONNECTIVES

3.1 Background: Semantics of the connectives

When two or more clauses are combined in a conjunctive sentence, the syntactic relations between the clauses are realized with the connectives, which suffix to the preceding verbs in Korean. In fact, syntactic clausal relations are closely related to semantic relations, which is to say that the more dependent the semantic relation, the less marked the syntactic means for expressing that relation. Givón (1984, p. 315) described this tendency for syntactic-semantic dependency thus: “The more dependent the subordinate clause is semantically/pragmatically on the main clause, the less likely are independently expressed TAM markers to appear in the subordinate clause.”

To capture the interaction of syntactic features and the nature of the semantic relationship, it is important to note that Givón is using the term “dependent” to refer to the extent to which the relative dependency of the semantic relation between two clauses in a complex construction correlates with the syntactic markings that are realized in the sentence operating system. It is immediately obvious that a clause that has its own peripheral operators is more semantically independent than one that does not. In the paratactic constructions where the clauses are independent, consequently, the first

clauses are dependent on the second clauses only with respect to illocutionary force, but may have all of the nuclear, core, and peripheral operators such as voice, subject honorific, aspect, modality, modal, and tense. In the hypotactic constructions that link dependent clauses and independent clauses, the first clause is dependent upon the second clause with respect to the peripheral operators including illocutionary force, tense, and modal, but may have its own modality operator and nucleus operators such as voice, subject honorific, and aspect. A clause that contains only a predicate is the most dependent on the main clause, but may have the nucleus operators.

No language has a one-to-one correlation between syntax and semantics in interclausal dependency. The connectives are used to express a variety of semantic relations, which are realized as grammatical relations. A given semantic relation can have a variety of morphological means of expression. For example, purposeful action can be expressed by several connectives such as *-le*, *-lyeko*, *-koca*, *-key*, and so on, in Korean. Conversely, a connective can express various semantic relations. For instance, *-ese* can indicate temporal succession, cause, result, and relative time as well as ways. The connective *-eto* indicates temporal succession and addition, *-ko* temporal succession and addition, and *-nulako* cause and same-event addition. Such examples could be continued. The complex form-meaning phenomena in the connectives will be discussed in Section 3.2.1 in detail.

In school grammars, the connectives are generally categorized as coordinate, subordinate, and auxiliary (K.-S. Nam & Y.-K. Ko, 1993). Based on that classification, the scholarly literature has usually divided the connectives into several semantic types

first, then described the syntactic-semantic features of each connective (H.-B. Choe, 1971; H. Kim, 1992; B.-S. Yang, 1994; E.-K. Yi, 1996; Y.-K. Ko & B.-K. Ku, 2008; H.-M. Sohn, 2009). Table 2 displays three representative categorizations of semantic types of connectives with several examples.

The semantic categories for clausal relations are various depending on the perspective of the grammarians. For example, the background connective *-nuntey* has been described as specification (S.-K. Ju, 1910), explanation type (H.-B. Choe, 1971), elaboration (H.-M. Sohn, 2009), background (E.-K. Yi, 1996), and situation (P.-H. Yoon, 2005). Likewise, the cause connective *-ese* has been classified as expressing reason (S.-K. Ju, 1910), cause and result (P.-H. Yoon, 2005), relative time or ways (H.-M. Sohn, 2009), and cause (E.-K. Yi, 1996).

The labeling of clausal relations varies in part because it depends on which clause is the focus. In the case of *-ese*, both “reason” and “cause” indicate a role that the first clause plays with respect to the second clause, while “cause and result” denotes the relation between the two clauses. For *-nuntey*, it is not clear which clause indicates “elaboration” (H.-M. Sohn, 2009), “situation” (P.-H. Yoon, 2005), or “background” (E.-K. Yi, 1996), although “elaboration” may be signified by the second clause, while “situation” and “background” probably refer to the first clause. That is, the content of a conjunctive sentence connected by *-nuntey* is “elaborated” in the second clause against the “background” or in the “situation” in the first clause.

Table 2. Semantic types of connectives

H.-M. Sohn (2009)	P.-H. Yoon (2005)	E.-K. Yi (1996)	Examples
temporal succession	temporal relation	precedence	<i>-ko, -konase, -ese, -teni, -taka</i>
relative time	temporal relation	precedence, result	<i>-ese, -ca, -tolok, -(u)mye(nse), -ulttay</i>
conditional	condition	condition	<i>-ketun, -tamyen, -eya, -takanun, -eto</i>
cause	cause & result	cause	<i>-ese, -nikka, -ni, -(u)mlo -nulako</i>
result	result	result	<i>-tolok, -key</i>
purpose	purpose	result	<i>-le, -koca, -key</i>
unordered addition	enumeration	enumeration	<i>-ko, -(u)mye</i>
same-event addition	enumeration	enumeration	<i>-ko, -keniwa</i>
elaboration	situation	background	<i>-(n)untey, -(n)unci</i>
contrast	contrast	contrast	<i>-ciman, -(u)na, -eto, -kenman</i>
disjunction	selection	selection	<i>-kena, -tunci, two clause apposition only in questions</i>
suggestion	-	-	<i>-nuni (pota)</i>
ways	-	-	<i>-ese, -e kaciko</i>
-	concession	concession	<i>-eto, -telato, -ntul</i>

With regard to the selection of the various connectives, the decision is made in accord with the speaker's intention, cognition, or communicative purposes in the two different situations of the two clauses. For instance, if the speaker recognizes the first

event as a cause of the second clause event, s/he chooses among the many cause connectives (e.g., *-ni*, *-ese*, *-may*, *-e*, *-mulo*, *-nuncila*, *-kenul*, *-kiey*, *-kilo*, *-nikka*, *-nulako*, *-ncuk*, *-nani*, etc.). Therefore, the semantic categories should be labeled to reflect the way in which the speaker recognizes the role of the first situation, not the relation between the two situations. In this study, I have modified the labels that have been used in the literature to follow this reasoning.

3.2 Temporal properties of the connectives

In conjunctive constructions, there are morphological, syntactic, semantic, and pragmatic factors in clausal combining, and these factors are concentrated on the connectives. Of course, suprasegmental devices may be a distinctive factor in clause combining. The grammatical properties of the connectives include inter-clausal anaphoricity (see Section 2.2), temporal succession versus temporal overlap (temporality of the connectives), the switch reference system,⁸ co-occurrence possibilities for tense-aspect-mood (TAM) elements, and so on, among which this study's interest is focused on the temporal properties of the connectives and the co-existence of a temporal morpheme with each connective, in order to investigate the temporal phenomena of the conjunctive sentences. In this chapter, I will discuss the

⁸ In “verb-chaining” languages, switch reference is a linguistic device indicating whether the preceding and following clauses have the same subject or a different subject (Longacre, 2007, p. 399).

temporalities of the connectives in terms of whether they have temporal features themselves, or not, and if they do, what those temporal features are.

Conjunctive suffixes are critical to describe temporal phenomena in conjunctive sentences, as they possess a variety of implicit and explicit temporalities that play a syntactic role with respect to the occurrence of the suffix *-ess*. Particularly noteworthy is that they determine the temporal status of the suffix *-ess*, whether tense or aspect (S.-O. Sohn, 1988), which will be discussed in Chapter 5.

- (3.1) a. *kongpwu-lul ha-ko umak-ul tul-ess-ta.*
 study-AC do-and then music-AC listen-PST-DC
 'I listened to the music after studying.'
- b. *kongpwu-lul ha-myense umak-ul tul-ess-ta.*
 study-AC do-SIMUL music-AC listen-PST-DC
 'I listened to the music while studying.'
- c. *kongpwu-lul ha-lyeko umak-ul tul-ess-ta.*
 study-AC do-PURP music-AC listen-PST-DC
 'I listened to the music to study.'

In (3.1), identical events are combined, but the use of the different suffixes, *-ko*, *-myense*, and *-lyeko*, creates three distinctive sentences with three different temporalities. In (3.1a), the first clause is temporally followed by the second clause, while in (3.1b), the two events are happening at the same time. In (3.1c), *-lyeko* denotes that the first event is the goal of the second event.

The phenomenon of the temporalities of the connectives denoting temporal relations between clauses is not idiosyncratic to Korean. Similar phenomena are found

in other “verb-chaining” languages such as Japanese and many languages spoken in New Guinea, South America, Ethiopia, and Central Asia. All the chaining languages have verb-final structures in which temporal relations are likely to be central and usually extend to express logical relations such as cause and effect, condition, result, and so on (Longacre, 2007, p. 400). The verb-chaining languages specify the temporal relations in the connectives and have distinctive slots to denote succession or overlapping of the events. The examples in (3.2) are from the Kate language.

- (3.2) a. *Fisi-huk* *na-wek.*
 arrived-SIMUL ate-he
 ‘As he arrived, he was eating.’
- b. *Fisi-rα* *na-wek.*
 arrived-SEQ ate-he
 ‘He arrived, then he ate.’
- c. *mu-ha-pie* *kio-wek.*
 spoke-DS-they(SIMUL) wept-he
 ‘As they spoke, he wept.’
- d. *mu-∅-pie* *kio-wek.*
 spoke-DS-they(SEQ) wept-he
 ‘After they spoke, he wept.’

(from Longacre, 2007, p. 402)

In Kate, the structural distinction is related to overlap (3.2a) versus succession (3.2b). The temporal relation between the clauses is elaborated through variation in which the language uses distinct suffixes to indicate switch reference; in (3.2c) and (3.2d), the morpheme glossed as DS marks that the clauses have different subjects.

In Japanese, which is supposed to be close to Korean as a member of the Altaic language family, the medial verbs do not have explicit slots for temporal succession/overlapping or switch reference (3.3).

- (3.3) a. *benkyo-wo shi-te ongaku-wo kii-ta.*
 study-AC do-and then music-AC listen-PST
 'I studied and then listened to the music.'
- b. *benkyo-wo shi-nagara ongaku-wo kii-ta.*
 study-AC do-SIMUL music-AC listen-PST
 'I listened to the music while studying.'
- c. *benkyo-wo isshokenmei shi-ta-ga seseki-ga waru-katta.*
 study-AC hard do-PST-CONT grade-NM bad-PST
 'I studied very hard but the grade was bad.'

As shown in (3.3), Japanese conjunctive sentences seem very similar to Korean, with the medial verbs carrying the connectives. The interpretation of the first clause tense is dependent on the matrix clause tense in (3.3a) and (3.3b), whereas each clause has its own tense operator in (3.3c).

Korean may not have such distinct slots in the medial predicate for marking the temporal relations and switch reference. Rather, the temporality of Korean connectives seems to be more inherent than it is in other verb-chaining languages. The next section discusses the temporal properties of the connectives.

3.2.1 Implicitness versus explicitness in temporality

In general, when the connectives combine clauses to create conjunctive sentences, the relation between the two clauses is necessarily either temporal or logical or both in terms of semantics and pragmatics. This is because speakers use conjunctive sentences to express their ideas about how two different events should be combined in light of their understanding of the complex situations. The concept of temporality is important in looking at the way that different situations are relevant to each other. Temporal relations may be more fundamental than logical relations, because temporality is part of logical relations such as cause-effect and condition-result. For example, the connective attached to the causal clause is bound to denote precedent temporality to the other clause, which indicates that cause-effect logic is expressed by a connective that, while it does not have an explicit temporal meaning, does have an inherent temporal meaning.

The temporality of conjunctive sentences can be understood in different ways depending on whether it is viewed from the perspective of the clausal relations or the connectives, but the phenomena described are the same.

First, the connectives can be categorized into three groups depending on their semantic substance with respect to temporality (E.-K. Yi, 1996, p. 176). Korean has considerably more temporal than non-temporal connectives, as shown below.

- (3.4) a. A type that denotes temporal relations exclusively: *-kose*, *-ese*, *-ca*, *-camaca*, *-taka*, etc.

- b. A type that denotes temporal relations inherently: *-nikka, -umulo, -umyen, -eya, -eto, -nulako, -tolok*, etc.
- c. A type that is not relevant to temporal relations: *-ko, -umye, -ciman, -kena, -tunci, -nuntey*, etc.

In the list in (3.4), the first type of connective combines two situations in a temporal, not a logical, relation. The second type seemingly indicates the logic between the two conjuncts but nevertheless involves the time relation. The third type connects the two different events with only logical relations such as addition, contrast, background, and selection.

- (3.5) a. *John-i cip-ey tochakha-ca phyenci-ka wa-ss-ta.*
 J.-NM home-at arrive-SEQ letter-NM come-PST-DC
 'As soon as John arrived at home, a letter was delivered.'
- b. *John-i apha-se pyengwen-ey ka-ss-ta.*
 J.-NM sick-REASON hospital-to go-PST-DC
 'John was sick, so he went to hospital.'
- c. *John-un cip-ey ka-ss-ciman Mary-nun hakkyo-ey*
ka-ss-ta.
 John-TC home-to go-PST-but Mary-TC school-to
 go-PST-DC
 'John went home and Mary went to school.'

In (3.5a), the connective *-ca* directly denotes the sequential occurrence of the events within a short period of time. When clauses are linked by connectives of the first type that express only temporal relations, the preceding clauses without exception denote events prior to the events of the following clauses (E.-K. Yi, 1996, p. 177). On the other hand, there is no direct temporal relation between the situations in (3.5b), but the logical

relation between the sickness and the visit to the hospital necessarily includes temporal precedence and non-precedence. The temporal relation between the situations is determined by the logical semantics of the second type of connective. In (3.5c), the event of the first clause is temporally irrelevant to the event of the second clause, since the connective simply denotes an “unordered addition” (H.-M. Sohn, 2009, p. 311), even though one of the events is either prior to or simultaneous with other one.

Second, the temporality of the connectives can be classified into anteriority, overlapping, and posteriority depending on the sequentiality of the events in the temporal relation (S.-O. Sohn, 1988, p. 87). As shown in Table 1, Sohn paid attention to the temporal relations between the preceding and the following clauses: anterior, overlapping, posterior, perfective, or non-temporal.

The studies of E.-K. Yi (1996) and S.-O. Sohn (1988) both differentiate between temporal and non-temporal, but Sohn’s categorization is more elaborate than that of Yi. For example, Sohn identified the existence of perfectiveness in the anterior connectives. However, neither of these studies fully explains standards for the division of the connectives, leaving it unclear whether the inherent connectives such as *-eto* and *-nikka* are temporal or non-temporal. Yi counted these two connectives as inherent temporal, while Sohn considered them non-temporal. In this study, I take Yi’s view, because although the two connectives signify either concessive or causal meaning, it is possible to posit the temporal priority of the first clause to the second clause.

Irrealis in the conditional or concessive may make it hard to decide on their temporality. As shown in (3.6b), however, it is feasible to propose a temporality for these connectives.

- (3.6) a. *pom-i* *o-nikka* *sopwung-ul* *ka-ss-ta*.
 spring-NM come-REASON picnic-AC go-PST-DC
 '(We) went to picnic because spring came.'
- b. *mom-i* *aph-ato* *John-un* *kongpwuha-n-ta*.
 body-NM sick-CONCESS John-TC study-IN-DC
 'Although John is sick, he studies.'

As shown in (3.6a), the connective *-nikka* may not indicate only temporality, but it can signify a temporal relation because the first clause's event necessarily occurs prior to the second clause's event. Cause-result sentences are closely involved with temporal relations in general. This is the case with the conditional or concessive sentences in which the anterior-posterior relation can exist because the events of each first conjunct, if they occur, must occur before the events of each second conjunct (E.-K. Yi, 1996, p. 180). In (3.6b) the sickness is thought to occur prior to the event of studying, although the sentence does not specify the actual situation.

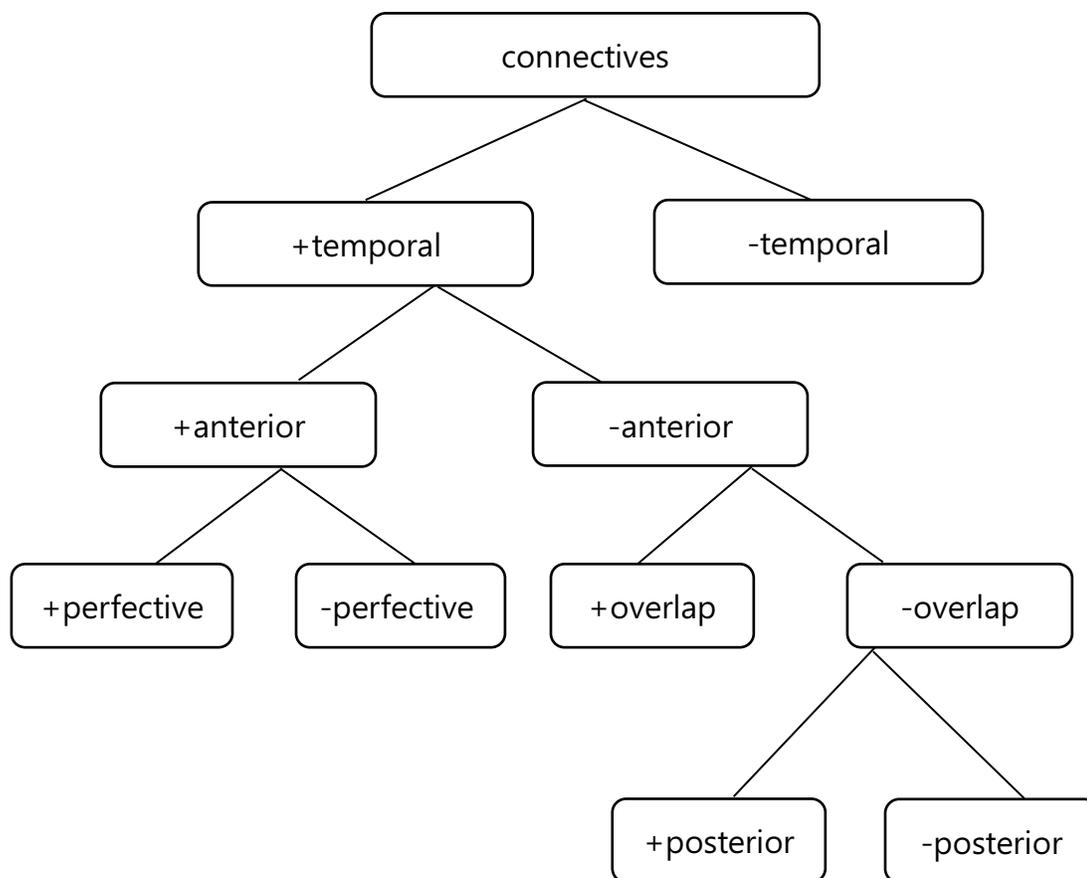
3.2.2 Classification of the connectives by temporality

Based on the previous studies of S.-O. Sohn (1988) and E.-K. Yi (1996), let me put forward a revised classification of connectives that depends on temporality. The purpose of this revised classification is to facilitate the investigation of the temporal phenomena

of conjunctive sentences in relation to the tense/aspect marker and the connectives. A classification of data types has to be adapted to the methods involved in the data processing and analysis. Furthermore, the value of a classification depends on both the clarity of its distinction between categories and its practical usefulness (De Jong, 1998, p. 36). The method of classification described below and illustrated in Figure 2 produces a clearly distinguished set of connective categories, which allows the classification to be used for diagnosis of the connectives' meanings and functions while also pointing to areas of greater complexity that need to be treated in more detail.

First, the connectives are divided into two main categories, temporal versus non-temporal connectives. Temporal connectives include the connectives that inherently denote temporality such as conditional, concessive, and causal connectives. Second, temporal connectives are divided into anterior versus non-anterior connectives. Anterior connectives suffixed to the first clause indicate that the event of the preceding clause occurs prior to the event of the following clause, while non-anterior connectives include all except the anterior connectives. Third, anterior events vary in whether the event is completed or not; therefore, the anterior connectives are divided into perfective and non-perfective connectives. Fourth, the non-anterior connectives are divided into overlapping and non-overlapping depending on whether the two events of the conjunctive sentence are temporally overlapped or not. Fifth, the non-overlapping connectives are divided into posterior and non-posterior connectives. There, reasonably, exist no non-posterior connectives. This method of classification is illustrated in Figure 2.

Figure 2: Classification of the connectives by temporality



In the classification of the connectives, the isomorphism hypothesis is worth noting.

There is no natural language that has only one-to-one relations between form and meaning (Haiman, 1980, pp. 515–516). The hypothesis of isomorphism encourages the grammarian to explain all linguistic occurrences of a form in terms of meaning.

However, in natural languages, there are many types of form and meaning relations such as synonymy (several forms, but only one meaning), polysemy (several meanings of a

single form), homonymy (one form, but several meanings), empty morphemes (form, but no meaning), and zero morphemes (meaning without a form) (Haiman, 1985, p. 21). All of these types of relation are violations of the hypothesis. According to Haiman, iconicity and economy are two competing motivations to make language structure complex. The main assumption of iconicity is that a concept can potentially correspond to a linguistic form in a one-to-one relation. On the other hand, economy is motivated by linguistic efficiency to reduce redundancy and the size of forms. These two motivations are the main sources of language change, which involves gradual grammaticalization processes in which the more predictable and/or frequent a linguistic sign is, the shorter and/or more reduced it becomes (Hopper & Traugott, 2003). So the mapping between form and function eventually becomes distorted in what is a continuous process, never a static situation of one-to-one relationship.

For this research, the many-to-many relations between form and meaning are key. A connective can have an array of functions; for example, the connective *-ko* can express temporal succession, contrast, addition, and circumstance, as shown in (3.7).

- (3.7) a. *kapang-ul tul-ko tosekwan-ey ka-ss-ta.*
 bag-AC take-and library-to go-PST-DC
 '(I) took the bag and went to library.'
- b. *John-un coyongha-ko anay-nun swutasulep-ta.*
 J.-TC quiet-but wife-TC talkative-DC
 'John is quiet but his wife is talkative.'
- c. *cenyek mek-ko, khephi masi-ko, yenghwa po-ko,*
kathi kel-ess-e.
 dinner-AC eat-and coffee drink-and movie watch-

and together walk-PST-INT
 '(We) ate dinner and drank coffee and watched a movie and
 walked together.'

- d. *apeci-uy phyenci-lul ilk-ko nwunmwul-i na-ss-ta.*
 father-GEN letter-AC read-and tears-NM come
 out-PST-DC
 'When I read my father's letter, tears came.'

Furthermore, a semantic relation between clauses can be expressed by means of several connectives, without significant differences in meaning. An overlapping time relation, for instance, can be realized with connectives such as *-ko*, *-umye*, and *-umyense*.

- (3.8) a. *John-un cacenke-lul tha-ko Oahu-lul tol-ass-ta.*
 J.-TC bicycle-AC ride-ko Oahu-AC circle-PST-DC
 'John circled Oahu island while he was riding his bicycle.'
- b. *John-un cacenke-lul tha-mye Oahu-lul tol-ass-ta.*
 J.-TC bicycle-AC ride-mye Oahu-AC circle-PST-DC
 'John circled Oahu island while he was riding his bicycle.'
- c. *John-un cacenke-lul tha-myense Oahu-lul tol-ass-ta.*
 J.-TC bicycle-AC ride-myense Oahu-AC circle-PST-
 DC
 'John circled Oahu island while he was riding his bicycle.'

In all the sentences in (3.8), the connectives are used to express the simultaneity of the first and the second situations, even though the constructions differ in terms of possible grammatical behaviors, such as permutability and its derived differences in semantics, the possibility of co-occurrence with TAM markers and their derived differences, and combination with verb types.

As shown in Table 3 below, my revised classification of Korean connectives attends to the temporal criteria in Figure 2. This is not an entirely new classification, but modifies and supplements versions available in the literature (S.-O. Sohn, 1988; H. Kim, 1992; E.-K. Yi, 1996; P.-H. Yoon, 2005; H.-M. Sohn, 2009). It is critical to understand the complexity of the temporal phenomena in the conjunctive constructions because the syntactic and semantic properties of the connectives may control the presence/absence of TAM suffixes.

Table 3. Classification of Korean connectives by temporality

Temporality			Semantic categories	Example
non-temporal			background	<i>-(n)untey</i>
			contrast	<i>-na, -ciman, -eto₂, -kenman, -umyense₂</i>
			selection	<i>-kena, -tunci</i>
			enumeration	<i>-ko₁, -keniwa, -umye₂</i>
temporal	anterior	non-perfective	cause	<i>-nikka₁, -umulo, -kiey</i>
			condition	<i>-umyen, -eya, -ketun, -tamyen, -takanun</i>
			concession	<i>-eto₁, -telato, -untul</i>
			sequence	<i>-taka</i>
		perfective	cause	<i>-ese₁</i>
			sequence	<i>-kose, -ca, -camaca, - ese₂, -ko₂</i>
			background	<i>-nikka₂</i>
	non-anterior	overlapping	simultaneity	<i>-umye₁, -umyense₁</i>
			cause	<i>-nulako</i>
		posterior	result	<i>-key, -tolok</i>
			purpose	<i>-le, -lyeko, -koca</i>

3.3 Connectives and the temporal morpheme *-ess*

In this section, I will describe the relation between the temporalities of the connectives and the temporal marker *-ess* with respect to the co-occurrence of the two. As far as I know, there has not been a consistent explanation for why particular connectives can co-occur with the morpheme while others cannot. In the literature, the irregularity of the co-occurrence has been discussed in terms of relative tense theory (See Section 1.2). Various other aspects of the matter require examination, including the temporal meaning of the connectives, the semantics of the marker *-ess*, and even pragmatic factors involving the speaker's communicative purpose in discourse.

To explain the co-occurrence of the two kinds of suffixes, I will observe the possibilities for the temporal morpheme's absence or presence with each category of connectives described in Section 3.2. This is because the temporal meaning of the connective is the deciding factor for the presence or absence of *-ess*.

3.3.1 Non-temporal connectives and *-ess*

There exist no constraints on time relations between the first conjunct and the second conjunct with non-temporal connectives, which are free in distribution with temporal suffixes such as *-ess*. This is because the non-temporal connectives do not impose restrictions in temporal sequence or overlapping, unlike the temporal connectives. That is, the preceding event is temporally irrelevant to the following event, no matter whether either event occurs prior to or simultaneous with the other event. Therefore, the medial

verbs have no syntactic barrier caused by the temporality of the connectives in terms of TAM conjugation. Indeed, the non-temporal connectives widely permit TAM markers, except for markers denoting illocutionary force, because the logical relation between the two events is what is primarily highlighted. What matters with the occurrence of the temporal suffixes is the speaker's communicative purpose and/or perception of the situation.

- (3.9) a. *John-i ecey mikwuk-ulo ttena-ss-ciman,*
Mary-nun hankwuk-ey nam-ass-ta.
 John-NM yesterday America-to leave-PST-but
 Mary-TC Korea-at stay-Pf-DC
 'John left for America yesterday, but Mary stayed in Korea.'
- b. *icey pom-i ka-ss-ko yelum-i o-ass-e.*
 now spring-NM go-Pf-and summer-NM come-Pf-INT
 'Now spring has gone and summer has set in.'
- c. *hyeng-un apeci-lul talm-ass-nuntey na-nun*
emma-lul talm-ass-e.
 brother-TC father-AC resemble-Pf-BACK I-TC
 mom-AC resemble-Pf-INT
 'My brother takes after my father but I take after my mother.'

The temporal suffix *-ess* with the first verb can occur freely, as shown in (3.9), because each connective allows the overt suffix *-ess*. The distribution of *-ess* with the medial verb is not different from that with the final verb. Each of these connectives denotes no temporality but exclusively logical relations such as contrast in (3.9a), temporal sequence in (3.9b), and background in (3.9c), where two clauses are syntactically and semantically independent of each other. Their independence leads the conjunctive

sentences to have individual periphrastic operators for each clause (except for the illocutionary force). Therefore, the temporal quality of the connectives cannot affect the grammatical meaning of the temporal suffix, which is discussed in Chapter 4. Here, the suffix *-ess* denotes past tense in (3.9a), perfective in (3.9b), and perfect of result in (3.9c).

3.3.2 Temporal connectives

The temporal conjunctive suffixes contain temporal information as a semantic constituent: anterior, overlapping, and posterior. As shown in the examples of Section 3.2, the conjunctive sentences with ‘studying’ and ‘listening to the music’ show different interpretations, which are caused by the temporal properties of the connectives.

It is important to point out the temporality of the connectives because their temporal quality plays a critical syntactic role in the presence or absence of the temporal suffix as well as its grammatical meaning. With regard to the temporal status of *-ess*, the temporal connectives do not allow past tense but possibly allow perfective aspect, as will be discussed in the following subsections, while the non-temporal connectives allow either tense or aspect depending on the speaker’s perception of the situation. For the different types of temporal connective, I use the terms “anterior connective,” “overlapping connective,” and “posterior connective.”

3.3.2.1 Anterior connectives and *-ess*

Anterior connectives show temporal relations in that the event of the preceding clause is precedent to that of the following clause. The anteriority of the connectives also can have various meaning differences in which the preceding clause event is either simply precedent (*-nikka₁*, *-kiey*), or precedent but overlapping with the following event (*-taka*), or completed (*-kose*), or completed with a gap (*-ese*) or without a gap (*-camaca*), and so on. In any case, the two main types of anterior connectives are those that denote inherent perfectivity (completedness) and those that do not.

3.3.2.1.1 Perfective connectives and *-ess*

The perfective anterior connectives such as *-ese₁*, *-ese₂*, *-kose*, *-konase*, *-ko₂*, and *-ca(maca)* do not apparently appear with the suffix *-ess*, regardless of temporal status, tense, or aspect, because these connectives already express perfectivity.

- (3.10) a. *cip-ul* *nao-ca* *pi-ka* *wa-ss-ta*.
home-AC leave-as soon as rain-NM come-PST-DC
'It began to rain right after I left home.'
- b. *John-i ecey* *ttena-se* *Mary-ka* *cikum wu-n-ta*.
J.-NM yesterday leave-REASON M.-NM now cry-IN-DC
'Mary is crying because John went away yesterday.'

As shown in the English translation in (3.10a), the connective *-ca* expresses a temporal relation in that the event of 'leaving home' is completed and then it rained without a temporal gap between the events (S.-O. Sohn, 1988, p. 94). There may, on the other

hand, be an interval between the two events in (3.10b), where the time adverbs *ecey* ‘yesterday’ and *cikum* ‘now’ modify the respective verbs.

In sentences like (3.10b), the relative tense theory’s claim that the embedded clause tense is dependent on the matrix clause tense for the interpretation of its temporal orientation encounters a difficulty, because the main clause has the present tense. No grammatical basis for a tense interpretation exists for the first clause. Even if we take the viewpoint of absolute tense for the first conjunct, there is no grounds for it denoting a past event except for the past adverb *ecey* ‘yesterday’. If the suffix *-ess* is the past tense marker and the event is a past event, surely the first clause should be marked by the past morpheme in (3.10b). If the morpheme is not able to appear, despite the pastness of the situation, the reason may be a constraint emanating from the connective. The question then is why the connective restricts the presence of the tense morpheme. One answer is provided by the relative tense theory in terms of dependence between clauses. However, this is not always the case, as demonstrated in (3.10b).

The temporal quality of the connectives is the key to understanding the complexity of the temporal phenomena of conjunctive constructions in Korean. The idea that the perfectivity of the connective constrains the appearance of the perfective aspect marker *-ess* due to semantic redundancy seems to be reasonable. This is because the connective is clearly relevant not to the grammatical meaning of tense, but to aspect.

Further, an inquiry into the grammaticalization process provides support for this idea, as it shows that the perfectivity of the connective *-ese* originated from the resultant

durative construction, *-e isi-e* COMP stay-CONN, which is evidenced in the historical data (E.-H. Jeong, 2007; M.-J. Kim, 2011). Here, I will briefly discuss this grammaticalization process.

Figure 3: Grammaticalization process of the connective *-ese*

Resultant Duration (15C)	Relational Duration (17C)	Sequential/Causal (19C)
<i>V-e isi-e</i> >	<i>V-e isye</i> >	<i>V-ese</i>

- (3.11) a. *CWASEN-un anc-a-isye kiphun TOLI-sAlanghA-Issila.*
 meditation-TC sit-COMP-isye deep rightness-think-DC
 ‘Meditation is to sit and think in the profound rightness.’
 (*Welin sekpo*, 1459, 1:5b)
- b. *HWANHUYhA-zaw-a han TAYCWUNG-kwa cAmcAmhA-yasye*
tut-cAo-si-te-ni
 delight-HON-CONN all people-COM quiet-ese
 listen-HON-SH-RT-DC
 ‘Being delighted, (Buddha) was quiet and (remaining quiet) listened to
 all the people.’
 (*Wenkakkyeng*, 1465, 2:14a)
- c. *olay nwu-esye PYENGTu-n hethuy-IAI mot psu-lka*
silAmhA-ya
 long lie-ese sick-RL thigh-AC NEG use-COMP
 worry-CONN
 ‘Since (I) lay (bed-stricken) for a long time, I worried if I could not use my
 injured thigh.’
 (*Twusi chwungkan*, 1613, 6:50a)

In the 15th century, *isye*, a contracted form of *isi-e*, was frequently combined with resultant verbs such as *anc-* ‘sit’, *nwup-* ‘lie’, *sye-* ‘stand’, and *caki-* ‘take’ (M.-J. Kim, 2011), as in (3.11a): *anc-a isye* (*anca-isi-e*). The existential meaning of *isi* ‘stay’ provides the action of the first event with a static duration, expressing that the second clause event occurs in the resultant state of the first clause. In (3.11b), the resultant durative meaning is retained in *-ese* (which appears as the allomorph *-yasye*), because

the situation of the first clause overlaps with the situation of the following clause. The durative meaning of *-ese* began to disappear around the 17th century, as shown in (3.11c), although some traces of the original durative meaning of *-ese* persisted in the form (Hopper & Traugott, 2003). This can be identified by the fact that the addition of the resultative *-e iss-* as in *nwu-e iss-ese* ‘since I lay for a long time’ is much more natural in Modern Korean. As the durative meaning was lost in *-ese*, the causal function initially emerged under the circumstances that the semantic relationship between the first clause and the second clause was cause-effect. The grammatical functions of *-ese* have been eventually extended to make it a sequential and causal connective while its resultant durative function was weakened, as shown in corpus data: The use of *-ese* for the causal function increased diachronically, from 9% of its uses in the 15th century, to 13% in the 18th century, and to 45% in the 20th century (See M.-J. Kim, 2011).

- (3.12) a. *John-eykey* *cenhwaha-nikka* *tonghwacwungi-ess-ta.*
 J.-DAT call-BACK on the phone-PST-DC
 ‘When I called John, he was on the phone.’
- b. **cip-ey* *tochakhay-ss-unikka* *amwuto* *eps-ess-ta*
 home-to arrive-ss-BACK anyone doesn’t exist-PST-DC
 ‘When I arrived at home, nobody was there.’

In *-nikka*₂ constructions, the speaker presents a situation in the first clause, and then what is discovered from the behavior of the situation appears in the second clause (K.-S. Nam, 1994, p. 128; C.-S. Suh, 1996, pp. 1198–1200; P.-H. Yoon, 2005, pp. 254–268). In other words, the speaker describes his/her perception at the end point of the first event.

As shown in (3.12a), the event of ‘calling’ is presented in the preceding conjunct and the speaker found the fact of John being ‘on the phone’ in the following conjunct.

The connective *-nikka₂* never combines with the temporal suffix *-ess* as in (3.12b). When clauses are combined with this connective, the construction is already a cause-result conjunctive. This is relevant to the inherent perfective meaning of the connective, as in (3.12a), in which the first event of ‘calling’ must be completed before the discovery of the event of ‘being on the phone’. This connective is comparable to the non-temporal background connective *-nuntey*, which has no restriction on combining with the temporal suffix. That is, the suffix *-ess* can freely join with *-nuntey* or not depending on whether the event is perceived to have ended or not (see Section 3.3.1), whereas *-nikka*, which marks pastness by its innate temporality, does not allow the speaker to mark the temporal status with *-ess*.

3.3.2.1.2 Non-perfective connectives and *-ess*

The non-perfective anterior connectives express the temporal relation that the first conjunct event occurs prior to the second conjunct event without consideration of the completion of the event. When the speaker intends to signify the perfective aspect, the suffix *-ess* has to appear before the non-perfective connective. If the overt suffix is not present, the imperfectivity of the event is denoted. Examples include *-taka*, *-ketun*, *-umyen*, *-eto*, *-nikka*, *-ni*, among others.

- (3.13) a. *John-i kyohoy-ey ka-taka cip-ey tolaw-ass-e.*
 J.-NM church-to go-INTRP house-to come-PST-INT
 'John came back home on his way to church.'
- b. *John-i kyohoy-ey ka-ss-taka cip-ey tolaw-ass-e.*
 J.-NM church-to go-Pf-INTRP house-to come back-PST-INT
 'John arrived at church and then came back home.'

In (3.13), the semantic distinction between (3.13a) and (3.13b) is made by the presence or absence of the suffix *-ess*, because *-taka* denotes the switch of one action to another action where the completion of the preceding action is irrelevant (P.-H. Yoon, 2005, pp. 293–333). It is clear that the semantic difference is not related to tense but to aspect, as the presence of *-ess* denotes the completion of the first event (3.13b) while the sentence without *-ess* expresses its non-completion (3.13a). *-taka* has been regarded as a unique connective in the literature (H.-B. Choe, 1971; S.-C. Song, 1983) because its co-occurrence with *-ess* causes a semantic difference between the imperfective reading and the perfective reading, which supports the idea that one of the grammatical meanings of *-ess* is a perfective aspect marker. However, this function is not limited to situations in which *-ess* co-occurs with the connective *-taka*.

In the conditional constructions, the non-perfective anterior connectives such as *-ketun* and *-umyen* express a hypothetical relation in which the presumptive situation is implied to be true and the validity of the consequence is dependent on the factuality of the presumption (Haiman, 1985).

- (3.14) a. *kohyang-ey ka-myen chinkwu-ul manna-[n-ta, ni, la, ca]*
 hometown-to go-COND friend-AC meet-[IN-DC, Q, IMP, PR]
 'If (you) go to your hometown, you meet your friend.'
- b. *kohyang-ey ka-ketun chinkwu-ul manna-[*n-ta, *ni, la, ca]*
 hometown-to go-COND friend-AC meet-[IN-DC, Q, IMP, PR]
 'If (you) go to your hometown, you meet your friend.'

As shown in (3.14a), *-myen* can be freely used in sentence types including declarative, imperative, interrogative, or propositive. However, *-ketun* in (3.14b) is not natural in a declarative utterance or an interrogative sentence, because it constrains the following clause to indicate performative actions such as the speaker's command, suggestion, intention, or promise. This pragmatic restriction prohibits the conjunctive constructions from having third person subject or adjective/copular predicates in the following clauses (P.-H. Yoon, 2005, p. 104).

- (3.15) a. *mwul-i kkul-ess-umyen myen-ul neh-usey-yo.*
 water-NM boil-ess-COND noodle-AC put-SH-POL
 'If the water fully boils, put the noodles into (the pot).'
- b. *mwul-i kkul-[ess-te-la, ess-ess]-umyen myen-ul*
neh-ess-ul theyn-tey-yo.
 water-NM boil-[ess-RT-DC, ess-ess]-COND noodle-AC
 put-PST-RL ground:COP-RT-POL
 'If the water had fully boiled, I must have put the noodles into (the pot).'

The present hypothetical is usually expressed with *-ess* in the first clause as in (3.15a), and the past hypothetical with double *-ess* or the past retrospective quotative *-esstela-* as in (3.15b) (H.-M. Sohn, 1994). Usually, the main clause ends in a supposition-bearing expression such as *ul theyntey*. No matter what the grammatical meaning of *-ess* is, the

conditional connectives can co-occur with it. Compared to the interruptive connective -*taka*, the conditional connectives do not make obvious distinctions in terms of the presence/absence of a TAM marker.

Like the conditional connectives, the concessive connectives deal with hypothetical situations. In the concessive relation, however, the connectives such as -*eto*, -*telato*, and -*untul* signify antithesis between the propositions. This is different from a contrast relation because the concessive expresses a contra-expectation in light of the other proposition, whereas a contrast relation expresses that a difference between the propositions is relevant (Haiman & Thompson, 1988).

- (3.16) a. *pi-ka* *w-ato* *sopwung-ul* *ka-n-ta*.
rain-NM come-CONCESS picnic-AC go-IN-DC
‘Although it rains, (we) go on a picnic.’
- b. *pi-ka* *wa-ss-eto* *kyengki-nun* *yel-[i, i-ess] -eyo*.
rain-NM come-PST-CONCESS game-TC open-[PAS, PAS-
PST]-POL
i. ‘Although it rains, the game will be opened.’
ii. ‘Although it rained, the game was opened.’

In (3.16a), the connective -*eto* denotes an antithetical relation between the first event of ‘raining’ and the second event of ‘going on a picnic’. That is, the first event allows the speaker and the hearer to expect the ‘picnic’ to be canceled, but the counter-expected event is occurring in the second clause.

It is possible for the concessive connectives to combine with the suffix -*ess* even in future situations. As shown in (3.16b), even when the main clause is marked for tense,

the temporal marker can appear with the connective. The first clause can be interpreted in two ways in terms of tense: as a future (hypothetical) event or a past event. The availability of *-ess* in the position for both situations implies that the morpheme retains a quite wide semantic field, covering past tense along with other grammatical properties, which will be discussed in Chapter 4.

Among the non-perfective connectives, there are also the causal connectives such as *-nikka₁*, *-ni*, *-kiey*, and *-umulo*, among others. Unlike the perfective *-ese*, the connectives optionally take the temporal morpheme *-ess* depending on the speaker's perception of the situation. Apart from the difference between *-ese* and the non-perfective causal connectives with respect to temporality, there are semantic-pragmatic dissimilarities such as whether the clausal relation is speaker-oriented causal (*-nikka₁*) or event-oriented causal (*-ese*) (see S.-O. Sohn, 1992).

- (3.17) a. *pi-ka* *o-nikka* *wusan-ul* *kacy-e* *ka-sey-yo.*
rain-NM come-REASON umbrella-AC take-COMP go-SH-POL
'Take the umbrella because it rains.'
- b. *pi-ka* *wa-ss-unikka* *wusan-ul* *kacy-e* *ka-*
sey-yo.
rain-NM come-PST-REASON umbrella-AC take-COMP go-
SH-POL
'Take the umbrella because it rained.'

In Korean, there are a considerable number of causal connectives, as shown in Table 2, all of which have their own syntactic, semantic, and pragmatic features. In (3.17a), the connective *-nikka₁* cannot be replaced with another causal connective, *-ese*, because *-nikka₁* is more available for an utterance with imperative illocutionary force than *-ese*.

Besides, *-nikka₁* has non-perfective temporality while *-nikka₂* has perfective temporality. Consequently, *-nikka₁* is allowed to combine with the temporal suffix *-ess* when the speaker would like to mark either the completion or the past orientation of the event, as shown in (3.8b).

In addition, the connectives *-kiey* and *-umulo*, which are derived from constructions in which a nominalizer combines with an adverbializer (*-ki+-ey* and *-um+-ulo* respectively), are pragmatically used in literary expressions.

3.3.2.2 Overlapping connectives and *-ess*

When two clauses describing two different situations are combined in a sentence, either one must occur prior to, subsequent to, or simultaneous with the other clause (Longacre, 2007). The overlapping connectives signify temporal simultaneity, which hinders the overlapping constructions from denoting the perfective aspect in the first conjunct, because these connectives focus on the simultaneity between the situations. If these connectives somehow occur with *-ess* in the first conjunct, the constructions lose the sense of simultaneity and one becomes background for the other (Thompson & Longacre, 1985).

- (3.18) a. *John-i nolayha-myense il-ul hay-ss-ta.*
 J.-NM sing-SIMUL work-AC do-PST-DC
 'John worked while he was singing.'
- b. *John-un cwucwung-ey ilhay-ss-umyense, cwumal-eyto ilha-n-ta.*
 J.-TC week-at work-PST-CONCESS weekend-even
 work-IN-DC

‘John worked even on the weekend although he worked during the week.’

The sentence in (3.18a) shows the connective *-myense*, a typical overlapping connective, which indicates that the second event of ‘working’ occurred in the middle of the first event of ‘singing’. Although either event could happen before or after the other one because of permutability, the focus of the connective is on the overlapping temporality. Yet the semantic property of *-myense* in (3.18b) is distinct from that of (3.18a) with respect to temporality. In other words, the connective in (3.18b) has little or nothing to do with temporal simultaneity, but expresses a circumstantial meaning. Based on their cross-linguistic observations, Thompson and Longacre (1985, p. 175) indicated that when clauses are marked for simultaneity, either one of the clauses generally serves as background. In line with this, the *-myense* in (3.18b) functions to provide the second clause of ‘working even on the weekend’ with the concessive background information of ‘working during week’. The non-temporality of the connective in this sentence makes it possible for the marker *-ess* to co-occur with it.

- (3.19) a. *pheiphe-lul ssu-nulako ecey mos ca-ss-ta.*
 paper-AC write-REASON yesterday NEG sleep-PST-DC
 ‘I could not sleep yesterday because I had to write my paper.’
- b. **John-i cikakha-nulako nay-ka hwana-ss-ta.*
 J-NM tardy-REASON I-NM mad-PST-DC
 ‘I was upset because John was late.’

(3.19a) shows an example of the connective *-nulako*, which combines only with verbs, not with adjectives or with copulars. It also has a subject constraint (P.-H. Yoon, 2005, p.

172) that forces both clauses to have an identical agent, as exemplified by the ungrammaticality of (3.19b). It is used to express the grounds on which the second situation is obstructed by the first situation. Consequently, the second clause usually involves a negative expression.

In *-nulako* constructions, the first event does not necessarily precede the second event, unlike constructions with the other cause connectives such as *-ese*, *-nikka₁*, and *-umulo*. This is because it does not denote an immediate cause but provides a reason, in that the actor spent time on the first event (E.-K. Yi, 1996, p. 179). In a *-nulako* construction, the situations overlap with each other and consequently, *-ess* cannot occur with the connective *-nulako*.

3.3.2.3 Posterior connectives and *-ess*

The posterior connectives indicate that the event of the first clause occurs after that of the second clause. Accordingly, the preceding clause does not take the perfective marker *-ess* due to its inherent futurity or prospectiveness (S.-O. Sohn, 1988). These connectives include *-key*, *-le*, *-koca*, and *-(u)lyeko*.

(3.20) a. *John-un kongpwuha-le tosekwan-ey ka-ss-eyo.*
 J.-TC study-PURP library-to go-PST-POL
 ‘John went to the library in order to study.’

b. *Mary-nun ton-ul pel-koca yelsimhi ilhay-ss-eyo.*
 Mary-TC money-AC make-PURP hard work-PST-POL
 ‘Mary worked hard to make money.’

In (3.20), the first conjuncts express the purposes or results that have arisen from the situations of the second conjuncts. For the purpose of ‘studying’ in (3.20a) or ‘making money’ in (3.20b), the events of ‘going to library’ or ‘working hard’ have to be precedent. Therefore, these conjunctives show that the preceding clauses are temporally posterior to the following clauses. In other words, the events of the first clauses are not realized yet at the time point of the second events, but are ‘motivating events’ (Thompson & Longacre, 1985, p. 185).

To sum up, I have suggested that the conjunctive connectives can be categorized by their temporalities: non-temporal vs. temporal (e.g., anterior, overlapping, posterior). I also suggested that the grammatical meaning of *-ess* can vary in relation to the temporalities of the connectives. That is, the *-ess* prior to the non-temporal connectives (e.g., *-ko*, *-(u)mye*, *-(n)untey*, *-ciman*) freely denotes either past tense or perfective aspect depending on the speaker’s perception. On the other hand, the suffix before the non-perfective anterior connectives (e.g., *-(u)nikka*, *-taka*, *-(u)ni*, *-ketun*) can occur and may express a perfective, while the perfective anterior connectives (e.g., *-ese*, *-ca*, *-konase*, *-ko*) cannot co-occur with the *-ess*. Both the overlapping connectives (e.g., *-tolok*, *-nulako*) and the posterior connectives (e.g., *-key*, *-le*, *-lyeko*, *-koca*) also cannot occur with the temporal suffix *-ess* because they implicitly denote non-perfectiveness, a situation in which the perfective suffix *-ess* cannot appear.

CHAPTER 4

MULTIPLE USES OF *-ESS* IN CONJUNCTIVE CLAUSES

There is a huge literature that attempts to account for the Korean non-terminal verbal suffix *-ess*,⁹ which does not appear to fit a single grammatical category. The suffix *-ess* is generally recognized as expressing the past tense (Martin, 1954; D.-H. An, 1980; C.-K. Kim, 1985; K.-C. Sung, 1985; H.-J. Chong, 1990), and is also known to denote the perfective aspect (K.-S. Nam, 1972; H.-M. Sohn, 1975; Huh, 1987; T.-R. Suh, 1987).

Some scholars have argued that *-ess* is neither a tense nor a perfective marker. S.-H. Choi (1987) contended that the suffix *-ess* expresses a mixture of various grammatical meanings such as simple past, completion, current relevance, and resultant state. Moreover, its semantic properties are not fixed and singular but decided by the contexts in which it occurs. The research has attributed the various grammatical meanings of *-ess* to the inherent lexical aspect of verbs. Influenced by the work of S.-H. Choi (1987), H.-S. Lee (1991) also claimed that *-ess* marks neither a past tense nor a

⁹ In this study, *-ess-* represents various allomorphs including *-ess-*, *-ass-*, *-ss-*, *-yss-*, etc.

perfective aspect, but functions as an anterior marker, indicating that “a situation is terminated at or before a referent point” (H.-S. Lee, 1991, p. 247).

Still others have proposed that *-ess* is a homophone of two distinct suffixes, one the past marker and the other the perfective marker (H.-B. Choe, 1971; J.-S. Na, 1971; S.-O. Sohn, 1988). The notion behind this claim of homophony is that there are different lexical, grammatical, and/or contextual environments for the two different readings.

Although the variety of the previous research adds to understanding of the multiple facets of the temporal suffix, there is unfortunately no agreement on its nature. The literature has dealt mainly with the issues of the invariant meaning and the grammatical category of the suffix. These issues are not the focus of this research, which instead analyzes the meaning of the suffix in the first conjunctive clause. However, one thing that is worthy of attention is that the semantics of *-ess* depends on the speaker’s intention or focus on a portion of an event when a speaker describes it (H.-M. Sohn, 1975, p. 159). That is, depending on the speaker’s communicative purpose, the suffix signals past tense or completion, or current relevance (S.-H. Choi, 1987). When the speaker’s utterance concerns the event time of a situation with relation to a reference time, the suffix is used to indicate that the event occurred prior to the reference time. On the other hand, the suffix denotes the perfective aspect when the speaker is concerned with the completion of a situation with respect to the reference time.

4.1 The concepts of tense and aspect

Tense and aspect are semantic notions concerning temporality encoded inherently and grammatically on the verb. Despite the fact that tense and aspect are fundamental concepts, myriad studies have spawned a variety of definitions. I will begin with a series of definitions that will help clarify my research perspective.

4.1.1 Tense

Tense is a grammatical category that refers to the time of an event or state denoted by a verb in relation to some other temporal reference point (Reichenbach, 1947; Comrie, 1985). Tense can be categorized into two different notions depending on whether the reference time point is the speech time or not: absolute tense and relative tense.

Absolute tense assigns event time in relation to speech time, where event time prior to speech time is “past” (e.g., *John sang*, *John was singing*), event time co-occurring with speech time is “present” (e.g., *John sings*, *John is singing*), and event time following speech time is “future” (e.g., *John will sing*, *John will be singing*) (Comrie, 1985, pp. 122–123). For absolute tense, the deictic center is the moment of the speech behavior.

When several clauses are combined to create a compound sentence, the “sequence of tenses” matters. Reichenbach (1947, p. 293) indicated that the tenses of the various clauses are adjusted to one another by certain rules: (1) the permanence of the

reference point, and (2) the positional use of the reference point. According to Rule (1), Example (4.1) shows that the time relation of reference time points is identical, although the events referred to in the clauses may occupy different time points.

(4.1) I had mailed the letter when John came and told me the news.

	E_1	---	R_1	---	S
1st clause:	E_1	---	R_1	---	S
2nd clause:			R_2, E_2	---	S
3rd clause:			R_3, E_3	---	S

(E: event time, R: reference time, S: speech time)

(from Reichenbach, 1947, p. 293)

On the other hand, the time relation of reference points is not the same for all clauses. Rule (1) is replaced by Rule (2) for the positional use of the reference point. When time adverbials, such as *now* or *yesterday* are given (e.g., *I had met him yesterday*), they do not refer to the event time but to the reference point that functions as the carrier of the time position. Similarly, if time points are compared by sequential adverbials, such as *when*, *before*, or *after*, they are the reference points to which the comparison refers.

(4.2) He was healthier when I saw him than he is now.

	E_1	---	E_2	---	E_3
1st clause:	R_1, E_1	---	S		
2nd clause:	R_2, E_2	---	S		
3rd clause:			S, R_3, E_3		

(from Reichenbach, 1947, p. 295)

This discussion about the sequence of tenses opens the door to the discussion of relative tense in complex sentences that include non-finite verbs.

Relative tense deals with the relationship between event time and reference time in that event time refers not to speech time but to a time that precedes or follows speech time (Comrie, 1985). This is the case with many complex sentences where the reference time of the subordinate clause is decided by that of the main clause. For instance, a non-finite verb in English takes a relative time reference.

- (4.3) a. The passengers awaiting flight 26 proceeded to gate 5.
b. The passengers denied boarding on flight 26 proceeded to gate 7.
c. John had arrived by six o'clock yesterday.

(from Comrie, 1985, pp. 59–65)

The present participle is always interpreted as simultaneous with the reference time as in (4.3a) and its informational equivalent, *The passengers who were awaiting flight 26 proceeded to gate 5*. In fact, a different way to paraphrase this, *The passengers who are awaiting flight 26 proceeded to gate 5*, is also possible in some contexts. That is, there is ambiguity in the English present participle between relative tense and absolute tense.

When the past participle is used as in (4.3b), two interpretations are possible: *The passengers who had been denied boarding on flight 26 proceeded to gate 7* and *The passengers who have (just recently) been denied boarding on flight 26 proceeded to gate 7*. The interpretation depends on the location of the reference time point between the main clause and the speech time (Comrie, 1985, p. 59). There is another case of relative tense termed “absolute-relative tense,” in which a reference time refers to absolute tense and an event time refers to relative tense. For instance, in (4.3c), the past perfect (so-called pluperfect in English) indicates a reference time in the past, *by six o'clock*

yesterday, and the event time, *John's arrival*, is located prior to that reference time (Comrie, 1985, p. 65). Present perfect also denotes the relationship of event time prior to reference time.

4.1.2 Aspect

Aspect can be expressed lexically by the inherent lexical semantics of a verb in interaction with the verb's arguments and adverbials. Inflectional verbal endings and/or periphrastic constructions can also function to express aspect. The former is called "Aktionsart," inherent aspectual properties (Comrie, 1976), situation type (Smith, 1997), aspectual potential (Dahl, 1985), or lexical aspect (Andersen, 1986) and the latter is called grammatical aspect or viewpoint aspect (Smith, 1997).

Lexical aspect, defined as "the inherent temporal properties of verbs" (Van Valin & LaPolla, 1997, p. 92), can be classified into four basic semantic types put forward by Vendler (1957). "States" hold for an unbounded period of time (e.g., *be*, *know*, *like*). "Activities" go on for a period of time, with no defined end point (e.g., *walk*, *run*, *watch*). "Accomplishments" go on for a period of time, but with a defined end point (e.g., *walk a mile*, *paint a house*, *build a bridge*). "Achievements" occur at a single moment, with an immediate end point (e.g., *break a glass*, *catch a ball*, *win the race*) (O'Grady, 2009). The semantic features of each of the four categories can be characterized as in Table 4.

Table 4. The features of lexical aspect (based on Andersen, 1991, p. 311)

	States	Activities	Accomplishments	Achievements
Punctual	-	-	-	+
Telic	-	-	+	+
Dynamic	-	+	+	+

The properties of lexical aspect deal with the semantic nature of verbs on one level. But it is not necessarily true that any verb is always grouped into any particular category of lexical aspect, because, on another level, the classification of verbs according to inherent values is contingent on contextual information including the verb's arguments and real world situations (Smith, 1997). Smith (p. 18) distinguished between the basic level, which is "always available for a verb" and the derived level, which is shifted by time adverbials or given context.

For instance, the verbal predicate *run on/to the track* may be classified as an accomplishment in the sentence *They ran to the track in an hour*, but as an activity in the sentence *They ran on the track for an hour*. Also, lexical aspect is related to real world situations. Shirai (2000, p. 341) provides the example of a predicate *open a box* that can be considered an achievement in the phrase *open the box by pushing a button*, but an accomplishment in the phrase *open a carefully wrapped box*.

Another way of expressing the temporal contour of a situation is related to the location of the speaker's viewpoint, that is, the aspect from which a speaker views a situation (i.e., inside or outside of an event), or which phase or juncture of the event is described by the speaker as being of concern (i.e., initial, middle, or final). The literature

discusses these two sets of viewpoint aspect as perfective versus imperfective and progressive versus non-progressive (Comrie, 1976; Dahl, 1985; Bybee, Perkins, & Pagliuca, 1994; Smith, 1997).

The progressive/non-progressive distinction is made according to whether ongoingness is a matter of interest, and is relatively simpler than the distinction between perfective and imperfective. The distinction between perfective and imperfective is multidimensional. It is made depending on whether a situation is viewed externally or internally (Comrie, 1976), whether it has attained a terminal point (Dahl, 1985), whether it refers to the partial or full view (Smith, 1997), or whether it is viewed as a bounded entity or open-ended (Bybee et al., 1994). Three general notions are involved: (1) totality (Comrie, 1976; Smith, 1997), (2) completedness (Dahl, 1985), and (3) boundedness (Bybee et al., 1994).

In terms of totality, imperfectivity concerns “the internal structure of the situation” and perfectivity indicates “the view of a situation as a single whole” (Comrie, 1976, p. 16). The notion of completedness, on the other hand, concerns the temporal dimensions of situations, such as completion, inception, ongoingness, and duration. With regard to completion, imperfective refers to the location of the viewpoint in the middle of the situation, while perfective indicates a viewpoint located at a terminal point. To compare the two approaches, completed situations are surely perfective when considered in terms of completedness, but could be imperfective when viewed in terms of totality. Thanks to these different approaches, what could be perfective in one approach is not necessarily accepted as such in the other.

In terms of boundedness, perfective views a situation as bounded, including the inception and the end point of a situation, whereas imperfective views a situation as unbounded, that is, not including either an inception point or an end point.

The three different approaches to perfective/imperfective are independent in definition, although they overlap in general. For instance, completed situations are by and large viewed as a single whole that is bounded. Unbounded situations are, overall, regarded as non-completed and internally viewed. According to Smith (1997, pp. 3–8), perfective viewpoints “focus on the situation as a whole, with initial and final points,” whereas imperfective viewpoints “focus on part of a situation, including neither initial nor final point,” and neutral viewpoints are “flexible, including the initial point of a situation and at least one internal stage.” With these approaches in mind, perfectivity and imperfectivity need to be treated language by language.

The non-inherent nature of viewpoint aspect permits the speaker to express aspectual status (i.e., perfective vs. imperfective, progressive vs. non-progressive) in terms of how it fits in specific discourse flows (H.-S. Lee, 1991; Smith, 1997; S.-Y. Oh, 2003). In other words, perfectivity and imperfectivity do not conflict with each other in the same situation. The difference between progressivity and non-progressivity is not necessarily an objective difference between situations (Comrie, 1976, p. 4). Thus, the speaker can express the same situation differently depending on his/her communicative purpose.

On the other hand, the inherent nature of lexical aspect may restrict ways of expressing a situation (Salaberry & Shirai, 2002). For instance, the state verbs generally do not co-occur with the progressive because states do not denote inherent temporal change (e.g., *??I am loving you*). Yet such a construction may be acceptable depending on the speaker's communicative purposes, even though an expression may be problematic in itself.

4.1.3 Distinction between tense and aspect

Their deictic nature is what most prominently distinguishes tense from aspect (Comrie, 1976, p. 5), as tense locates the time of a situation with reference to any other time point, while aspect refers to the internal temporal constituency of one situation. An issue of the distinction between tense and aspect is raised by Dahl (1985, p. 25):

The distinction between deictic and non-deictic categories can only be used to distinguish tenses and aspects if we do not in addition to “absolute,” i.e. deictic, tenses, admit the existence of “relative” tenses, i.e. forms that may express temporal relations between any pair of time points, regardless of their deictic status.

Dahl illustrated subtle but critical points to distinguish between relative tense meaning and aspectual meaning.

- (4.4) a. The passengers who were awaiting flight 576 proceeded to the departure gate.
- b. While she was singing “God save the Queen” Mary was drying the clothes.

What is the semantic interpretation of the present participles *awaiting* and *singing* in terms of relative present tense and progressive aspect? Surely, when the present participles are used in finite clauses, as in (4.4a) and (4.4b), they express progressive aspect. Although the non-finite versions are interpreted, at best, as the same as the finite versions, the meanings of the two versions are not fully synonymous in terms of the relative approach (Comrie, 1985). When present participles appear in non-finite clauses, they are said to have “relative simultaneous time” meaning (Comrie, 1985, p. 57). Thus, the semantic interpretation of the present participles varies depending on the conversational implicature. It is not easy to distinguish relative tense from aspect due to the non-deictic nature of relative tense.

Although the conceptual meanings of tense and aspect are independent of each other, the correlation between the two still exists and makes it difficult to draw a line between them. In tenseless languages such as Yoruba or Igbo (West Africa), for example, the imperfective verb form is interpreted as referring to the present in the absence of a temporal adverbial, while the perfective is interpreted as referring to the past. If the imperfective verb form takes the past temporal adverbial (e.g., *yesterday*), it is interpreted as referring to the past (Comrie, 1976, pp. 82–83). Thus, there is a correlation between perfective aspect and past tense, and between imperfective aspect and non-past tense.

In the case of the perfect in English, it is unclear whether it has to be treated as aspect or tense. It has a special position because the perfect expresses a past situation that has present relevance (e.g., *I have lost my penknife*). In fact, Comrie (1976) treats the perfect as only one of the possible tenses of the perfect aspect, which is to say, absolute-relative tense, as reviewed in Section 3.1.2. Hence, the past perfect (the so-called pluperfect) denotes relative past tense and the present perfect (often simply called the perfect) denotes relative present tense.

One of attempts to solve the problem of confusion between tense and aspect is the unified temporal theory proposed by Johnson (1981), following Reichenbach (1947). In this analysis, tense is characterized by the relation between reference time point and utterance time point, and aspect by the relation between reference time and event time. Thus, (present) perfect in English has present tense because the reference point is simultaneous with the speech time point, along with perfective aspect, in that the event time point precedes the reference time. On the other hand, pluperfect (past perfect) denotes past tense because the reference point is followed by the utterance time point, along with perfective aspect, in that the event time point precedes the reference time point. In this regard, the meaning of the perfect is produced by the sum of both the auxiliary *have* and the past participle. Compositionally, the auxiliary denotes the time relation between the reference time point and the utterance time point, and the past participle gives the time relation between the event time and the reference time.

Even though the unified temporal theory puts forward a coherent account of tense and aspect, two problems pointed out by Dahl (1985) still remain. First, the perfect

in English is categorized as aspect in the unified temporal account, because event time precedes reference time. For the same reason, however, the temporal property of the perfect actually belongs to the tense category in the relative tense approach. Second, non-finite constructions such as those shown in (2.4) do not differentiate tense from aspect in terms of interpretation.

4.2 Grammatical meanings of *-ess*

It is not easy to capture the nature of *-ess* because the non-terminal suffix exhibits meaning variation in interaction with other elements such as lexical aspect of verbs, time adverbials, the terminal suffix, and discourse contexts.

First, *-ess* denotes simple past. The suffix *-ess* refers to a situation in which an event occurred at a certain time in the past.

(4.5) *John-un achim-ey hakkyo-ey ka-ess-e.*
 John-TC morning-at school-to go-PST-INT
 'John went to school in the morning.'

Second, *-ess* expresses the completion of a situation in which the speaker's focus is on the terminal point of the event.

(4.6) *John-i tutie sihem-ul phaysuha-ess-ta.*
 John-NM finally exam-AC pass-PST-DC
 'John has passed the exam finally.'

The meaning of completion denoted by *-ess* is observed more explicitly when it co-occurs with a verb whose lexical aspect refers to telicity that has an inherent end-point or with an adverbial expression that implies that a situation described has arrived at its terminal point. The perfective meaning of *-ess* is also found in irrealis, where an event is presumably completed prior to a referent point.

- (4.7) *ne-nun* *nayil* *cwuk-ess-ta.*
 you-TC tomorrow die-PST-DC
 'You shall die tomorrow.'

In (4.7), it is possible to use *-ess* even if it is only assumed that the future situation will be terminated, because the use of *-ess* is dependent on whether the event is perfected or not in the mind of the speaker (H.-M. Sohn, 1975, p. 159).

Third, *-ess* may be used to express the perfect of result.

- (4.8) a. *Mary-nun* *cikum* *ilena-ss-e.* *cikakha-ci.*
 Mary-TC now get up-PST-DC be late-SUP
 'Mary has gotten up. She is going to be late.'
- b. *khempyute-ka* *kocangna-ss-e.* *ettek-ha-y?*
 computer-NM broke-PST-INT how-do-INT
 'The computer has been out of order. What can I do?'

Both examples in (4.8) are concerned with the current state of a previous situation. The perfect of result is different from resultatives in terms of whether the focus is on the event or the state (Dahl, 1985, p. 133). That is, there is no prolonged gap in the perfect of results. In a resultative version of (4.8a), *Mary-nun acik ilena-e-iss-e* (Mary-TC still

get up-CONN-stay-INT), ‘Mary is still up’, on the other hand, the state of the verb is persistent from the end point of the event, focusing on the state, not on the event.

As described so far, the semantics of *-ess* derives from contexts and includes factors such as adverbials, lexical aspect, and the speaker’s intention. For example, time adverbials play an important role in confirming the meaning of *-ess* (S.-O. Sohn, 1988, p. 50).

- (4.9) a. *Suni-nun ecey ttena-ess-ta.*
 Suni-TC yesterday leave-PST-DC
 ‘Suni left yesterday.’
- b. *Suni-nun tutie ttena-ess-ta.*
 Suni-TC finally leave-PST-DC
 ‘Suni left finally.’
- c. *Suni-nun pangkum ttena-ess-ta.*
 Suni-TC just now leave-PST-DC
 ‘Suni has left just now.’

In (4.9a), the time adverbial *ecey* ‘yesterday’ points to a specific time point and the suffix *-ess* marks the simple past. The adverbial *tutie* ‘finally’ implies that the situation has reached its final juncture, indicating that the suffix *-ess* is the perfective marker in (4.9b). The adverbial *pangkum* ‘just now’ in (4.9c) refers to the current moment, and the *-ess* here signals the present relevance of the previous situation.

As mentioned, the lexical aspect of verbs also has an influence on the meaning of *-ess*. S.-H. Choi (1987, p. 47) explicitly discussed the possible meanings of the suffix *-ess*:

When combined with the suffix *-ess*,

- (i) resultative verbs and punctual verbs give a resultant-state meaning
- (ii) accomplishment verbs give the meaning of completion
- (iii) process (activity) verbs and stative verbs give simple past tense meaning.

According to Choi (1987), the telic verbs—verbs of accomplishment and achievement—are generally compatible with the meaning of perfective. On the other hand, non-telic verbs—verbs of activity and state—are not compatible with completion and/or the perfect of results, as they do not have natural end points. For instance, when achievement verbs (+punctual, +telic), such as *cwukta* ‘die’, *pakkwuta* ‘change’, *ancta* ‘sit down’, and *ilhta* ‘lose’, have attached *-ess*, the predicates produce the meaning of the perfect of results. As in (4.2), when accomplishment verbs (+durative, +telic), such as *kulita* ‘draw’, *tatta* ‘close (door)’, *mekta* ‘eat’, *ponghata* ‘seal’, and *ikta* ‘be cooked’, are suffixed with *-ess*, the meaning of completion is produced.

The relationship between the meanings of *-ess* and lexical aspect types, however, is not fixed but changeable depending on the discourse contexts. That is, the correlation

both constrains the possible meaning of *-ess* on the basic level and varies it on the derived level.¹⁰

S.-Y. Oh (2003) analyzed the distribution of the multiple uses of the suffix *-ess* in terms of their correlation with the lexical aspect of verbs. Table 5 provides Oh's statistical information about the correlation between the lexical aspect of verbs and the meaning of *-ess* on the derived level. The meaning of the suffix varies according to the category of verb with which it combines. For example, when both the perfect of result and the perfective are denoted by *-ess*, the suffix exclusively combines with telic verbs (i.e., accomplishment and achievement). However, 61% of the occurrences of *-ess* with the past meaning are when it is combined with telic verbs, and 39% when it is combined with state and activity verbs. This suggests that the lexical aspect of verbs does not always control the meaning of the suffix, because the various meanings are associated with the suffix depending on the contextual components such as time adverbials, lexical aspect of verbs, and communicative purposes.

¹⁰ The derived level considers all components, including the lexical aspect of verbs, time adverbials, modals, and the actual discourse, while the basic level indicates only the inherent lexical aspect.

Table 5. Distribution of the suffix *-ess* with lexical aspect (Oh, 2003, p. 1196)

	Number of tokens	Past	Anterior			PFV	ES	H
			PERF	EXP	CON			
STA	100 (17%)	84 (19%)	0 (0%)	0 (0%)	4 (57%)	1 (2%)	11 (100%)	0 (0%)
ACT	109 (18%)	90 (20%)	0 (0%)	8 (35%)	3 (43%)	0 (0%)	0 (0%)	1 (14%)
ACC	145 (24%)	90 (20%)	22 (45%)	8 (35%)	0 (0%)	28 (58%)	0 (0%)	3 (43%)
ACH	243 (41%)	188 (41%)	27 (55%)	7 (30%)	0 (0%)	19 (40%)	0 (0%)	3 (43%)
Total	597 (100%)	452 (75.7%)	49 (8.2%)	23 (3.9%)	7 (1.2%)	48 (8.0%)	11 (1.8%)	7 (1.2%)

STA: state; ACT: activity; ACC: accomplishment; ACH: achievement; PERF: perfect of result; EXP: experiential; CON: anterior continuing; PFV: perfective; ES: existing state; H: hypothetical.

In sum, the non-terminal suffix *-ess* is not necessarily a past tense marker, due to the many exceptions, as shown in Table 5 (145 cases out of 597 cases of *-ess* found by Oh, 2003) and as in (3.2) through (3.5). In fact, the compatibility of *-ess* with adverbials referring to the current moment such as *cikum* ‘now’, *pangkum* ‘just now’, and *icey* ‘from now’, among others, and even with future adverbials as in (3.3), refutes the idea that the suffix is a tense marker.

4.3 Historical development of *-ess*

Grammaticalization theory provides an explanation for variety in grammatical distribution (Hopper, 1991; H.-M. Sohn, 1996; Hopper & Traugott, 2003). The diachronic development of *-ess* may account for its variation in a persuasive and profound way. Based on their typological studies of tense-aspect, Bybee et al. (1994)

p. 57). According to H.-M. Sohn (1991), the pastness came from the past-oriented suffix *-e*, the perfect of result from the resultative state meaning *isi*, and the perfective meaning of *-ess* from the combination of the pastness of *-e* and the present state of *isi*. These assumptions can be explained by the grammaticalization process. Other studies on the process have indicated that the semantic nature of *-ess* is related to the periphrastic construction *-e is(i)-*, which was formerly a resultative construction (D.-W. Hahn, 1986; Huh, 1987; Y.-K. Ko, 2010).

The construction consists of a connective *-e* and a lexical verb *is(i)-* ‘exist’, which was originally a simple combination of two verbs. In Middle Korean, the semantic constituents of the construction may have been analyzed as [+resultative], [+stative], and [+durative], and syntactically, *-e is(i)-* had a much wider range of functions than the current construction, *-e iss-*, which cannot be used with transitive verbs and dynamic verbs in general. The periphrastic construction *-e is(i)-* was able to freely occur with intransitive/transitive verbs and static/dynamic verbs (D.-W. Hahn, 1986; E.-H. Jeong, 2007).

- (4.11) a. *mom-i khukuytAoy-a hekong-ay*
 body-NM big become-CONN sky-at
kAtAkhA-a is-taka sto cyekkuy tAoy-mye.
 full-CONN exist-SEQ again small become-and
 ‘The body became so big that it was full in the sky, then again became small.’
 (Sekbosangcel, 1447, 6:34; from Jeong, 2007)
- b. *nay cwungsayng-Ay api tAoy-a is-no-ni*
 I people-GEN father become-CONN exist-IN-
 DC
 ‘I exist as a father for people.’

(*Welin sekpo*, 1459, 12:39; from Jeong, 2007)

- c. *chosag-uy kyecip-i aki pAy-e*
 first pregnancy-GEN woman-NM baby conceive-CONN
is-taka kongkwung-ay tAl-a-ka tu-ni-la.
 exist-SEQ palace-at run-CONN-go enter-IN-DC
 ‘A woman who was in her first pregnancy ran into the palace.’
 (*Samkang hayngsilto chokan*, 1481; from Jeong, 2007)

The *-e is(i)-* could combine with statives, such as *kAtAkhAta* ‘be full’ in (4.11a), intransitives, such as *tAoyta* ‘become’ in (4.11b), and transitives, such as *pAyta* ‘conceive’ in (4.11c), denoting commonly “resultant state duration.”

In the 15th century, there appeared *-e is-* (and its allomorphic variant *-a is-*) and its coalesced form *-eys-* (and its allomorphic variant *-ays-*) in the same text, as in (4.12). The two forms of *-a is-* and *-ays-* in (4.12) appear to be interchangeable, as the morphemes appear in the same slot of the same predicate.

- (4.12) a. *posal-i cengsa mAyngkAl-o hAoza anc-a is-te-*
 Buddhist-NM temple make-CONN alone sit-a is-RT-
si-ni
 SH-DC
 ‘The Buddhist made a temple, and was seated there alone.’
 (*Welinsekpo*, 1459, 1:6; from Oh, 2003)

- b. *nimkum-wi-l pAli-sy-a cengsa-ay anc-ays-te-*
 king-crown-ACabdicate-SH-CONN temple-at sit-ays-RT-
si-ni
 SH-DC
 ‘Having abdicated the crown, (he was) seated in the temple.’

(*Welinsekpo*, 1459, 1:2; from Oh, 2003)

The coexistence of *-a is-* with *-ays-* in the data of (4.12) demonstrates that the resultant state durative marking was already stabilized as a newly developed grammatical form emerging from a simple verbal compound.

According to Hopper and Traugott, the meaning of a periphrastic construction will be semantically bleached in the processes of syntactic conventionalization and routinization (Hopper & Traugott, 2003, p. 93). The syntactic sequence of the two verbal units ([V-*e*] ‘past event’ or ‘completion’ + [*is*] ‘present state’) is reanalyzed by rebracketing them into a single unit ([V-*e is(i)*]), which speakers perceive as a single verb. The reanalysis signifies a constituency change that probably does not occur in one step, with syntactic-semantic change to be expected in a later stage. As the structure of [V-*e is(i)*-] is perceived as a single verb, the deletion of the word boundary occurs, supported by the phonologically weak boundary (i.e., vowel + vowel) and the increased frequency of the form’s use, and eventually it begins to express the perfect of result, completion, and/or past tense.

The emerging properties of the reanalyzed structure are matched well with the original periphrastic construction whose meaning is extracted compositionally from the combination of a completion of a situation, denoted by the preceding verb and the connective, and its result of the present moment, denoted by the existential verb *is(i)*-. Only the property of duration is lacking in the structure of [V-*e is(i)*-] (H.-S. Lee, 1991,

p. 254), which can be explained by the deletion of the auxiliary verb *is-* ‘exist’ (Huh, 1987).¹²

The following examples also show the process of reanalysis from *-e is(i)-* to *-es-*, as well as “layering,” which refers to the coexistence of forms that belong to the same functional domain. The development of *-es-* from *-e is-* can be observed in three different versions of the same text, *Nokeltay*.

- (4.13) a. *Penyek Nokeltay* (1517):
hAn kot tAli muletiy-e is-te-ni icey kothy-e is-nAnka.
 one place bridge collapse-**e is**-RT-DET now repair-**e is**-Q
- b. *Nokeltay Enhay* (1670):
hAn kos tAli mulhetiy-e is-te-ni icey kothy-es-nAnka.
 one place bridge collapse-**e is**-RT-DET now repair-**es**-Q
- c. *Monge Nokeltay* (1741):
hAn tAli mwunhecy-es-tA-ni icAy kochy-es-nAnya.
 one bridge collapse-**es**-RT-DET now repair-**es**-Q
 ‘A bridge had collapsed. Has it been repaired now?’
 (from Oh, 2003)

See the replacement of *-es-* in the interrogative predicate in (4.13b) (*kothy-e is-nAnka* > *kothy-es-nAnka*) and in the medial verb in (4.13c) (*mulhetiy-e is-te-ni* > *mwunhecy-es-*

¹² The loss of the durative resulted from the loss of duration in the existential *-is(i)-* and coincided with the establishment of *-es-*. This example is in line with Bybee et al.’s (1994, p. 289) claim that when a perfect changes to a simple past and/or perfective, the current relevance component of meaning is lost, and the meaning generalizes; a simple past and/or perfective is more general than a perfect, and is accordingly more compatible with more contexts.

tA-ni). This change from existential verb to auxiliary verb and then to suffix follows the principle of unidirectionality, which is that the process of grammaticalization moves from lexical to grammatical items, but not vice versa (Hopper & Traugott, 2003, p. 99). For instance, D.-W. Hahn (1986) showed that the existential verb *eps-* ‘not exist’ does not occur with *-e is(i)-* but with the newly emerged form *-es-* around the 15th century.

Further, the principle of layering is shown in Example (4.13), where the original periphrastic construction, [V-*e*] [-*is(i)-*], coexists with the reanalyzed structure, [V-*e is(i)-*], and the newly emerged [V-*es*] form (Hopper & Traugott, 2003, p. 124).

Moreover, the original lexical form remains as an autonomous element and/or undergoes changes as an ordinary lexical word, while the new one undergoes the grammaticalization to suffix. This follows the principle of divergence (Hopper, 1991, p. 22). In fact, although the [V-*e*] [-*is(i)-*] construction maintains the same form, the function narrows down syntactically in that the construction cannot take transitive verbs anymore and is limited to having agentive subjects. By contrast, the reanalyzed structure takes its own grammaticalization path, *-e is(i)-* > *-eys-* > *-ess-*, and its meaning is generalized with the increase of textual frequency; this follows the principle of specialization (Hopper & Traugott, 2003, p. 116).

Yet there is also the principle of persistence, according to which, even though the process of grammaticalization keeps moving on, an old lexical meaning such as the resultant state durative may continue to persist and to constrain the meanings of a new

form, such as *-ess* (Hopper, 1991). The principle of persistence supports the analysis that *-ess* is not only a past tense marker but is polysemous.

As briefly indicated in this section's discussion, the coalescence of the internal structure fostered the reduction of the form, resulting in the loss of the glide /y/, which is the trace of the existential verb *is(i)-*. The morpho-phonological reduction of *-e is(i)-* > *-eys-* > *-es-*, which the phonologically weak boundary (i.e., vowel + vowel) promoted, facilitated the semantic shift (H.-M. Sohn, 1996). The routinization of expressions typically involves simplification as speakers find new ways to say old things (Slobin, 1977). Expressivity with simple units contributes to improving informativeness for the hearer and at the same time allows the speaker to convey his/her subjectivity toward the situation, including the speech situation. This very process of innovation is itself typically based on a principle of economy.

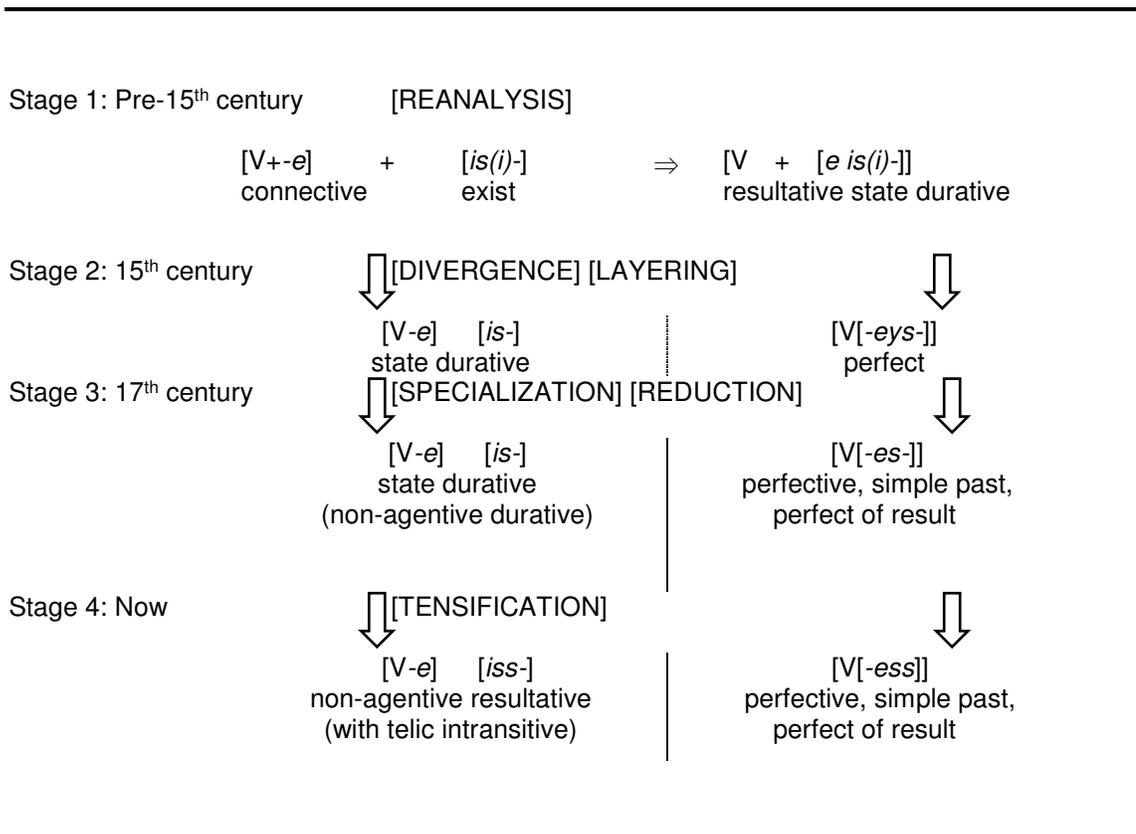
By contrast, other studies (D.-W. Hahn, 1986; S. Rhee, 1996) on *-ess* have argued that the phonological deletion was followed by the semantic change, not vice versa. In terms of the phonological reduction, they do not admit the layering of the two morphemes and further propose that *-eys-* was the actual precursor of *-ess*.

As the grammaticalization process proceeds, the *-e is(i)-* construction is no longer associated with a single semantic concept, such as past tense, completion, or even current relevance. This is the completion of divergence. By about the 17th century, both the restricted *-e is(i)-* and the *-es-* with the phonological contraction (i.e., *-e is(i)-* > *-eys-*

> -es-) had completely diverged from the periphrastic *-e is(i)-* construction. Finally, tensification occurs to *-es-* and *-e is-*, resulting in *-ess* and *-e iss-*.

Based on the historical studies of the Korean non-terminal suffix *-ess/-ass*, which developed from a resultative periphrastic construction, it is assumed that it has undergone the grammaticalization stages shown in Figure 4. In order to observe the development of *-ess*, S.-Y. Oh (2003) calculated the frequency of its use in the different versions of *Nokeltay*: it occurs 17 times in *Penyek Nokeltay* (1517), 35 times in *Nokeltay Enhay* (1670), and 91 times in *Chenge Nokeltay* (1765). This remarkable increase of frequency may reflect the degree of grammaticalization of *-ess* over time.

Figure 4. Grammaticalization process of the suffix *-ess*



The increase of frequency coinciding with conventionalization generates a paradigmatic change in that the zero morpheme comes to denote the opposite meaning. That is, as the suffix is used far more frequently, the inferential mechanism affects the absence of the suffix, thus coding the zero suffix as non-past and/or non-perfective (S.-Y. Oh, 2003).

CHAPTER 5

CORPUS STUDY

As I explained in the introduction, one of the purposes of this study is to present an empirically based, synchronic account of the relationship between the verb, the temporal morpheme, and the connectives in conjunctive constructions in contemporary Korean spoken data. This chapter will explore the contexts and functions of the constituents that are found in the 21st Century Sejong Project's corpora of spoken Korean. Nowadays, there is not much doubt about the important role that corpora and corpus analyses play in linguistics. The advantages of corpus analysis are noted in the point that "the language looks different when you look at a lot of it at once" (Sinclair, 1991, p. 100) as well as the point that data from a large corpus guarantee objectivity and stability (J.-W. Choe, 2014, p. 76).

5.1 Corpus selection

Whether their work is corpus-based or corpus-driven, researchers who want to work with any kind of corpus should keep in mind certain criteria for choosing an appropriate one, which include corpus availability, size, and representativeness (Sinclair, 1991, p.

113). In this section, I discuss my motivation for using a corpus of spoken, not written, Korean.

The most important reason is that naturally occurring spoken data from real life conversations are key to achieving a better understanding of what language is and how it works. One argument for the selection of spoken data as the empirical basis for this study of temporal relations in the Korean conjunctives lies in the extended uses of the forms that can be observed in spoken language. In an empirical study on conversation discourse, S.-Y. Oh (2003) found the temporal suffix *-ess* used for a variety of functions, including marking simple past, perfective, anterior continuing, experiential, and perfect of result. In addition, the interactional nature of conversation apparently has an influence on the use of certain verbal suffixes (H.-S. Lee, 1991, p. 7). Furthermore, a practical reason for choosing to analyze spoken Korean is that it can be expected to be more relevant to pedagogical goals, as language curricula usually emphasize spoken language.

The most representative collection of spoken Korean data, which was released in 2011, is the 805,652-*ecel* spoken subsection of the 21st Century Sejong Project's corpus of modern Korean language. The Sejong Project provides morphologically parsed corpora. The spoken corpus consists of 201 transcribed text files, covering various spoken genres such as face-to-face conversations, sermons, telephone conversations, presentations, lectures, sports commentaries, and monologues. The number of sentences is 227,310 and the number of morphemes is 1,618,650. The material is available to researchers both on DVD and through a web-based concordance

program. The corpus provides more than sufficient relevant data on the conjunctive constructions.

5.2 Method: Data collection and processing

After the selection of the appropriate corpus, the actual corpus-based work was performed. The following sections describe the steps carried out to collect and process the selected corpus data.

5.2.1 Three elements under analysis: verbs, *-ess*, and connectives

From a practical point of view, it would be formidable, if it is not impossible, to carry out a detailed investigation with a full treatment of verbs, the semantics of the suffix, and the connectives. Hence, it was necessary to reconceptualize and recategorize each constituent for analysis.

5.2.1.1 Verbs

Vendler's (1957) verb classification was applied in this study (See Section 4.1.2). In this classification, the inherent temporal properties of verbs are categorized into stative, activity, accomplishment, and achievement (Van Valin & LaPolla, 1997, p. 92).

However, not all Korean predicates can be thus classified by lexical aspect. For example, it is difficult to determine the lexical aspect of the copula *i-ta* 'is-DC' and *ani-ta* 'isn't-DC'. In addition, when the preceding clauses have a negative expression, the verb

cannot have a temporal property because the event did not occur yet. Therefore, such tokens had to be sorted out.

Compounding verbs in Korean conjunctive clauses present another problem for the determination of the lexical aspect of the verbs. In Korean, the compound verb constructions are very productive for expressing either aspect or modality. For instance, the auxiliary verb constructions of desirative modality *-ko siph-* (-COMP want-) ‘to want’ or perfective aspect *-e peli-* (-COMP throw away-) ‘to finish’ frequently suffix to the verb stem. In this case, the modality verbs were not included in the determination of lexical aspect, but the auxiliary verbs of the perfective aspect were regarded as either accomplishment or achievement. Additionally, operational tests were applied for the determination of lexical aspect, drawing on the work of H.-Y. Kim and E.-H. Lee (2007, p. 123).

5.2.1.2 Temporal suffix *-ess*

As discussed in Chapter 4, the semantic properties of the morpheme *-ess* have been defined in many ways including past tense, perfective aspect, perfect of result, anterior continuing, or experiential (S.-Y. Oh, 2003, p. 1186), depending on the perspectives of the scholars. Despite the variety of the semantics of *-ess*, its core functions are to mark simple past, perfect of result, and perfective aspect (see Section 4.3), while its other uses are pragmatic functions derived from the core functions. And although the perfect of result can be regarded as a discrete component of the semantics of *-ess*, I counted it with the perfective aspect because of the relevance of the current state resulting from the past

event. Therefore, the two central functions of perfective aspect and perfect of result were processed in the same category for analysis.

5.2.1.3 Connectives

The 21st Century Sejong Project provides information about the participants, the frequency of the sentences and the lines, lists of morphemes by word category, and lists of word category by morpheme. In the frequency list of morpheme by word category, the number of the connectives transcribed from spoken data was 534, which is too many for the purposes of this study. As a first step in the procedure, then, individual connectives needed to be chosen for analysis. The selection criteria were frequency of occurrence in spoken Korean and the possibility of co-occurrence with the suffix *-ess*. In order to retrieve a list of the most frequent connectives, I referred to the “frequency list” provided by the 21st Century Sejong Project (See Appendix 1) in which displays 78 high-frequency connectives, which were narrowed down to a smaller set for analysis through a few steps. The detailed examination focuses on five of these connectives’ temporal relations with medial verbs and the temporal suffix.

First, allomorphs were regarded as a single item with the original morpheme. The frequency list for the spoken data corpus of the 21st Century Sejong Project counts the allomorphs separately. For instance, the item with the third highest frequency in the list above is the allomorph *-kwu*, counted as a separate item from the connective *-ko*, but I combine them for this study’s analysis.

Second, the complementizers were excluded from the analysis. The list contains complementizers such as *-e/a*, *-key*, *-ko*, and *-ci* with which serial verb constructions and auxiliary verb constructions are formed.

Third, the perfective connectives, the overlapping connectives, and the posterior connectives were excluded, because the frequency list I used is based on co-occurrence with the temporal suffix.

Fourth, I removed the conditional connective *-umyen*, which is often used to denote a hypothesis. This is because it is not easy to decide the temporality in conjunctive sentences where the speaker talks about a hypothetical situation. Also, the sequential non-perfective connective *-taka* was not counted because it necessarily co-occurs with the perfective reading of *-ess* (See Section 3.3.2.1.2).

Through this procedure, I selected five connectives, two non-temporal, one overlapping, and two non-perfective: *-ko*, *-ciman*, *-nikka*, *-eto*, and *-umyense*.

5.2.2 Data collection

Language patterns from a large amount of computerized corpus data can be revealed with the help of a corpus-analytic program, which is called “concordance software.” The main function of the program is to compile long lists of texts with the key word in the center and the context on the left and the right. This so-called “key word in context

(KWIC)” function, as shown in Figure 5, is the most useful format because the concordance program provides the original text along with its part of speech (POS) tag.

To retrieve the conjunctive constructions in context from the Sejong Project’s morphologically parsed corpus, I used AntConc, which is a freeware text concordance application. AntConc is a program for looking at how words behave in texts. Individual tools such as “Clusters/N-Grams,” “Concordance,” and “File view” can be used to perform various corpus-analytic procedures, which include the extraction of recurring word clusters and the compilation of frequency wordlists. Yet the source files from the Sejong corpus had to be encoded for using with AntConc. Fortunately, I was provided with the encoded corpus (utf8 encoding) by Dr. Jae-Woong Choe, who also provided support and suggestions for an appropriate query strategy to retrieve the co-occurrences of the three elements of the verbs, the temporal suffix, and the connectives in the conjunctive constructions.

Figure 5. An example of a KWIC concordance (key word *ㅏ*쓰으니까)

1	뭐 십오분의 일이나 십분의 일 정도는 크 나 거 (이) 나 가 ? 만 원 오르 ㅏ	5ct_0013.txt
2	알 아야 되 ㅏ요 ? 아니요 그냥 , 아니 그거 그냥 , 다 저 도 지금 모르 고 오 ㅏ	5ct_0016.txt
3	는데 제 가 쟈 어리 구 다 나이 있 는 언니 오빠 들 이 있 었 어요 . 근까 처음 가 ㅏ	5ct_0016.txt
4	(이) 나 지 옛 여인 이 생각 나 ㅏ서 그리구 요 언니 ? 가 ㅏ야 되 ㅏ . 니 들 보 ㅏ	5ct_0017.txt
5	때 까지 우리 가 있 어야 되 는 거 (이) 야 . 근데 거기 는 시택 이 미국 에서 오 ㅏ	5ct_0017.txt
6	호텔 이 죠 ? ... 개 는 내 조카 (이) 야 . 예 예 . 체리 ... 앞 에 안 나오 ㅏ	5ct_0017.txt
7	오 ㅏ서 . 일요일 날 오 ㅏ서 구나 ! 일요일 날 오 ㅏ서 수요일 날 출장 들어가 ㅏ	5ct_0017.txt
8	그리구 나 이제 거기 서 하 라는 대로 만 다 하 ㅏ으니까는 나 는 정리 상 끝 나 ㅏ	5ct_0019.txt
9	동 걸 ㅏ 거 뭐 있 어 ? 아 나 는 그때 는 차 를 전혀 하나 두 안 다루 ㅏ 보 ㅏ	5ct_0022.txt
10	의 전부 이 나 여자 (이) 야 여자 를 잘 만나 ㅏ야 되 니까 . 여태 까지 잘못 만나 ㅏ	5ct_0023.txt

The concordances for this study were compiled for the five connectives utilizing the “Clusters/N-Grams” tool, which exhibited lists of co-occurrences with *-ess* and its allomorphic variants *-ass-* and *-yss-*. Consequently, there exist three subsets for each connective, which I integrated into a single Excel file. The datasets of concordance lines were saved as Excel files for further analysis.

With the saved concordances of the collexemes that consist of a verb, *-ess*, and a connective, I carried out a series of filtering processes manually. First, fragmentary examples were deleted. Second, examples including connectives transferred to sentence-terminal suffixes were eliminated. This phenomenon has been observed in

circumstances in which the connectives have undergone grammaticalization involving functional changes and changes in speaker's modality (H.-M. Sohn, 1999). In addition, the cases in which following clauses were reduced because of omission in conversation also were excluded.

Table 6. Numbers of originally collected and remaining concordance lines

Connective form	Connective without <i>-ess</i>	Connective with <i>-ess</i>	
		before filtering	after filtering
<i>-ko</i>	25,608	472	393
<i>-ciman</i>	1,330	189	164
<i>-nikka</i>	787	238	182
<i>-eto</i>	1,079	23	19
<i>-umyense</i>	2,526	9	3
Total	31,330	931	761

5.2.3 Data processing and encoding

In order to make it easier to handle the large amount of corpus data that remained after the filtering procedure, an electronic database was created with the help of Microsoft Excel software (version 2013). In this section, I will describe the manual annotation of the data according to semantic and contextual criteria.

In Excel, the imported corpus data were stored in a table for each connective. Further information about each token was entered into the subsequent boxes. The creation of information boxes allowed the display of detailed annotations of the context

features and functions of each token. The determination of features and values was a dynamic process and constantly adjusted in the light of the data. To be more concrete, when the KWIC format of about 50 syllables per line was not sufficient to determine the category in which a particular instance should be grouped, I referred to the original text with the hyperlink presented in the software in order to make sure of the classification. Eventually, I developed a set of values that could account for all the relevant features of the data. The sets of context and function features I used are displayed in Tables 7 and 8. They will be illustrated and explained in detail in Sections 5.3 and 5.4.

Table 7. Function features of *-ess* under analysis

Central function features	Values
simple past tense perfective aspect	time reference completedness, resultant state

Table 8. Context features under analysis

Lexical aspect of verbs	Values
state	-dynamic, -telic, -punctual
activity	+dynamic, -telic, -punctual
accomplishment	+dynamic, +telic, -punctual
achievement	+dynamic, +telic, +punctual
Connectives	
non-temporal	e.g., <i>-ko</i> , <i>-ciman</i> , <i>-eto₂</i> , <i>-umyense₂</i>
non-perfective	e.g., <i>-nikka₁</i> , <i>-eto₁</i>
overlapping	e.g., <i>-umyense₁</i>

A widely used statistical test in corpus analysis is the chi-square test. The test is contended to be useful if one wants to determine whether found differences are significant or not by comparing the frequencies of items. In the following functional and contextual analyses I will conduct a chi-square test for each comparison of figures from different sets of data. All chi-square tests were performed using the SAS program.

5.3 The functions of *-ess* in spoken Korean

The analysis of the functions of *-ess* in spoken conjunctive clauses was a main purpose of this study. The aim was to find out what was expressed by each of the 761 conjunctive concordance lines to determine which functions the *-ess* form served in particular utterances. The discovery process of the central function of the suffix, as

discussed in Chapter 4, was driven by the question of whether the suffix denotes a temporal orientation or current relevance, which was able to be determined by the given contexts.

5.3.1 Time reference

The first step in the analysis of the functions of *-ess* in spoken data was the examination of the “time reference.” The aim was to determine for each of the 761 concordances from the Sejong corpus whether it referred to something happening in the past. This “time reference” attribution was relatively straightforward in the case of actions or events. I encoded it as the acronym “Ps” for the datasets.

(5.1) *ko:*

oppa-nun ince toykey cal ewulli-n-tay.
 he-TC by the way very well go with-IN-QUOT
 ‘He said that (the job) suits me very well.’

cal hal-kes kath-ta-kwu kkok ha-la-ku
 well do-seem-DC-QUOT surely do-IMP-QUOT
 ‘“(You) seem to do very well, so surely you do (the job well).” ‘

kulehkey iyaki-l hay-cwu-ess-e.
 like that tell-AC do-give-Ps-INT
 ‘(He) told (me) like that.’

cheum poa-ss-nuntey.
 first see-Ps-BACK
 ‘It was the first (time) that (he) met (me).’

kulaykackwu com nwun-i ttui-ess-ci.
 so a little eye-NM be opened-Ps-COM
 ‘So I was attracted (to him).’

→ *kulayse* ***manna-ss-ko***
 so date-Ps-and then
 'So I dated him.'

manna-ta *po-nikka* *kunyang*
 date-DC see-BACK just
 'as our dating continued, just'

i *salam-i-ta* *siph-kwu*
 this person-COP-DC wishful-and
 'I thought that this person is (the guy I wish to get married to).'

kulayse *sangkyenlyey-lul* *kot* *ha-l keya.*
 so family meeting-AC soon do-be going to
 'So a meeting with both our families is going to occur.' (6ct_0006.txt)

The context of a particular situation usually provides information about whether *-ess* refers to temporal orientation or internal consistency (Comrie, 1976, 1985). In Example (5.1), the speaker has been talking about how she met her husband (referred to as *oppa*). We can find in line 6 the activity verb *manna-ta* 'date' with the suffix *-ess* and the subsequent connective *-ko* attached to it. The utterance does not denote relevance to a result or completedness in the present but refers to the temporal location of an event in the past.

Although contextual information suffices to indicate the function of the temporal suffix, what specifies the grammatical interpretation of the suffix is often a temporal adverb. They indicate the definite time location of the given situation.

(5.2) *ciman:*

→ *akka camkkan nao-ass-ciman, (...)*
a little ago moment appear-Ps-CONT
'Although (it) appeared a moment ago,'

wulinala mal-ey tane-ka myech kay-ka iss-nu-nya
our nation language-to word-NM how-CL-NM exist-IN-Q
'How many words do we have in our language?'

solcikhi ce-to cal molu-kyess-sup-ni-ta.
frankly I-too well don't know-PRS-AH-IN-DC
'Frankly speaking, I don't know either.' (8ct_0009.txt)

(5.3) *nikka:*

→ *iltanun akka pangsong-ul poa-ss-unikka,*
once a little ago broadcast-AC watch-Ps-REASON
'Once (we) watched a broadcast a while ago,'

ku yey-lose pangsong-ey tayha-n yayki-lul ha-l
kkey-yo.
the example-as broadcast-to toward-RL story-AC do-be
going to-POL
'As for an example, (I'll) talk about the broadcast.' (5ct_0045.txt)

In (5.2) and (5.3) above, the temporal adverb *akka* makes it possible to interpret the suffix as the past tense morpheme in the conjunctive clause without the help of contextual information. However, if no temporal adverbial was present, in many cases the examination of the larger utterance was necessary to define the function of the suffix. I will deal with the overall distribution of the suffix *-ess* in the preceding clauses as “time reference” in relation to the inherent aspects of the verbs and the connectives in Section 5.4.

5.3.2 Completedness and resultedness

The second function feature was “completedness and resultedness.” If it referred to an event or described an action occurring somehow in the past and resulting in the current state, a concordance instance was assigned the feature value “completedness and resultedness,” encoded as “Pf” for the datasets. Completedness is, for example, expressed in (5.4) and (5.5).

- (5.4) *-nikka:*
thayena-se chenlato-ccok-eyse-man cala-ss-unikka,
 be born-SEQ Chenla province-side-from-DL grow up-Pf-REASON
 ‘Because I have grown up in Chenla Province since I was born,’

chenlato-man tany-ess-ta-n mal-i-ya.
 Chenla province move-Pf-DC-RL word-COP-INT
 ‘I have moved around only in Chenla Province (you know).’ (6ct_0039.txt)

- (5.5) *-ciman:*
yocumey amwuli kiswul-i paltahay-ss-
ciman,
 recently no matter what technique-NM develop-Pf-
 CONT
 ‘No matter what technique has developed recently,’

kuke-lul payk-pheseyntu ilehkey sal-li-e
nay-l swu-n eps-eyo.
 it-AC hundred-percent this way live-CAS-COMP
 bring-RL way-DL not exist-POL
 ‘(we) can’t make it alive ever.’ (8ct_0002.txt)

The utterances that contain the suffix *-ess* denote the completion of a situation in that the speakers’ communicative purpose is to express the situation as a whole at the speech

time (Comrie, 1976), even though the events occurred at some point in the past. That is, the speaker in (5.4) indicated in the first clause that s/he has been born and raised in the province up to the speech time point. In the first clause of (5.5), the speaker described a situation in which techniques developed up to the point of speaking are reportedly very advanced, but any expectation based on that fact is disappointed in the following clause.

Resultedness corresponds to the perfect of result, discussed in Chapter 4. This function of the suffix *-ess* is closely related to the temporal features of the verbs attached to it.

(5.6) *ku taum-ey insam-jwu-nun (...) koyngcanghi tokha-key*
nao-ayo.
 the next-to ginseng-liquor-TC very much strong-AD
 come-POL
 ‘The next ginseng liquor is considerably strong.’

(...) kuntey masi-konase
 (...) but drink-after
 ‘but after (you) drink,’

ipan-ey naymsay-nun eps-sup-ni-ta.
 mouth-in smell-TC don’t exist-AH-IN-DC
 ‘there is no smell in your mouth.’

kuke-y cham coh-te-lako-yo.
 it-NM very good-RT-QUOT-POL
 ‘That was very good, (I think).’

→ *wusen pulayntu-uy sokay-ka ilehkey kkutna-ss-ko,*
 first brand-GEN introduction-NM this way end-Pf-and
 ‘The introduction of this brand has ended in this way,’

kak pulayntu pyeyl-lo choysohan twu-myeng-ssik-uy
 each brand part-with at least two-CL-DL-GEN

cikwen-ul twu-ko iss-sup-ni-ta.
 worker-AC assign-PROG-AH-IN-DC
 '(we) assign at least two employees for each brand.'

(6ct_0009.txt)

In the example of (5.6), the utterance marked in bold that contains the suffix *-ess* describes the resultant state of a situation that the speaker introduced: 'ginseng liquor'. Considering that 'the introduction...has ended' is a telic event that has a natural endpoint, the event itself is expected to have the completed state at the speech point, which means that the speaker is not interested in the temporal orientation but the result.

(5.7) *nikka:*

A: *wuli emma-nun mom-to an coh-usi-nikka,*
 our mom-TC body-too NEG good-SH-
 REASON

'My mom is not in good health too,'

B: *um*
 yes
 'yes'

A: *caknyen-ey swuswulha-si-ess-unikka,*
 last year-at operate-SH-Ps-REASON
 '(she) underwent an operation last year'

B: *um*
 yes
 'yes'

A: *yenghwa po-le ka-ki himtul-ku kulayse kunyang,*

movie see-to go-NOM hard-and so just,
 'It was hard (for her) just to go see a movie'

B: um
 yes
 'yes'

→ A: *cikum-un com manhi naci-si-ess-unikka,*
 now-TC a little much recover-SH-Pf-REASON
 'Now (she) has recovered a lot,'

kunyang oppa-ka cha kac-kwu ka-se
 just brother-NM car bring-and go-SEQ
 'My brother brings (her) with his car and'

ilehkey Changkyengkung mak Tekswukung ile-n
tey
 this way Changkyeng palace just Tekswu palace this-RL
 place

B: '(to these places) like Changkyeng Palace and Tekswu Palace'

um
 yes
 A: 'yes'

kunyang kwukyeng-ina ha-ca ile-n sik-i-ci.
 just look around-DL do-PR this-RL way-COP-COM
 '(we) thought (by ourselves) "Let's just look around."'

In the above example, the speaker (A) used *-ess* when she described her mom's current state (in the utterance marked with the arrow): her mom has recovered a lot and can now look around at places, whereas before she could not, as explained in the several lines preceding. The preceding bold-marked *swuswulha-si-ess-unikka* 'she underwent an operation' contains the suffix *-ess* for time reference. The different functions of *-ess* in

these two occurrences are specified by the temporal adverbs *caknyen* ‘last year’ and *cikum* ‘now’. Even though the inherent aspect of both verbs, *swuswulha-ta* ‘operate’ and *naci-ta* ‘recover’, is accomplishment, the function of the suffix is determined by the contextual information and the speaker’s communicative intention more than the lexical aspect of the verbs.

5.3.3 Distribution of different functions of *-ess*

To find out what portion of occurrences of the suffix *-ess* refer to “time reference” or “completedness and resultedness,” the concordance lines in the database were filtered according to the possible values, and the numbers of occurrences were retrieved from the database. Table 9 displays the retrieved absolute frequencies from the conjunctive clauses and their main clauses depending on the connectives in the datasets.

Table 9. Distribution of *-ess* in the medial position

Function	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Pf	208	27.33	208	27.33
Ps	553	72.67	761	100.00

Table 10. Distribution of -ess in the final position

Function	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NPs	470	61.76	470	61.76
Pf	41	5.39	511	67.15
Ps	250	32.85	761	100.00

(NPs: non perfective aspect and past tense)

In both positions, the absolute frequency of the suffix in the medial position (761) is definitely higher than that in the final position (291). This is because the data were extracted from the conjunctive sentences that include the suffix in the medial position. The different frequencies between the two positions is attributed to the fact that the sentences having the medial *-ess* usually express the events in the first clause and then the speaker's evaluation on them using either emotional, judging, prospecting, or retrospective modalities, so to speak, non-PST (NPs) predicates.

The distribution of the suffix in terms of grammatical functions in the corpus data is presented in Table 11. The highest numbers were found for past tense marking (803; 76.33%) while the absolute frequency of completedness and resultedness (249; 23.67%) was comparatively low. This result is notably similar to the findings of S.-Y. Oh (2003, p. 1186) (i.e., 75.7% for past tense marking).

Table 11. Distribution of medial *-ess* and final *-ess*

Frequency	Medial <i>-ess</i>	Final <i>-ess</i>		Total
		Pf	Ps	
	Pf	26	26	52
	Ps	15	224	239
	Total	41	250	291

When we look closely at the data, however, the shares between the positions, in the medial clauses and the final clauses, are a little different. That is, the number of occurrences of *-ess* for past marking is lower in the preceding clauses than in the main clauses. I will discuss the differences not only between the positions but also between the connectives in Section 5.4.

5.4 The relational use of *-ess* in spoken Korean

Having examined the central functions of the suffix *-ess* in the data, this section will look at co-selection of important features in the lexical-grammatical context of the three elements under consideration in the datasets from the Sejong spoken corpus. A large amount of concordance data was searched to identify patterns in the combination of different function types of *-ess*, lexical aspect of verbs, and temporal types of connectives in the medial predicates, as well as in the final predicates for comparison.

5.4.1 Temporal suffix *-ess* and lexical aspect of verbs

In this section, I will discuss the distributional features of the two elements of the temporal suffix *-ess* and the verb type in terms of lexical aspect in the medial predicates, comparing them with the final positions. In the literature, it has been indicated that many more telic verbs are used with the suffix *-ess* than atelic verbs (S.-Y. Oh, 2003, p. 1198). The data discussed in the literature, however, has been mainly simple sentences, not conjunctive sentences.

The focus of analysis here is the distribution of verbs of the four lexical aspect types in relation to the suffix *-ess* in medial clauses in conjunctive sentences. In order to determine the proportion of the lexical aspect types, absolute frequencies of co-occurrence for each possible combination were retrieved from the dataset.

5.4.1.1 Distribution of verb types across positions

For comparison, I calculated the distribution data from the main clauses. Table 12 and Table 13 display the retrieved numbers together with their percentages in the datasets. In both predicates, in over 80% of all cases in which the four types of verbs combined with *-ess*, its function was as a temporal suffix. Other forms (*copula-ess* and *negative expression V-ess*) are comparatively infrequent.

Table 12. Frequencies of co-selection of *-ess* and each verb type in medial predicates

Type	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STA	151	19.84	151	19.84
ACT	135	17.74	286	37.58
ACC	196	25.76	482	63.34
ACH	145	19.05	627	82.39
COP	59	7.75	686	90.14
NEG	75	9.86	761	100.00

(STA: state; ACT: activity; ACC: accomplishment; ACH: achievement; COP: copula; NEG: negative)

Table 13. Frequencies of co-selection of *-ess* and each verb type in final predicates

Type	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STA	43	23.24	43	23.24
ACT	44	23.78	87	47.02
ACC	41	22.16	128	69.18
ACH	21	11.35	149	80.53
COP	26	14.05	175	94.58
NEG	10	5.42	185	100.00

As the tables show, there is a clear difference in absolute frequencies between the positions. As shown by the absolute numbers, the frequency of *-ess* in medial predicates (761) is over four times higher than it is in main predicates (185). This is likely due to

the fact that the first clauses function as the supporting clause, which is marked, whereas the main clauses are related to the focal clause, which is left unmarked in conjunctive sentences (H.-M. Sohn, 2009, p. 289).

With the exception of the low frequency of achievement verbs in the main predicates, there is not a significant difference in distribution between verb types in combination with *-ess*. This lack of difference is contradictory, in part, to the idea of the aspect hypothesis, which attributes to input the tendency of children or foreign language learners to add past or perfective morphemes on telic verbs more than atelic verbs (Klein, Dietrich, & Noyau, 1995; Shirai & Kurono, 1998). This is because there is at least no correlation between past marking and inherent aspect in the real data. Rather, the position of the verbs seems more relevant to past marking, as shown in Table 14 (see Hartford & Bardovi-Harlig, 1992).

Table 14. Distribution of medial telicity and final telicity

Medial telicity	Final telicity		Total
	atelic	telic	
atelic	194	43	237
telic	213	93	306
Total	407	136	543

What is noticeable in Table 14 is the fact that atelic verbs (407; 47.02%) are more frequent than telic verbs (136; 33.51%) in the main predicates, while in the medial predicates atelic verbs (237; 37.58%) are less frequent than telic verbs (306; 44.81%). That is, speakers frequently express an event in the preceding clause followed by their response to or evaluation of the event in the following clause in conjunctive sentences. The difference was significant according to the chi-square measure (p -value < .001). This result is dissimilar to that of Oh (2003), mentioned above, because the atelic verbs are used with *-ess* more frequently than the telic verbs in the main clauses. Some typical examples of the patterns from the corpus are given in (5.8) below.

- (5.8) a. *tonkkasu-nun hanmwul ka-ss-ko*
 pork cutlet-TC prime go-Pf-and
 'The pork cutlet is out of season and'
- cheum-ey-man com kwaynchanh-ass-ci.*
 first-at-DL a little be good-Ps-COM
 'it was good only the first time.' (7ct_0027.txt)
- b. *nay-ka mwullon manhi phay-ss-ciman*
 I-NM surely very much hit-Ps-CONT
 'Surely I hit (him) a lot but'
- emcheng kwuiyep-kwu*
 quite cute-and
 '(he) was quite cute and'
- ttolttolhay-ss-ketun.*
 smart-Ps-INT
 '(he) was smart, you know.' (6ct_0027.txt)

- c. *na cikum ku sang-ulo yeki-l o-ass-unikka*
 I now the prize-with here-AC come-Pf-REASON
 'because I came here with the help of the prize,'
- tyokey towum-i toy-ess-ci-yo.*
 a lot help-NM become-Ps-COM-POL
 '(It) was very helpful.' (7ct_0008.txt)

As shown in (5.8), the telic verbs, *hanmwul ka-ta* 'to be out of season', *phay-ta* 'to hit', and *yeki o-ta* 'to enter', occur in the preceding clauses, while the atelic verbs, *kaynchanh-ta* 'to be alright', *ttolttolha-ta* 'to be smart', and *towumtoy-ta* 'to be helpful', occur in the following clauses that express the speakers' evaluation of the first clause propositions.

5.4.1.2 Distribution of lexical aspect with functions of *-ess*

After an examination of the distribution of verbs' lexical types by position, this subsection investigates the main question of this section: Are there any typical collocations of verb types and the functions of the suffix in the medial position? Table 15 presents the raw numbers and the relative frequencies depending on the different functions of *-ess* by inherent aspect types of verbs.

Table 15. Distribution of verb lexical aspect types by functions of *-ess* in medial position

lexical aspect types	Pf	Ps
STA	26 (12.50%)	125 (22.60%)
ACT	38 (18.26%)	97 (17.54%)
ACC	66 (31.73%)	130 (23.51%)
ACH	54 (25.96%)	91 (16.46%)
COP	4 (1.92%)	55 (9.95%)
NEG	20 (9.62%)	55 (9.95%)
Total	208 (100%)	553 (100%)

As we observed in the previous section, no significant difference was found between the verbs' lexical aspect types in frequency in general (See Tables 12 and 13). This result agrees with the distribution in the time reference function of the suffix *-ess*. In terms of perfective and perfect of result functions of the suffix, however, combinations of *-ess* and telic verbs (i.e., accomplishment for 31.73% and achievement for 25.96% of the total predicates) appear frequently compared to combinations of *-ess* and atelic verbs (i.e., state for 12.98% and activity for 17.79% of the total). Of course, the inherent agreement between telicity and completedness/resultedness makes significant co-occurrence possible, because "the interpretation of perfective and perfect of result requires the situation described to have an inherent end point" (S.-Y. Oh, 2003, p. 1198; see also S.-H. Choi, 1987). However, the verbal semantics does not necessarily

determine the grammatical meaning of the suffix or vice versa, although the inter-
relation between the two would be close.

Table 16. Distribution of telicity by functions of the suffix *-ess* in medial position

Frequency Row Pct	Medial telicity	Medial <i>-ess</i>		Total
		Pf	Ps	
	atelic	64	222	286
		34.78	50.11	
	telic	120	221	341
		65.22	49.89	
	Total	184	443	627

Table 16 displays the shares of verb types, telic or atelic, for different uses of the suffix in the medial clauses. Interestingly enough, the shares of atelic (222; 50.11%) and telic (221; 49.89%) verbs are close to half and half for past tense use, while the share of telic verbs (120; 65.22%) far exceeds half for the perfective and perfect of result use. The relation between the telic verbs and the perfective/perfect of result was statistically significant (p -value < .001).

Table 17. Distribution of telicity by functions of the suffix *-ess* in final position

Frequency Row Pct	Final telicity	Final <i>-ess</i>		
		Pf	Ps	Total
	atelic	15	146	161
		39.47	69.19	
	telic	23	65	88
		60.53	30.81	
	Total	38	211	249

The phenomenon in which telic verbs frequently co-occur with *-ess* in its function of marking perfective and perfect of result is also found in the final predicates. Table 17 shows the numbers with the percentages of the frequencies of the co-selection. More than half of the telic verbs (60.53%) combined with *-ess* with the grammatical meaning of completedness/resultedness. With respect to the past marking, atelic verbs (69.19%) combined with *-ess* with this function much more frequently than telic verbs (30.81%).

Surely, this does not mean that the co-occurrence of either state verbs or activity verbs and the perfective meaning of the suffix *-ess* is not feasible. When the speaker intends to express the relevance to the present state/result, the suffix can denote completion or resultant state with atelic verbs, as shown in the examples in (5.9).

- (5.9) a. *Na-nun han hakki nam-ass-unikka,*
 I-TC one semester remain-Pf-REASON
 'Because I have one more semester (until graduation),'
kongpwuha-myense te sayngkakha-e pol-lakwu.

study-SIMUL more think-COMP see-INT
 'I want to think about it more while studying.' (6ct_0031)

b. *sikan-i* *manhi* *cina-ass-unikka*,
 time-NM considerably pass by-Pf-REASON
 'Because much time has passed by,'

cip-ey *ka-si-ese*
 home-to go-SH-SEQ
 '(you) go back to your home, and'

tasi han pen hoysang-ul ha-e po-si-kwuyo.
 again one time reflect-AC do-COMP see-SH-POL
 'please reflect on (it) one more time.' (5ct_0052.txt)

In (5.9a), the state verb *nam-ta* 'remain' denotes a sense of a present state while using *-ess*, which is by no means relevant to time reference. Also, the activity verb *cina-ta* 'pass by', which is atelic, expresses the perfective sense while occurring with the suffix in Example (5.9b).

5.4.2 Temporal suffix *-ess* and connectives

The next type of combination under examination is between *-ess* and the connectives. As part of the corpus study approach, I investigate which type of connectives most typically combine with which type of *-ess* in the spoken data. The purpose is to analyze the relation between the grammatical functions of *-ess* (past tense vs. aspect) and each temporal type of connective (see Table 3). Table 18 shows the number of co-occurrences of *-ess* and each of the target connectives depending on their temporality, with their

percentages. A bit more than two-thirds of the concordance lines from the analyzed examples involve non-temporal connectives.

Table 18. Frequencies of co-selection of *-ess* and temporal types of target connectives

connectives	non-temporal (562 examples)	non-perfective (199 examples)
<i>-ko</i>	393 (51.64%)	0 (0.00%)
<i>-ciman</i>	164 (21.55%)	0 (0.00%)
<i>-nikka</i>	0 (0.00%)	182 (23.92%)
<i>-eto</i>	2 (0.26%)	17 (2.23%)
<i>-umyense</i>	3 (0.39%)	0 (0.00%)

In the dataset from the corpus, both *-ko* and *-ciman* were used only as the non-temporal type and *-nikka* was used only as the non-perfective type. Despite its categorization as non-perfective (see Table 3), *-eto* denotes no temporality, showing just two tokens in which it has contrastive meaning. It is very natural in languages that the relation between form and function has many-to-many correspondence rather than one-to-one (Haiman, 1985, p. 21). In the same vein, the overlapping *-umyense* can exhibit non-temporality with the use of the suffix *-ess*, which is actually a small fraction of total usages in the dataset.

In addition to the temporal type distribution, the main point of this section is to investigate the relationship between the functions of the suffix (i.e., time reference,

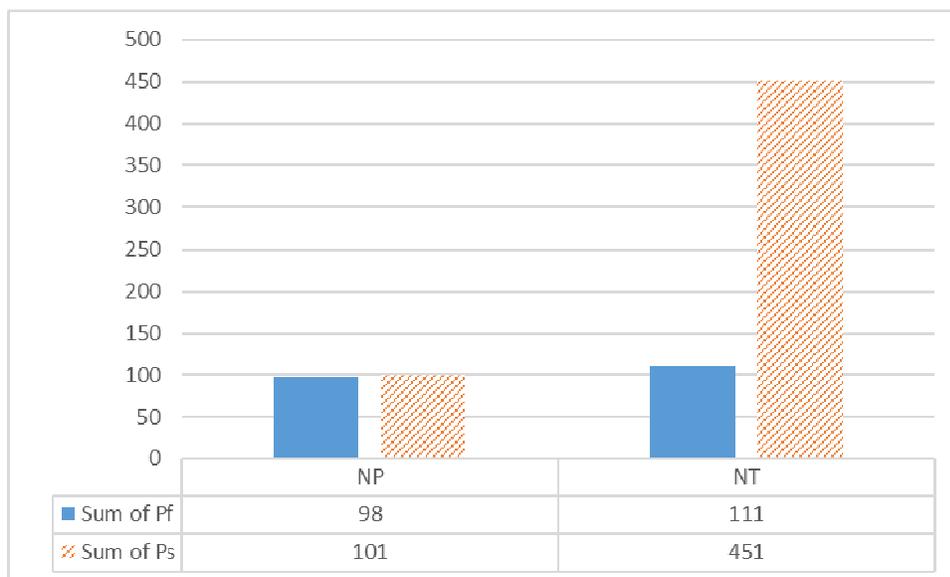
completedness/resultedness) and the temporality of the connectives (i.e., non-temporal, non-perfective). It is to be determined whether, in spoken data, there is a connection between variables such as completedness and temporal connectives. Table 19 summarizes the distribution of co-selection of the functions of the suffix *-ess* and the types of connectives.

Table 19. Distribution of the functions of *-ess* by the temporal type of connectives

Frequency Col Pct	Function of <i>-ess</i>	Temporal type		Total
		NP	NT	
	Pf	98	111	209
		49.25	19.75	
	Ps	101	451	552
		50.75	80.25	
	Total	199	562	761

(NP: non perfective connective; NT: non temporal connective)

Figure 6. Relationship between function of *-ess* and temporality of connectives



In order to clearly see connections, it would be best to deal with either all the connectives, amounting to more than 600, or the relatively frequent connectives shown in Appendix A. For the sake of this discussion, however, only selected connectives from each temporal type that is able to take the suffix *-ess* are investigated. Figure 6 serves to illustrate the results.

If we look at the two columns representing functions of the suffix with the non-temporal (NT) connectives, we see that the great majority of the examples denote time reference (451 instances, 80.25%). Only 19.75% (111 instances) of the concordance lines contain completedness/resultedness with the non-temporal connectives. However, the relation between functions of the suffix and temporal types of the connectives is even more significant in the case of non-perfective connectives. The two left-hand

columns in Figure 6 clearly display that neither of the functions of the suffix dominates the other, but they occur in nearly equal amounts (98 instances vs. 101 instances). In terms of the functions of the suffix, the difference between the temporal types was significant (p -value < .001), which means that the perfective function of the suffix was significantly frequent in its co-occurrence with the non-perfective connectives.

Table 20. Distribution of the functions of *-ess* with *-ciman* and *-ko*

Frequency Col Pct	Function	connective		Total
		ciman	ko	
	Pf	30	81	111
		18.29	20.61	
	Ps	134	312	446
		81.71	79.39	
	Total	164	393	557

Table 21. Distribution of the functions of *-ess* with *-eto* and *-nikka*

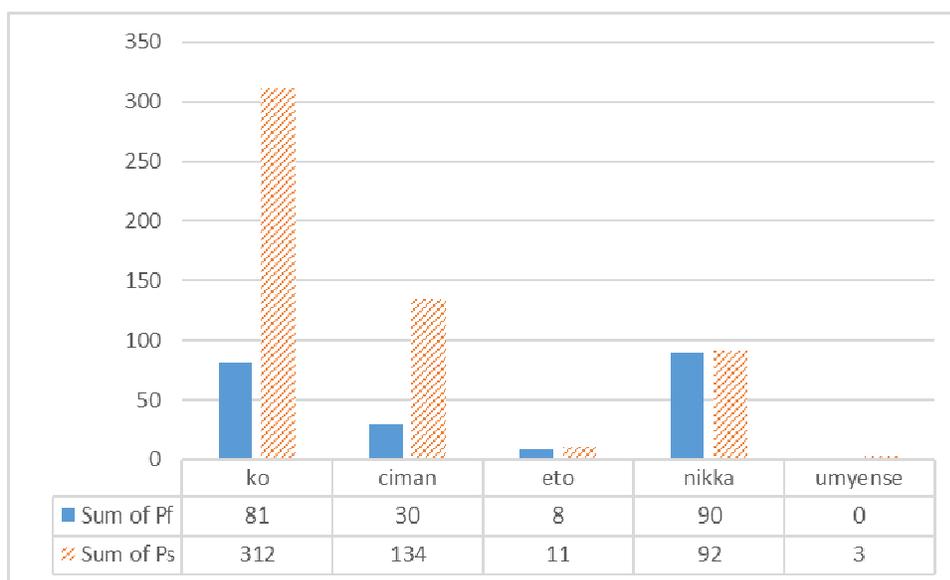
Frequency Col Pct	Function	connective		
		eto	nikka	Total
	Pf	8	90	97
		36.84	49.45	
	Ps	11	92	104
		63.16	50.55	
	Total	19	182	201

Tables 20 and 21 demonstrate the proportion of each connective's co-occurrence with each function of the suffix *-ess* in the data. As they show, the tendency for the temporality of the connectives to either create or have a close relationship with the different functions of the suffix was reflected in the distributions. The non-temporal connective *-ko* was mainly used with the past time function of the suffix (79.39%) and the non-temporal contrast connective *-ciman* also co-occurred mainly with the past tense (81.71%). These results, interestingly, are similar to the results in the final position (See Table 10). This is because the non-temporal connectives simply combine the clauses, which retain syntactic independence (see Foley & Van Valin, 1984). Consequently, it is necessary to have tense marking in the first clause when the situation happened in the past.

On the other hand, the suffix *-ess* with the connective *-nikka*, of the temporal non-perfective category, showed almost equal ratios (49.45% vs. 50.55%) of its

grammatical functions. Despite the comparatively low frequency of the connective *-eto*, the frequency ratio between the two functions of the suffix indicates a similar tendency. This means that the non-perfective connectives cause the first clause to be more dependent on the second clause's tense marking than the non-temporal connectives do. This phenomenon is in line with the idea that when the connectives have more temporality, the more dependent the medial predicates are on the final predicates. That is, the constructions that have the perfective or overlapping or posterior connectives usually possess some syntactic constraints that cause the clauses to be tightly related, such as a same-subject condition or a sentence-type condition.

Figure 7. Relationship between functions of *-ess* and each connective



As illustrated in Figure 7, the gap between the functions of *-ess* evidently depends on the temporality of the connectives. The perfective and perfect of result of the suffix have significantly high percentages with the temporal connectives (non-perfective connectives *-eto* and *-nikka* in the data), compared to the non-temporal connectives in the corpus.

5.4.3 Lexical aspect of verbs and connectives

I will now take a look at correlations between the two constituents of inherent lexical aspect of verbs and temporality of the connectives. At the beginning of this research, I did not intend to observe these collocations because the two elements have no intuitive relation but are in free variation.

Table 22. Distribution of telicity by the temporal types of the connectives

Frequency Row Pct	Telicity	Temporal type		
		NP	NT	Total
	atelic	51	235	286
		31.29	50.65	
	telic	112	229	341
		68.71	49.35	
	Total	163	464	627

Tables 22 and 23 show the connections between verbal semantics and connectives' temporality. The first thing to note is that the distributions of verb types with non-perfective connectives and non-temporal connectives are different. In Table 23, the atelic (i.e., activity, state) verbs are just over 30% of all the examples, which means that the telic (i.e., accomplishment, achievement) verbs co-occurred more frequently with the non-perfective connectives than the atelic verbs. As for the non-temporal connectives, there is no difference between the verbal types, which are both close to 50%. This result, which suggests that the telic verbs are more closely related to the non-perfective connectives, implies that the temporal connectives are significantly used in the eventual situation (p -value < .0001).

Table 23. Distribution of each connective by telicity

Frequency (percent)	Connective	Telicity		Total
		atelic	telic	
	ciman	64 (41.03)	92 (58.97)	156
	eto	6 (31.58)	13 (68.42)	19
	ko	168 (55.45)	135 (44.55)	303
	nikka	47 (32.19)	99 (67.81)	146
	umyense	1 (33.33)	2 (66.67)	3
	Total	286	341	627

The shares of co-occurrences of each connective and telic/atelic verbs in the concordances are displayed in Table 23. As the table shows, all of the given connectives except for the non-temporal connective *-ko* were used more with telic verbs than atelic verbs. The relative numbers of co-occurrences with telic verbs for *-eto* (68.42%) and *-nikka* (67.81%) are notably similar. This may be related to the fact that the non-perfective connectives such as *-nikka* (cause) and *-eto* (concession) are definitely relevant when describing dynamic events, as observed in Section 3.3.2. The patterns for

the non-temporal connective *-ko* and *-ciman* differ because *-ko* co-occurred more with atelic verbs and *-ciman* more with telic verbs.

5.4.4 Lexical aspect of verbs, *-ess*, and connectives

This brief section deals with the association of the three elements of the verb, the temporal suffix *-ess*, and the connectives in the medial predicates. With two categories of verb (atelic and telic), two categories of connective (non-temporal and non-perfective), and two categories of *-ess* functions (time reference [Ps] and completedness/resultedness [Pf]), there can be eight combinations. For all medial predicates in the dataset, there was a significant association between function of the suffix and temporal type of connective, depending on the lexical aspect of the verbs. The shares of each combination found in the dataset are displayed in Tables 24 and 25.

Table 24. Distribution of -ess by temporal type for atelic verbs

Frequency Row Pct	Function	Temporal type		
		NP	NT	Total
	Pf	24	40	64
		37.50	62.50	
	Ps	27	195	222
		12.16	87.84	
	Total	51	235	286

(NP: non perfective connective; NT: non temporal connective)

Table 25. Distribution of -ess by temporal type for telic verbs

Frequency Row Pct	Function	Temporal type		
		NP	NT	Total
	Pf	61	59	120
		50.83	49.17	
	Ps	51	170	221
		23.08	76.92	
	Total	112	229	341

(NP: non perfective connective; NT: non temporal connective)

Controlled for atelic verbs as shown in Table 24, the number of co-selections of past tense -ess and a non-temporal connective was 195, which makes this the most frequent combination. For telic verbs, too, the most frequent combination is of past tense and a

non-temporal connective, at 170 occurrences, as shown in Table 25. Only 24 of the examined combinations include *-ess* with an aspect function and a non-perfective connective, which is the lowest frequency combination among the eight possible. In addition, a matter of interest is the relation between the aspect function of the suffix and the non-perfective connectives; controlling for telic verbs, this combination occurs 61 times in the dataset, which is the third highest frequency.

When we consider the frequencies displayed in Tables 24 and 25, we can see that there must be a particularly strong association between the temporal suffix and the connectives. By far the most frequent combination, whether controlled for atelic verbs or telic verbs, was the past marking *-ess* with a non-temporal connective, with slightly less than 60% of total concordance examples. Even though the data were limited to include only five connectives, they show a strong tendency toward specific combinations of verb types, functions of the suffix *-ess*, and connective types.

CHAPTER 6

PEDAGOGICAL IMPLICATIONS

6.1 Introduction

I have so far examined the temporal features of each element in the conjunctive sentences and their relations with each other, looking at spoken data from a corpus. This chapter aims to investigate how the Korean temporal suffix *-ess* in conjunctive clauses is acquired by Korean second language (KSL) learners.

Korean has several dozen connectives, which are preceded by a medial verb stem and, optionally, a subject honorific suffix (*-si-*), tense/aspect suffixes (*-ess*, *-essess*), and modal suffixes (*-keyss*, *-te*, *-nun*) (H.-M. Sohn, 1999, p. 232). TAM suffixation in medial clauses may be deficient because the presence or absence of TAM elements varies depending on the connectives. Therefore, learners must memorize whether a connective can co-occur with a TAM marker or not. The memorization of the grammatical fact, however, does not guarantee verbal production ability in a real-world situation until the declarative memory can be transferred into procedural memory (O'Grady, 2006).

Several researchers have observed KSL/KFL learners' errors and described the development process related to the acquisition of Korean connectives (S.-K. Nam & S.-H. Choe, 2004; N.-W. Kang & H.-J. Kim, 2011; S.-J. Seo & J.-H. Eo, 2011). These studies have indicated that the connectives are involved with the TAM suffixes in complex ways, and that their combination with personal pronouns or verbs is subject to a variety of constraints. Kang and Kim (2011) conducted a quantitative study on learner errors and development of complex sentences over a 23-month period. They calculated the frequencies of complex sentences in learners' production and analyzed the mistakes in their conjunctive sentences.

For this study, I selected three connectives that are involved with either presence or absence of the temporal suffix to investigate the errors and the causes of errors made on conjunctive sentences by adult learners of Korean. I hypothesized that the use of *-ess* in preceding clauses of conjunctive sentences is affected by the connectives. To test this hypothesis, I developed a written acceptability judgment task, which I administered to one hundred English-speaking learners of Korean.

6.2 Phenomena

It is not easy for KSL learners to use the suffix *-ess* accurately in complex sentences. For example, in Kang and Kim's (2011) longitudinal case study on the acquisition of Korean complex sentence by three adult learners, the advanced learners initially showed 16.9% errors in using the suffix in conjunctive sentences, as in the example in (6.1).

- (6.1) a. **cikumkkaci ce-nun hankwuk-ey wa-ss-e*
tases-tal-ccum toy-ss-ess-sup-ni-ta.
 until now I-TC Korea-to come-PST-CONN
 five-month-about become-PST-PST-SH-IN-DC
 ‘Until now I have stayed about five months since I came to Korea.’
- b. **ilnyen-kikan il-ul hay-ss-ess-se hankwuk-*
chinkwu manh-ayo.
 one year-period work-AC do-PST-PST-REASON Korea-friend
 many-POL
 ‘I have many Korean friends because I have worked for a year.’

The difficulty in the acquisition of this grammar may lie in the pedagogical treatment of *-ess*. First, the suffix is introduced as a homogeneous past tense marker in KSL pedagogy. The textbooks that I examined indicated that the suffix is a “past tense” (*Sekang Hankwuke 1* [Sogang Korean 1], Kim, Park, & Lee, 2012, p. 204), a “past tense marker” (*Caymiissnun Hankwuke 1* [Fun! Fun! Korean], Korean Language & Culture Center, 2009, p. 145), and a “past tense form” used when “the event described has already taken place” (*Integrated Korean: Beginning 1*, Cho et al., 2010, p. 144).

Second, KSL pedagogy provides no consistent explanation about the use of the suffix in the first conjunct. KSL curricula initially introduce connectives such as *-ko*, *-myen*, and *-ciman* that are able to combine with the suffix. At this point, textbooks present the suffix as a past tense marker. At the next stage, they present connectives such as *-ese*, *-nulako*, and *-camaca*, which cannot take the suffix *-ess*, guiding the learners to memorize the fact that these specific clause-enders never take the suffix. For example,

the grammar dictionary for KSL by the National Institute of the Korean Language (Kim et al., 2005, p. 154) describes the connective *-nulako* as in (6.2).

(6.2) a. *-nulako*: this cannot be used with either the past ‘-ess’ or the future ‘-kyess’.

**ce-to cikum-kkaci hay-ss-nulako kosaynghay-ss-eyo.*
 I-also now-until do-PST-REASON laborious-PST-POL
 ‘I have been laboring to do the work.’

b. **onul hoysik-ul ha-keyss-nulako nuc-ul ke-yeyo.*
 today party-AC do-PRS-REASON late-RL thing-POL
 ‘Today, I am going to be late due to a party.’
 (my translation)

Learners must memorize the meaning of dozens of connectives as well as their tense information one by one in order to know whether or not the connectives are able to combine with the suffix *-ess*.

6.3 Method

6.3.1 Research questions

Noting that English has a different TAM system and conjugation method than Korean, this experiment was conducted with mainly L1 English KFL/KSL learners as participants. The goal was to investigate their acquisition of the suffix in the conjunctive clause and to observe what affects the use of *-ess* by KSL learners. These are the research questions:

- Do English-speaking learners of Korean exhibit differences in their use of the suffix *-ess* depending on the target connectives?
- Is there any difference between Korean heritage learners and non-heritage learners in the use of the temporal suffix?

As most Korean textbooks introduce the suffix as the past tense marker, it is expected that learners will use the suffix for the first clause in which the event occurred in the past, even when that predicate should remain unmarked because of the connective. That is, the prediction is that learners will commit errors with respect to the different temporalities of the connectives. More specifically, I expected the participants to use *-ess* erroneously in preceding clauses that denote past situations and that have overlapping connectives, perfective connectives, or posterior connectives that do not allow the suffix *-ess* to appear in the same clause, and in preceding conditional clauses in which *-ess* can optionally co-occur in a future situation.

6.3.2 Participants

One hundred students, enrolled in different levels of Korean classes at the University of Hawai‘i at Mānoa participated in the study. Sixty-four (64%) were non-heritage students, of whom 62 reported English as their L1; the remainder were L1 Cantonese speakers. Thirty-six (36%) were Korean heritage students, who had at least one parent who was a native Korean speaker. Among the heritage students, 10 reported English as their L1 and 26 reported Korean as their L1. I categorized the 10 learners who reported English as

their L1 into the Korean heritage group because they all used Korean as a listening language. The participants were enrolled in intermediate level (60), advanced intermediate level (29), or advanced level (11) Korean classes at the time of data collection, and the analysis used their class level to group the participants by proficiency level.

6.3.3 Materials and procedure

For the collection of data from the Korean learners, a written acceptability judgment task was used. The test items were constructed in a dialogue format in which two speakers exchanged questions and answers about a past situation. I inserted past time adverbials in the conversations such as *cinan cwu* ‘last weekend’, *ecey* ‘yesterday’, *kotunghakkyo ttay* ‘in (one’s) high school days’ to mark pastness. All of the matrix verbs necessarily had *-ess*. An example is presented in (6.3).

- (6.3) A: *merimoyang-i* *talacye-ss-eyo.*
 hairstyle-NM be different-PST-POL
 ‘Your hairstyle has been changed.’
- B: **yeppukey* *poy-ess-ulyeko* *ecey* *calla-ss-eyo.*
 beautifully be seen-PST-PURP yesterday cut-PST-POL
 ‘I cut it yesterday to look beautiful.’

The task included 12 target items with three target connectives, as well as 18 filler items. I pre-tested the 12 target items on seven native speakers of Korean for comparison. The participants were asked to judge the acceptability of an underlined part

by marking the number on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree) that best reflected their initial judgment. All target medial verbs had a suffix *-ess* and a connective. For the fillers, modal suffixes, nominative/accusative/topic particles, and other connectives were used.

Table 26. Three types of target connectives

target connectives	semantic category	acceptability with <i>-ess</i>	temporality	
<i>-ciman</i>	contrast	+	-temporal	
<i>-umyen</i>	conditional	+/-	-perfective	+temporal
<i>-ulyeko</i>	purpose	-	+posterior	

The target connectives, shown in Table 26, were selected from beginning and intermediate level textbooks, to ensure that they had been taught to the learners before the time of the experiment. The contrast marker *-ciman* denotes non-temporality, which is not relevant to temporal relations between the first clause and the second clause, which means the connective must take the temporal suffix *-ess* in a clause denoting a past situation. The purpose marker *-ulyeko* cannot appear with the suffix *-ess* even when the first clause's situation occurred in the past. The conditional *-umyen* optionally co-occurs with the suffix *-ess* depending on the speaker's intention and whether it is pragmatically strong or not.

Table 27. Target question items for the three types of connectives

Items	verbs	verbal aspect	connective	temporality
1	<i>poita</i> 'to be seen'	state	<i>lyeko</i>	posterior
2	<i>cohta</i> 'to be good'	state	<i>ciman</i>	non-temporal
3	<i>khuta</i> 'to be big'	state	<i>umyen</i>	non-perfective
4	<i>(theynisu) chita</i> 'to play (tennis)'	activity	<i>lyeko</i>	posterior
5	<i>paywuta</i> 'to learn'	activity	<i>umyen</i>	non-perfective
6	<i>ilhata</i> 'to work'	activity	<i>ciman</i>	non-temporal
7	<i>mannata</i> 'to meet'	accomplishment	<i>lyeko</i>	posterior
8	<i>ilenata</i> 'to get up'	accomplishment	<i>ciman</i>	non-temporal
9	<i>(chaykul ta) ilkta</i> 'to read (book)'	accomplishment	<i>umyen</i>	non-perfective
10	<i>sata</i> 'to buy'	achievement	<i>umyen</i>	non-perfective
11	<i>kkuthnata</i> 'to finish'	achievement	<i>lyeko</i>	posterior
12	<i>chwuicikhata</i> 'to find a job'	achievement	<i>ciman</i>	non-temporal

Most of the target verbs were high frequency words that are included in the beginning level textbooks, as displayed in Table 27. The lexical aspect of verbs is another factor that affects the acquisition of the Korean past suffix *-ess*. The aspect hypothesis suggests that the lexical aspect of verbs influences learners' acquisition of grammatical morphemes (Andersen & Shirai, 1994; Bardovi-Harlig, 2000). If that is the case, then if the verb denotes achievement, Korean learners should easily learn to mark it with the past suffix *-ess*, while they may be slower in learning to use the marker with a state verb. Considering this theory, the experimental stimuli were designed to present each type of verb with each type of connective.

6.3.4 Results

6.3.4.1 Acceptability rates for the three types of connectives

In this section, I will discuss the results that demonstrate how the participants responded to the co-occurrence of the temporal suffix *-ess* and the different types of connectives. Differences between the groups are not significant in terms of proficiency because the participants were not grouped by a standardized test tool but by the placement test that determined their class level. Nevertheless, to describe the results of the analysis, I indicate the mean scores of each group. Responses to the judgment task were coded from 1 to 5.

Table 28. Acceptability rates for the three types of connectives

Level (N)	<i>-ciman</i> (SD)	<i>-lyeko</i> (SD)	<i>-umyen</i> (SD)
201 (60)	3.18 (1.16)	3.13 (1.24)	3.13 (1.16)
301 (29)	3.78 (1.09)	2.75 (1.35)	3.47 (1.17)
401 (11)	3.93 (1.14)	2.88 (1.58)	3.38 (1.56)
Mean	3.43 (1.18)	2.96 (1.32)	3.14 (1.56)
Native Korean	4.96 (.19)	1.14 (.76)	3.27 (1.67)

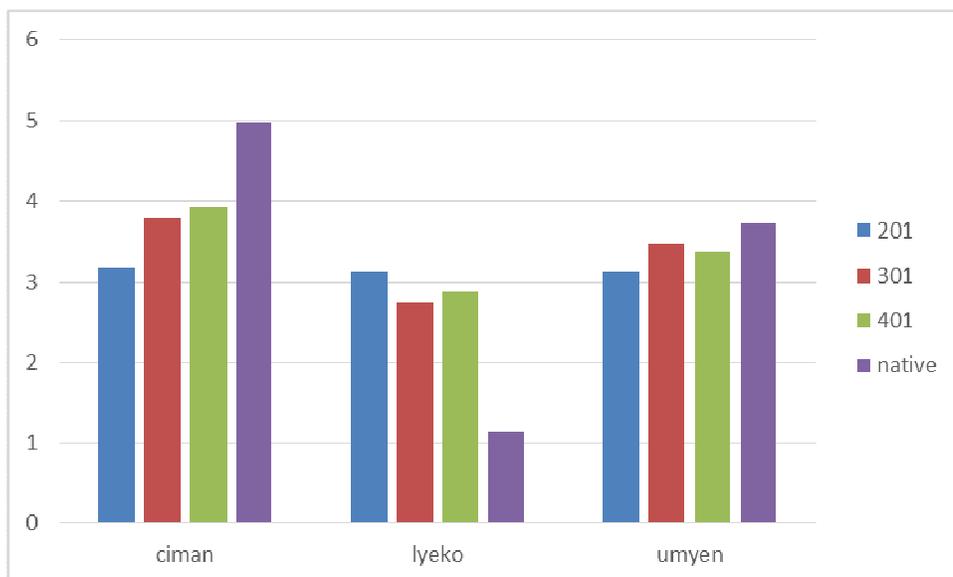
Table 28 represents the mean of each group's acceptability judgment rating on the 5-point Likert scale, which are graphed in Figure 8. The acceptability rates for *-ess* with the different connectives ranged from 2.96 to 3.43 with a median of 3.18. The scores

generally fell in the middle range, suggesting no clear indication of distinct associations between connective types and the presence/absence of *-ess* in the learners' grammars.

The contrastive connective *-ciman* should co-occur with the suffix in a conjunctive clause expressing a past situation and therefore sentences with this connective would be expected to be judged as highly acceptable (close to 5). However, the participants' mean score for it was 3.43 ($SD = 1.18$). This score is much lower than that of the native Korean speakers (4.96), meaning that the learners have difficulty with the use of the suffix *-ess* in conjunctive sentences with *-ciman*. In addition, the standard deviation score indicates that the responses of the learners are scattered and inconsistent.

The conditional *-umyen* can optionally occur with the suffix depending on the communicative context and the degree to which the speaker intends to signify his/her strong wish. The participants' mean score was 3.14 ($SD = .68$), which means they are likely to use the suffix in the given past situation. Interestingly, the mean score of native speakers is similar to that of the learners in this case. For the use of the suffix *-ess* with the conditional connective, the native speakers responded variously, which may be observed in their scores' standard deviation (1.67).

Figure 8. Acceptability rates for three types of connectives



As for the purpose connective *-ulyeko*, it cannot have the suffix in the same clause even for a past situation, and is therefore expected to be marked as close to 1 as possible. The participants' mean score was 2.96 ($SD = 1.32$), which is much higher than the native Korean speakers' score (1.14), showing that the learners do not understand the use of the suffix *-ess* in conjunctive sentences with *-ulyeko*. Also, their standard deviation score is higher than that of the native Korean speakers, which means that the learners' scores are inconsistent. These results are illustrated in Figure 8.

Figure 9. Acceptability rates by levels

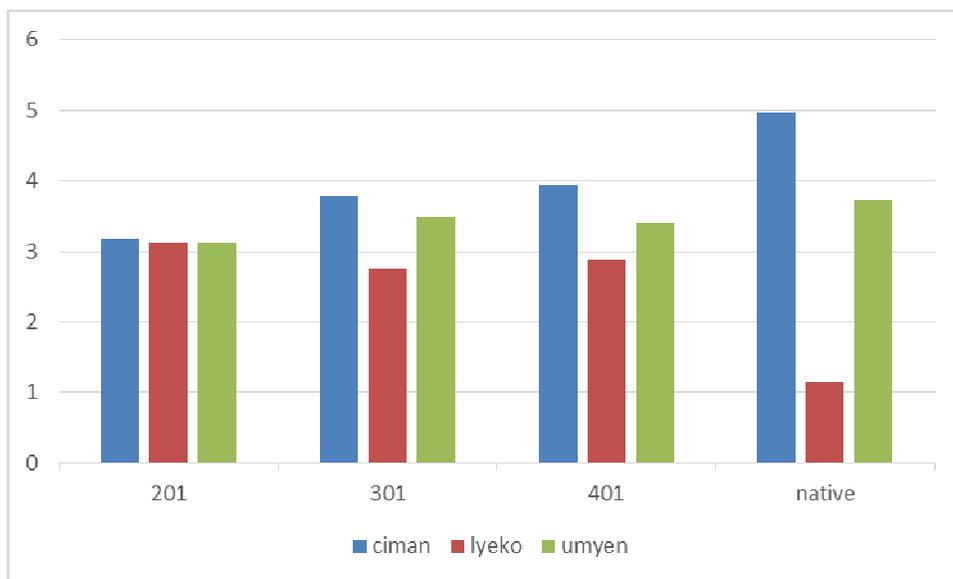


Figure 9 graphs the participants' judgments of acceptability by learner group (class level), and shows a small amount of development of the grammatical use of the connectives. The differences between the intermediate level (201) and the advanced intermediate level (301), and then the advanced (401) level, are slight. For the contrastive connective *-ciman*, the improvement is significant ($p < .00$), but it is not significant for the purpose connective *-lyeko* ($p < .07$).

6.3.4.2 Comparison between heritage and non-heritage learners

The participants included 36 Korean-heritage learners and 64 non-heritage learners. While acknowledging the ongoing debate on the classification of students by language background, this study compared the two groups in order to see if their language background affected the results. It is meaningful to look at the differences because the task is designed as an acceptability judgment test.

Table 29. Acceptability rates by language background

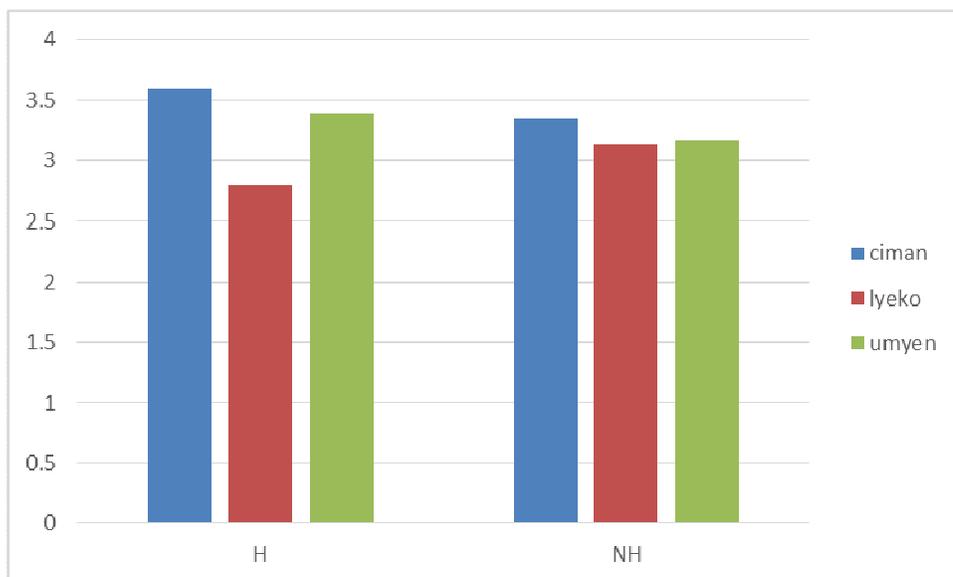
	<i>ciman</i>	<i>lyeko</i>	<i>umyen</i>
H	3.60	2.79	3.39
NH	3.34	3.13	3.17

(H: Korean heritage; NH: non Korean heritage students)

As shown in Table 29, the average acceptability ratings by the Korean heritage learners are higher than those of the non-heritage learners for the two connectives that allow co-occurrence with *-ess* and lower for the connective that does not. In other words, the Korean heritage learners' judgments are closer to the native speakers' judgments.

The non-heritage participants, in general, showed a tendency to accept the suffix in all situations. As illustrated in Figure 10, their scores for each connective are higher than 3, which is to say, the non-heritage learners either did not perceive distinct grammatical meanings of the suffix with the different connectives or simply considered it a homogeneous past marker.

Figure 10. Acceptability rates by language background



6.4 Discussion and conclusion

This chapter reported the results of a task in which learners judged the acceptability of the co-occurrence of the temporal suffix *-ess* and connectives of various temporalities. The judgment acceptability task's stimuli were conjunctive sentences with three types of connectives in the medial clauses: the non-temporal connective *-ciman* that has to take the suffix *-ess*, the posterior connective *-lyeko* that never takes the suffix, and the conditional *-umyen* that selectively takes the suffix.

The averaged Likert scale (1–5) ratings for all the connectives were near the median point, meaning that the participants do not have a clear distinction between the non-temporal connectives and the temporal connectives, in contrast to the results of the

native speakers. Non-native and native speakers did have similar results for the conditional connective *-umyen* that takes the suffix selectively. However, in the context of their ratings of the sentences with the other connectives, it seems likely that the learners perceived the suffix *-ess* as a singular past tense marker and had memorized its use as declarative knowledge, whereas the native speakers understand the suffix's various functions and appropriate environments as procedural knowledge.

The results of this acceptability judgment task imply that intermediate and advanced level Korean learners' understanding of how different connectives interact with the presence or absence of *-ess* is inaccurate.

I would particularly like to draw attention to the lack of development of accuracy in judging the acceptability of these forms' co-occurrence. The differences according to class level were slight, as shown in Table 1. Even though the placement test may not be a reliable indicator of proficiency, this finding is striking enough to suggest that the teaching of this grammatical item should take an alternative approach, especially when it is initially introduced. This is because if the learners at the advanced level still exhibit a significant error rate with this simple grammar, the error may proceed toward stabilization and fossilization, which is irreparable (Long, 2003, p. 521).

In terms of language background, the heritage learners showed more native-like judgments than the non-heritage learners. This was especially noticeable for the temporal connective *-lyeko*, which should not take the suffix *-ess* despite the pastness of a clause. The heritage learners also correctly accepted *-ess* with *-ciman* at higher rates.

This difference suggests that even instruction that provides the grammatical information that Korean, as a chaining language, constructs conjunctive sentences in which medial verbs are dependent on the matrix verbs with respect to marking pastness for the embedded verbs is not as effective as the long-term input that heritage learners are exposed to.

To sum up, for L2 acquisition and pedagogy of Korean tense and aspect morphology, this chapter suggests that the current practice of teaching the suffix *-ess* as a homogeneous past tense marker should be abandoned. Rather, it should be taught with consideration of the semantics of Korean connectives. At the least, the explicit introduction of the suffix as a past tense marker should be reconsidered to avoid delaying the acquisition of the grammar. Learners need to know that the grammatical meaning of the suffix *-ess* may be decided by the relationship between the speaker's perception of a situation (e.g., past vs. non-past, perfective vs. non-perfective), syntactic-semantic limitations (e.g., telic vs. atelic, sentence terminal vs. sentence non-terminal), and temporal adverbials (time adverbials vs. aspectual adverbials).

CHAPTER 7

CONCLUSION

The purpose of this study was to provide new insights into the temporal phenomena in the Korean conjunctive predicates, focusing on the use of the temporal suffix *-ess*, the structures it normally occurs in, and its pedagogical treatment. The study has considered some basic questions: What are the temporal properties of the connectives other than logical meanings between the clauses? How do different types of connectives affect the occurrence of the temporal suffix? How are different temporal functions of the suffix distributed? In which lexical or syntactical contexts does it usually occur? Is it possible to identify a general behavior of the temporal suffix in relation with other elements? These questions have been addressed through analysis of spoken data from the Sejong corpus. I have explored how the temporal suffix is used in the conjunctive predicates by native Korean speakers in real communicative situations, and how it is perceived and developed by English-speaking learners of Korean.

I approached the topic from a sentence operating system angle, following the work of Foley, Van Valin, Haiman, Bybee, and Dahl, among others. With this concept in mind, I have tried to observe and capture what happens in the conjunctive sentences in terms of temporal phenomena and draw conclusions about the temporal suffix *-ess* on

the grounds of my observations. The starting point of my study, however, was pedagogical. Noting the problems that the use of the temporal suffix causes for learners, even at an advanced level, I hoped to discover whether the problems might derive from inappropriate descriptions in the textbooks that learners are exposed to.

7.1 General remarks on the findings of the study

In general, this exploration of how the temporal suffix functions and has changed historically (Chapter 4) contributes to a better understanding of the way in which it is used, in what proportions, with what kinds of verbs, and with which connectives; how frequently it is found in particular contexts; and how often it is used to refer to tense or aspect in the conjunctive predicates. These findings about the use of the suffix *-ess* were presented and discussed in detail in Chapter 5 of this dissertation.

As explained in the introduction, a central goal of my work is to help bridge the gap between research and practice, in contrast to much of the existing research in which the given theories, including the relative tense theory and the binding theory, are too abstract to deal with empirical data. Teaching materials developed in line with such theories contain rather questionable information about the grammar and consequently constrain learners to use and understand the temporal suffix as a singular past tense marker. I have argued, based on my experimental research, that something different needs to be done to make the teaching of this topic more effective. At the end of Chapter 6, I suggested that the initial introduction of the suffix to learners as a past tense marker

should be avoided if possible. This idea may be valid not only because of the results of the experiment described in that chapter, but also because of the genesis of the suffix, which was reported in Section 4.3.

My analyses have provided detailed information about the actual use of the suffix *-ess* in spoken Modern Korean, the environments it typically occurs in, the functions it typically fulfills, and the relations that occur between individual verbs and the suffix or the connectives and the suffix. Not only have the analyses shown that the existing explanations of the suffix in teaching materials are not suitable in some aspects, they also provide evidence that the textbooks neglect important information by over-emphasizing a particular function. A case in point is the aspectual function of the suffix co-occurring with the temporal connectives. The labeling of the suffix in most present accounts of it does not represent the actual use and behavior of a large number of its other functions. What is obviously needed is a consideration of the temporal features in the verbal complexes of conjunctive constructions that pays attention to co-occurrence patterns and frequencies.

Throughout the study, I emphasized the importance of the temporal meaning of the connectives in the function of the suffix. A detailed account of the temporal properties of the connectives is given in Chapter 3. I have tried to show that they are essential in any kind of temporal phenomena in the conjunctive constructions. This is because it is the connectives that primarily decide the presence and the function of the suffix.

7.2 Further research

Even though I have tried to be as comprehensive as possible, I was not able to cover all topics and data that are worth investigating. Putting aside the framework criterion, the limitations I see are mainly related to the restricted number of certain types of connectives. It is always better to have more data because more inclusive coverage can support better representativeness. The accessibility of the spoken Sejong corpus including the utf8 encoding for the Antconc concordance program was a lucky circumstance for this study. Considering how difficult and time-consuming it is to compile several hundreds of concordances from a large corpus, the representativeness of this study's findings is deeply dependent on the availability of the coded corpus.

Future studies that follow in this line of research could profitably cover other connectives than the five connectives that I selected. I have discussed some criteria for choosing them (Section 5.2.1).

The current research could also be extended to investigate the temporal phenomena of other complex constructions such as relative clause constructions, nominal clause constructions, and quotative clause constructions. Not only would such research be valuable for providing a detailed description of the particular constructions, but it would contribute to developing a better general understanding of the syntactic and semantic features of Korean complex constructions with respect to their temporal features. This is because all of these constructions have some basic features in common, as they consist of a verbal stem, the temporal suffix, and a clausal ending suffix. For

instance, relative clause constructions can use two relativizers, *-(u)n* and *-(u)l*, in the preceding predicates. Unfortunately, the grammatical category of relativizers has not yet been agreed upon among scholars (see D.-M. Kim, 2014). Relativizers, like connectives, may well affect the temporal phenomena in the preceding clauses and the semantics of the temporal suffix, because they have their own temporal features (e.g., perfective vs. imperfective, past vs. non-past) as well as modal functions (realis vs. irrealis).

REFERENCES

- An, D.-H. (1980). *Semantics of Korean tense markers* (Unpublished doctoral dissertation). Georgetown University, Washington, DC.
- Andersen, R. W. (1986). *The need for native language comparison data in interpreting second language data*. Paper presented at the Forum Lecture, 1986 TESOL Summer Institute, University of Hawai'i.
- Andersen, R. W. (1991). Developmental sequences: The emergence of aspect marking in second language acquisition. In T. Huebner & C. A. Ferguson (Eds.), *Crosscurrents in second language acquisition and linguistic theories* (pp. 305–324). Amsterdam: John Benjamins.
- Andersen, R. W., & Shirai, Y. (1994). Discourse motivations for some cognitive acquisition principles. *Studies in Second Language Acquisition*, 16(02), 133–156.
- Austin, J. L. (1975). *How to do things with words*. Cambridge, MA: Harvard University Press.
- Baek, N.-C. (2009). Thukihan kwusengyosolul phohamhan cepsokemiuy hyenthayloncek haysek [A study on morphological interpretation of particular constituents contained in restructured compound conjunctive endings]. *Hankwukemwunhakyenkwu [Research on Korean Language and Literature]*, 53, 149–169.
- Bardovi-Harlig, K. (2000). Tense and aspect in second language acquisition: Form, meaning, and use. *Language Learning: A Journal of Research in Language Studies*, 50.
- Bybee, J. L. (1985). *Morphology: A study of the relation between meaning and form* (Vol. 9). Amsterdam: John Benjamins.
- Bybee, J. L., & Dahl, Ö. (1989). *The creation of tense and aspect systems in the languages of the world*. Amsterdam: John Benjamins.
- Bybee, J., Perkins, R., & Pagliuca, W. (1994). *The evolution of grammar: Tense, aspect, and modality in the languages of the world*. Chicago, IL: University of Chicago Press.
- Cho, Y.-M., Lee, H.-S., Schulz, C., Sohn, H.-M., & Sohn, S.-O. (2010). *Integrated Korean: Beginning 1*. Honolulu: University of Hawai'i Press.
- Choe, H.-B. (1971). *Wuli malpon [Our grammar]*. Seoul: Chengumsa.
- Choe, J.-W. (2014). Malmwungchiwa eneyenkwi [Corpora and linguistic research: Recent trends]. *Korean Linguistics*, 63, 71–102.
- Choi, D.-J. (1994). Kwuke cepsokmwuneyseuy sicey hyensang [The tense phenomena in Korean conjunctive sentences]. *Korean Linguistics*, 24, 45–86.
- Choi, S.-H. (1987). *Hyentay Kwukeuy an macumssi kkuthuy uymi yenkkwu: thukhi 'ess'kwa 'to'lul cwungsimulo [A semantic study on prefinal endings in Korean: Especially 'ess' and 'te']* (Unpublished master's thesis). Seoul National University, Seoul.
- Chong, H.-J. (1990). Hyentaykwuke sicey kwanhan cay kochal [Reconsideration on tense in Korean]. *Bilingual Research*, 6(1), 263–302.
- Choo, M. (1998). Tense and aspect in Korean (review). *Korean Studies*, 22, 141–148.

- Comrie, B. (1976). *Aspect*. Cambridge, UK: Cambridge University Press.
- Comrie, B. (1985). *Tense*. Cambridge, UK: Cambridge University Press.
- Culicover, P. W., & Jackendoff, R. (1997). Semantic subordination despite syntactic coordination. *Linguistic Inquiry*, 28(2), 195–217.
- Dahl, Ö. (1985). *Tense and aspect systems*. Oxford, UK: Basil Blackwell.
- De Jong, M. (1998). *Reader feedback in text design: Validity of the plus-minus method for the pretesting of public information brochures* (Vol. 13). Amsterdam: Rodopi.
- Dietrich, R., Klein, W., & Noyau, C. (1995). *The acquisition of temporality in a second language* (Vol. 7). Amsterdam: John Benjamins.
- Dixon, R. M. (2012). *Basic linguistic theory, volume 3: Further grammatical topics*. Oxford, UK: Oxford University Press.
- Enç, M. (1987). Anchoring conditions for tense. *Linguistic Inquiry*, 18, 633–657.
- Foley, W. A., & Van Valin, R. D. (1984). *Functional syntax and universal grammar*. Cambridge, UK: Cambridge University Press.
- Givón, T. (1984). *Syntax: A functional-typological approach*. Amsterdam: John Benjamins.
- Hahn, D.-W. (1986). Kwakesicey ‘ess’uy thongsiloncek kochal [The diachronic study of the past tense ‘ess’]. *Emwunhak [Korean Language and Literature]*, 15, 217–248.
- Hahn, D.-W. (1988). Cepsokmwun kwusengeyseuy sicey wenli [The tense principle in the conjunctive construction]. *Kwukekwukmwun [Korean Language and Literature]*, 99, 41–56.
- Haiman, J. (1980). The iconicity of grammar: Isomorphism and motivation. *Language*, 56, 515–540.
- Haiman, J. (Ed.). (1985). *Iconicity in syntax: Proceedings of a Symposium on Iconicity in Syntax, Stanford, June 24–6, 1983* (Vol. 6). Amsterdam: John Benjamins.
- Haiman, J., & Thompson, S. A. (1988). *Clause combining in grammar and discourse* (Vol. 18). Amsterdam: John Benjamins.
- Hartford, B. S., & Bardovi-Harlig, K. (1992). Experimental and observational data in the study of interlanguage pragmatics. *Pragmatics and Language Learning*, 3, 33–52.
- Hong, J.-S. (1990). *Kwukecheyenhwakwumwunuy yenkwu [A study of Korean nominalization construction]*. Seoul: Korea University Press.
- Hopper, P. J. (1991). On some principles of grammaticization. In E. C. Traugott & B. Heine (Eds.), *Approaches to grammaticalization* (Vol. 1, pp. 17–35). Amsterdam: John Benjamins.
- Hopper, P. J., & Traugott, E. C. (2003). *Grammaticalization*. Cambridge, UK: Cambridge University Press.
- Huh, W. (1987). *Kwuke ttay maykim pepuy pyenchensa [The history of temporal systems in Korean]*. Seoul: Saym Mwonhwasa.
- Hwang, B.-S. (2005). Sangtaysiceyuy mwunceycemkwa silhyen wenli [Problems of relative tense and principles of tense representation]. *Emwunhak [Korean Language and Literature]*, 89, 77–106.
- Im, H.-B., & Chang, S.-W. (1995). *Kwuke mwunpeplon*. Seoul: Hankwukbangsongtayhakkyo.

- Jakobson, R. (1971). *Shifters, verbal categories, and the Russian verb. Selected writings, vol. 2: Word and language*. The Hague: Mouton.
- Jeong, E. H. (2007). '-e ista' kwusenguy pwunphowa uymiuy yeksacek pyenhwa [Historical change of distribution and meaning in the '-e ista' construction]. *Emwunyenkwu [Research on Language and Literature]*, 35, 79–108.
- Johnson, M. R. (1981). A unified temporal theory of tense and aspect. In P. Tedeschi & A. Zaenen (Eds.), *Tense and aspect* (pp. 145–175). New York: Academic Press.
- Ju, S.-K. (1910). *Kwuke mwunpep [Korean grammar]*. Seoul: Pakmwunsekwan.
- Kang, N. W., & Kim, H. J. (2011). Hankwuke haksupcauy sicey kaynyem suptuk yenkwu(3): kwake sicey hyengthayuy suptuk yangsangul cwungsimulo [Korean learners' grammar acquisition: Focusing on the tense usages in complex and compound sentences]. *Journal of Korean Language Education*, 22(3), 1–28.
- Kim, C.-K. (1985). *Wulimal siceywa sang yenkwu [A study of tense and aspect in Korean]*. Seoul: Thayhaksa.
- Kim, C.-S., Kim, I.-K., Park, D.-H., Lee, B.-K., Lee, H., Jung, H.-J...Huh, Y. (Eds.). (2005). *Oykwukinul wyhan hankwuke mwunpep 2 [Korean grammar for foreigners]*. Seoul: CommunicationBooks.
- Kim, D.-M. (2014). The Korean relativizer *-l* from the viewpoint of linguistic evolution. *Hankwukehak [Korean Linguistics]*, 62, 123–147.
- Kim, H. (1992). *Clause combining in discourse and grammar: A discourse analysis of some Korean clausal connectives in spoken narrative* (Unpublished doctoral dissertation). University of Hawai'i, Honolulu.
- Kim, H.-Y., & Lee, E.-H. (2007). The development of tense and aspect morphology in L2 Korean. In J.-J. Song (Eds.), *Frontiers of Korean Language Acquisition* (pp. 91–126). London: Saffron.
- Kim, M.-J. (2011). *Grammaticalization in Korean: The evolution of the existential verb*. London: Saffron Books.
- Kim, M.-Y. (2008). Hankwuke cepsokmwunuy sice haysek [The tense of conjunct sentences in Korean]. *Korean Linguistics*, 43, 69–104.
- Kim, S.-H., Park, S.-M., & Lee, Y.-J. (Eds.). (2012). *Sekang hankwuke 1 [Sogang Korean 1]*. Seoul: Sogang University.
- Ko, Y.-K. (2010). *Pyocwun cwungsekwuke mwunpeplon [Standard Middle Korean grammar]*. Paju: Cipmwuntang.
- Ko, Y. K., & Ku, B. K. (2008). *Wulimal mwunpeplon [Korean grammar]*. Paju: Cipmwuntang.
- Korean Language & Culture Center. (2008). *Caymiissnun Hankwuke 1 [Fun! Fun! Korean]*. Seoul: KYOBO Book Centre.
- Korean Language & Culture Center. (2009). *Caymiissnun Hankwuke 2 [Fun! Fun! Korean]*. Seoul: KYOBO Book Centre.
- Kwon, J.-I. (1977). *Hyentay kwukeuy tongsakwu naypomwun yenkwu [A study of VP-embedded sentences in Korean]* (Unpublished master's thesis). Seoul National University, Seoul.
- Lee, H.-S. (1991). *Tense, aspect, and modality: A discourse-pragmatic analysis of verbal affixes in Korean from a typological perspective* (Unpublished doctoral dissertation). University of California, Los Angeles.

- Lehmann, C. (1988). Towards a typology of clause linkage. In J. Haiman and S. A. Thompson (Eds.), *Clause combining in grammar and discourse* (pp. 181–225). Amsterdam: John Benjamins.
- Long, M. H. (2003). Stabilization and fossilization in interlanguage development. *Language Research*, 12, 335–373.
- Longacre, R. E. (2007). Sentences as combinations of clauses. *Language Typology and Syntactic Description*, 2, 372–420.
- Lyons, J. (1977). *Semantics*. Cambridge, UK: Cambridge University Press.
- Martin, S. (1954). *Korean morphophonemics*. Baltimore, MD: Linguistic Society of America.
- McCawley, J. (1971). Tense and time reference in English. In C. J. Fillmore & D. Langendoen (Eds.), *Studies in linguistic semantics* (pp. 96–113). New York: Irvington.
- Mun, S.-Y. (2011). Cepsokmwunuy sicey hyensangkwa sangtaysicey [On the correlation of relative time reference and tense in coordinate and subordinate sentence in Korean]. *Korean Linguistics*, 50, 141–172.
- Na, J.-S. (1971). *Wulimaluy ttay maykim yenkwu [A study of tenses in Korean]*. Seoul: Kwanhaksa.
- Nam, K.-S. (1972). Hyentay kwuke siceyey kwanhan mwuncey [Topics on tense in Modern Korean]. *Kwukekwukmwunhak [Korean Language and Literature]*, 55, 213–328.
- Nam, K.-S. (1994). *Kwuke yenkyelemiuy ssuim: ‘-ko, -ese, -nikka, -taka’uy uymi tongsacek thukcing [Korean conjunctive suffixes’ usage: The semantico-syntactic features of ‘-ko, -ese, -nikka, -taka’]*. Seoul: Sekwanghakswulcalyosa.
- Nam, K.-S., & Ko, Y.-K. (1993). *Phyojwun kwuke mwunpeplon [Standard Korean grammar]*. Seoul: Tap Chwulphansa.
- Nam, S.-K., & Chae, S.-H. (2004). Hankwuke haksupcauy yenkyelemi sayong yenkwu. [A study on the usage of conjunctive endings in Korean language learners’ compositions]. *Journal of Korean Language Education*, 15(1), 33–50.
- O’Grady, W. (2006). The problem of verbal inflection in second language acquisition. Paper presented to the Pan-Pacific Association of Applied Linguistics. [Online]. Retrieved from: http://www.ling.hawaii.edu/faculty/ogrady/Verbal_inflection_in_SLA.pdf
- O’Grady, W. (2009). *The syntax files*. Unpublished manuscript, Department of Linguistics, University of Hawai‘i, Honolulu.
- Oh, S.-Y. (2003). The Korean verbal suffix *-ess*: A diachronic account of its multiple uses. *Journal of Pragmatics*, 35(8), 1181–1222.
- Park, G.-Y. (1986). *The lexical representations of Korean causative and passives*. Bloomington: Indiana University Linguistics Club Publication.
- Reichenbach, H. (1947). *Elements of symbolic logic*. New York: Macmillan.
- Rhee, S. (1996). *Semantics of verbs and grammaticalization: The development in Korean from a cross-linguistic perspective* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses (9719472).
- Salaberry, M. R., & Shirai, Y. (2002). *L2 acquisition of tense-aspect morphology*. Amsterdam: John Benjamins.

- Searle, J. R. (1969). *Speech acts: An essay in the philosophy of language*. Cambridge, UK: Cambridge University Press.
- Seo, S.-J., & Eo, J.-H. (2011). Hankwukwuke hakwupcauy swuktaltopyel yenkyelemi cenghwakto pyeni yangsang yenkwu. [Study on connective ending accuracy variation by Korean proficiency level among learners]. *Journal of Korean Language Education*, 22(1), 123–143.
- Shirai, Y. (2000). The semantics of the Japanese imperfective *-teiru*: An integrative approach. *Journal of Pragmatics*, 32(3), 327–361.
- Shirai, Y., & Kurono, A. (1998). The acquisition of tense-aspect marking in Japanese as a second language. *Language Learning*, 48(2), 279–244.
- Sinclair, J. (1991). *Corpus, concordance, collocation*. Oxford, UK: Oxford University Press.
- Slobin, D. I. (1977). Language change in childhood and in history. In J. MacNamara (Ed.), *Language learning and thought* (pp. 185–214). New York: Cambridge University Press.
- Smith, C. S. (1997). *The parameter of aspect*. Berlin: Springer.
- Sohn, H.-M. (Ed.). (1975). *Tense in Korean*. Honolulu: The Center for Korean Studies, University of Hawai‘i.
- Sohn, H.-M. (1991). Grammaticalization and semantic shift. In E.-J. Baek (Ed.), *Papers from the 7th International Conference on Korean Linguistics* (pp. 425–435). Seoul: Hanshin.
- Sohn, H.-M. (1994). *Korean*. London: Routledge.
- Sohn, H.-M. (1996). Reanalysis in Korean complex predicate constructions: Causative derivation. *Japanese/Korean Linguistics*, 5, 37–64.
- Sohn, H.-M. (1999a). Functional transfer in sentence-final positions in Korean and Japanese. *Language and Information*, 3, 145–185.
- Sohn, H.-M. (1999b). *The Korean language*. Cambridge, UK: Cambridge University Press.
- Sohn, H.-M. (2009). The semantics of clause linking in Korean. In R. M. W. Dixon & A. Y. Aikhenvald (Eds.), *The semantics of clause linking: A cross-linguistic typology* (Vol. 5; pp. 285–317). Oxford, UK: Oxford University Press.
- Sohn, S.-O. (1988). *Tense and aspect in Korean* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses (8902858).
- Sohn, S.-O. (1992). Speaker-oriented and event-oriented causals: A comparative analysis of *-nikka* and *-ese*. *Korean Linguistics*, 7(1), 73–83.
- Son, H.-O. (2010). Hankwuke cepsokmwuney nathananun ‘-ess’uy saynglyak hyensanguy hwankyengkwa haysek-‘-ko’, ‘-ciman’, ‘-uni’ cepsokmwunul cwungsimulo [Environments and interpretations of ‘-ess’ omission in Korean conjunctive sentences]. *Korean Linguistics*, 58, 157–200.
- Song, S.-C. (1983). Korean connection: A reanalysis of “transferentive.” *Korean Linguistics*, 3, 123–144.
- Suh, C.-S. (1996). *Kwuke mwunpep [Korean grammar]*. Seoul: Hanyang University Press.

- Suh, T.-R. (1987). *Kwuke hwalyongemiuy hyengtaywa uymi [Forms and meanings of Korean suffixes]* (Unpublished doctoral dissertation). Seoul National University, Seoul.
- Sung, K.-C. (1985). Kwukeuy hwakyewa kyeksikseng [Speech levels and formal/informal variation in Korean]. *Linguistic Journal of Korea*, 10(1), 143–170.
- Thompson, S. A., & Longacre, R. E. (1985). Adverbial clauses. In T. Shopen (Ed.), *Language typology and syntactic description* (Vol. 2, pp. 171–234). Cambridge, UK: Cambridge University Press.
- Van Valin, R., & LaPolla, R. J. (1997). *Syntax: Structure, meaning, and function*. Cambridge, UK: Cambridge University Press.
- Vendler, Z. (1957). Verbs and times. *The Philosophical Review*, 66(2), 143–160. doi: 10.2307/2182371
- Yang, B. S. (1994). *Morphosyntactic phenomena of Korean in role and reference grammar: Psych-verb constructions, inflectional verb morphemes, complex sentences, and relative clauses* (Unpublished doctoral dissertation). State University of New York at Buffalo.
- Yi, E.-K. (1996). *Kwukeuy yenkyelemi yenkwu [A study on connective endings in Korean]* (Unpublished doctoral dissertation). Seoul National University, Seoul.
- Yoo, H.-K. (1986). Kwuke cepsokmwunuy thongsacek thukciley tayhaye. [On the syntactic features of Korean conjunctive sentences]. *Hangeul*, 191.
- Yoon, P.-H. (2005). *Hyentaykwuke cepsokemi yenkwu*. [Study on the contemporary Korean conjunctive enders. Seoul: Pakiceng.

APPENDIX A

Frequency list of connectives in the Sejong spoken corpus

connectives		frequency	connectives		frequency
1	ko	19,104	40	yeto	383
2	nuntey	7,522	41	kena	377
3	kwu	6,966	42	nyamyen	368
4	myen	6,533	43	lakwu	356
5	ye	6,175	44	le	311
6	(vowel+) e	5,592	45	tolok	306
7	key	4,760	46	nta	279
8	yese	4,182	47	(vowel+)eto	265
9	e	3,825	48	(vowel+)ato	264
10	ci	3,755	49	llyeko	258
11	ase	2,876	50	aya	242
12	nikka	2,771	51	takwu	241
13	(vowel+)a	2,505	52	umyenun	231
14	myense	2,347	53	lci	223
15	myenun	2,188	54	eto	190
16	lako	2,160	55	umyense	188
17	a	2,092	56	nya	179
18	untey	1,913	57	kose	158
19	ta	1,603	58	nyamyenun	158
20	(vowel+)ese	1,497	59	ntamyen	157
21	ciman	1,494	60	kwuse	152
22	la	1,482	61	nikkan	148
23	umyen	1,433	62	ntakwu	137
24	taka	1,325	63	konun	131
25	(vowel+)yeya	1,324	64	lase	130
26	ese	1,288	65	llyekwu	129
27	tako	1,227	66	nyako	128
28	(vowel+)eya	1,007	67	(vowel+)yetwu	125
29	unikka	877	68	telato	121
30	nka	825	69	ca	120
31	ntako	732	70	tun	119
32	nci	718	71	lkka	118
33	(vowel+)aya	711	72	tusi	116
34	teni	685	73	tamyen	113
35	untey	679	74	lyeko	108
36	nunci	576	75	mye	103
37	ase	573	76	(vowel+)atwu	102
38	eya	534	77	tunci	101
39	na	426	78	ni	100

