Tense and Aspect in Korean

Sung-Ock S. Sohn
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Preface

Abbreviations and Symbols

Chapter 1 Introduction 1
1.1 The issues 1
1.2 Previous approaches 2
1.2.1 Structural approach 2
1.2.2 Generative semantic approach 5
1.3 Reichenbach’s tense system 8
1.4 Proposed approach 12
1.4.1 Tense, event time, and aspect 12
1.4.2 Descriptive model 13
1.5 Typological characteristics 17
1.5.1 Syntactic structure 17
1.5.2 Sequence of tenses 18
1.6 Scope of the study 22

Chapter 2 Temporal Categories in Korean 23
2.1 Overview 23
2.2 Tense and aspect categories 25
2.2.1 Past and perfect form -ess 26
2.2.2 Pluperfect form -ess-ess 30
2.2.3 Unmarked tense form -Ø 37
2.3 Modality categories 41
2.3.1 Retrospective mood suffix 41
2.3.2 Modal suffixes 45
2.4 Conjunctive suffixes 46
2.5 Temporal adverbials 50
2.6 Lexical aspect 55

Chapter 3 Tense Indexing and Binding 61
3.1 Two forms of tense 61
3.1.1 -Ess: R-expression 61
3.1.2 -Ø: Pronominal 62
3.2 Coindexing tenses 67
3.3 Syntactic explication (X-bar theory) 71
3.4 Null tense in embedded clauses 80
Chapter 4 Temporality in Conjunctive Sentences  87
  4.1 Overview  87
  4.2 Syntactic subcategorization  88
  4.2.1 Temporal vs. nontemporal  88
  4.2.2 Anaphoric vs. deictic  91
  4.2.3 Perfective vs. nonperfective  92
  4.3 Anterior constructions  94
  4.3.1 Unmarked anterior clauses  94
  4.3.2 Transferentive clauses  96
  4.4 Overlapping constructions  106
  4.5 Posterior constructions  108
  4.6 Nontemporal constructions  111
  4.6.1 Deictic clauses  112
  4.6.2 -Ko clauses  114
  4.6.3 Other [±anaphoric] clauses  129

Chapter 5 Tense in Nonconjunctive Embedded Clauses  133
  5.1 Overview  133
  5.2 Adnominal constructions  134
  5.2.1 Morphological notes  134
  5.2.2 Relative clauses  137
  5.2.3 Noun-complement clauses  147
  5.3 Verbal complements  151
  5.4 Quotative constructions  154
  5.5 Nominalized constructions  157

Chapter 6 Summary  161
  6.1 Findings  161
  6.2 Theoretical implications and residual problems  162
  6.3 Conclusion  166

Notes  167
References  177
Preface

This study proposes a unified, integrated account of tense and aspect in Korean. I argue that while tense is obligatory, aspect is optional. This study makes an important distinction between two notions—tense and event times. Tense names a relation between event time and speech time and is a grammatical category, whereas event time is not. There are two tenses in Korean, past and nonpast. Past tense names the relation in which an event precedes speech time. Nonpast tense names the relation in which an event follows or is simultaneous with speech time. I theorize that the actual event time is determined through the interaction of tense and a variety of other lexical items.

There are two forms for expressing tense contrasts in Korean: the overt form -ess and the null form -Ø. While -ess always names a past relation, the value of the null form can vary.

I propose two main theses. First, -ess enters into the same interpretive pattern as names or R-expressions since it has inherent reference. Second, -Ø behaves like pro (pronominals) and enters into the same interpretive pattern as pro. Like all other pronominals, -Ø can receive its interpretation from an antecedent (i.e., a matrix-clause tense) or it can refer freely. I label the former “anaphoric” tense and the latter “deictic” tense. The deictic interpretation of the null form is nonpast, unless otherwise specified. Furthermore, like an NP, tense can bear an index to indicate coreference or disjoint reference with respect to another tense. Coincided tenses have the same value for the feature [±past].

The main thesis that -ess is an R-expression is supported by Binding Principle C, and is borne out in a wide range of data, including conjunctive, relative, and complement clauses.

This unifying theory of tense addresses other issues involving temporal expressions in Korean in a principled way. For instance, conjunctive suffixes play a key role in temporal interpretations.

In short, the treatment of tense as a referring expression shows two types of parallels within the Binding Theory. The two phenomena, which at first glance look completely unrelated, are captured by the same principle.

This study originated as my doctoral dissertation at the University of Hawai‘i. I would like to thank all the people who helped me throughout that academic endeavor.
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Abbreviations and Symbols

Ac Accusative
Adn Adnominal suffix
AH Addressee honorific
Asp Aspect
Cl Classifier
Comp Complementizer
Cop Copula
Dat Dative
Dec Declarative
Dir Direction
DN Defective noun
Fut Future
Hon Honorifics
Imp Imperative
Ind Indicative
Loc Locative
Mod Modifier
Nm Nominative
Nml Nominalizer
Perf Perfective
Pl Plural
Pol Polite ender
Poss Possessive
Pres Present
Prog Progressive
Q Question
Quot Quotative
Rel Relativizer
Ret Retrospective
Top Topic
Trans Transferentive
* Ungrammatical sentence/phrase
? Marginal sentence/phrase
?? More marginal sentence/phrase
Chapter 1
Introduction

1.1 The issues
The present study addresses the traditional and current issues involving
temporal expressions in Korean in an attempt to propose a unified and
more principled account of these phenomena, with particular reference
to temporal categories in complex sentences. The following questions
may be conceived of as the major issues.

(1)  a. Do both tense and aspect exist in Korean, or just one of them? If
both exist, do they form separate grammatical categories, or are
the two syncretized into one category?

b. To what extent is Korean susceptible to tense agreement in com-
plex sentences?

c. How is embedded tense different from matrix tense? For example,
to what extent is an embedded tense form suppressed vis-à-vis a
matrix tense form?

d. What is the relation between embedded tense and the tense in the
immediate upstairs clause? What is a principled way of account-
ing for embedded tense with regard to the matrix tense and speech
time? Is the notion of reference time or relative tense linguistically
significant?

These issues are associated with other temporal phenomena in Korean,
including:

e. What is the grammatical status of the reduplicated suffixal form
\textit{-ess-ess}? Is it a past-past marker or past-perfective marker, or some
sort of modal or aspeclual suffix?

f. What is the nature of the so-called retrospective mood suffix with
regard to the tense and aspect system?

g. How many tenses are there in Korean: two (past and nonpast), or
three (past, present, and future)?

h. What kinds of aspectual forms are available in Korean?

i. Do the so-called modal suffixes (i.e., \textit{-keyss}, \textit{-uli}) denote future
time in any way?
j. What are the syntactic functions performed by temporal adverbials in relation to the other temporal categories?

k. What roles do conjunctive suffixes play in the temporal interpretation of conjunctive sentences?

l. Do the other complementizers, such as the adnominal, nominalizing, adverbial, and quotative suffixes, have any role in temporal interpretations?

Many of these questions have been addressed independently of each other by linguists of Korean, but they are by no means dissociated from each other. The present study was conceived and implemented with the objective of proposing a descriptive model that could answer these questions in an integrated, economical, and principled manner.

1.2 Previous approaches
There have been a number of works on temporal expressions in Korean, with a variety of theoretical orientations. The majority of the existing works are on how to interpret the morphological oppositions of the tense- or aspect-related inflectional categories that are realized as verbal suffixes. Only recently have some works appeared dealing with temporal expressions from a broader perspective, including tense and aspect in embedded clauses.

Previous works can, by and large, be categorized into the following three approaches:

- Structural approach
- Generative semantic approach
- Reichenbachian approach

Among the three approaches, the most relevant analysis for the present study is the Reichenbachian account. I will briefly review the other two accounts in this section, while taking up the Reichenbachian approach in the following section.

1.2.1 Structural approach
The structural approach has been adopted by many traditional, structuralist, and generative grammarians working on Korean (e.g., Martin 1954, Choi 1965, Na 1971, Gim 1980a, 1980b, 1985). This approach is characterized essentially by the syntagmatic and paradigmatic analysis of the inflectional suffixes that are relevant to tense and/or aspect. This includes the identification of the tense/aspect morphemes, their mor-
phemic slots in the syntagmatic verbal inflection, and the grammatical categories associated with them. For example, Martin (1954, 1963) proposes seven sequentially ordered slots for inflectional categories that are realized as various verbal suffixes. His scheme is summarized below. Notice that one slot (IV) is filled with more than one category, and some categories have more than one subcategory. Examples of suffixes are given in parentheses.


I. STATUS: Honorific (-usi)
II. TENSE: Past (-ess)
III. TENSE: Past (-ess)
IVa. TENSE: Future (-keyss)
IVb. ASPECT: Prospective (-ul)
V. STYLE: Formal (-{(s)up})
VI. ASPECT: 1. Indicative (-n(i), -Ø)
               2. Subjunctive (-s(i), -Ø)
               3. Retrospective (-ti, -tu)
               4. Processive (-{nu}n)
VII. MOOD: 1. Assertive
               a. Declarative (-ta, etc.)
               b. Propositive (-ca, etc.)
               2. Attentive
               a. Interrogative (-kka, etc.)
               b. Imperative (-la, etc.)
               3. Apperceptive (-kwun, etc.)
               4. Modifier (-{u}n)
               5. Infinitive (-e)
               6. Adversative (-una ‘but’)  
               7. Sequential (-uni(kka) ‘as’) 
               etc.

Martin’s mood category consists of eighteen subcategories, which include various kinds of clause enders, such as conjunctive, adnominal, nominalizing, and adverbial suffixes that are relevant to the present study. Since I will discuss tense and aspect categories in detail in Chapter 2, I will not comment further on Martin’s system here. Sentence (3) will suffice to illustrate the inflectional categories Martin postulates.

John-Nm book-Ac read-I-II-III-IVa-V-VI-VII
‘John may have read the book.’
According to a majority of the proposals in the structural approach, including Martin’s, the category of tense corresponds to a natural division of time. That is, there are three tense categories: past, present, and future. Most traditional and many structuralist or generative grammarians assume that there are these three-way contrasts in the structure of Korean. Such analyses, however, have one significant drawback. That is, natural time does not always match the systematic grammatical contrasts encoding tense. In fact, as Lyons (1968: 304–305) points out, tense itself is not found in all languages. In Korean, I propose that future tense does not exist as an inflectional category (cf. Sohn 1986: 158), as we will see in Chapter 2.

Another major shortcoming of the analyses under the structural approach is that they fail to account for the empirical problem that tense in embedded clauses calls for a descriptive mechanism different from that for matrix tense. For instance, it has been generally assumed in this approach that in relative clauses there are three different tense endings that simultaneously function as relative clause markers, as in (4).

(4)  
   a. [John-i e ilk-un]   chayk
       J.-Nm e read-Past   book
       ‘the book that John read/has read’

   b. [John-i e ilk-nun]  chayk
       read-Pres
       ‘the book that John is reading’

   c. [John-i e ilk-ul]   chayk
       read-Fut
       ‘the book that John will read’

In (4), the e stands for the gap that replaces the head noun chayk ‘book’. According to the usual structuralist view, the adnominal clause endings -un, -nun, and -ul represent past, present, and future tense, respectively. However, this generalization does not hold in (5).

(5)  
       J.-Nm read-Adn after this book-Ac read-will-Dec
       ‘I will read this book after John does/has read it.’

      i. ‘Mary read the book that John is reading (now).’
      ii. ‘Mary read the book that John was reading.’
In (5a), the morpheme *-un* refers to a nonpast tense, despite the structural analysis that treats it as a past morpheme. In (5b), *-nun* represents nonpast as well as past, contrary to the structuralistic claim that *-nun* refers to a present tense. These examples indicate that tense in embedded clauses may vary its time value depending on the matrix clause tense (cf. Nahm 1978: 3). It will be shown later that the adnominal suffix *-ul* is a modal suffix, and not a future tense marker.

### 1.2.2 Generative semantic approach

The generative semantic account has been adopted by many grammarians of Korean, especially in the 1970s (e.g., Sohn 1974, 1975, Suh 1977, Song 1983). In this analysis, tense is a higher verb which gets lowered into a tenseless clause. Let us consider some English examples first. A simple past is represented as a higher verb with a proposition as subject (cf. McCawley 1971). For instance, (6a) may be represented as (6b) in generative semantic terms. (The examples are from Hornstein 1981.) The past perfect construction is understood as a past sentence embedded as a subject to a higher verb *Past*, as illustrated in (7).

(6)  

a. John *ate* the cake.

b. 

```
NP                  VP
  S1
     S2
John eat the cake   Past
```

(7)  

a. John *had eaten* the cake.

b. 

```
NP                  VP
  S1
     S2
     S3
NP              VP
John eat the cake   Past   Past
```

In (6b), the *Past* gets lowered into *S₂* to yield (6a). Similarly in (7b), the *Past* of *S₂* gets lowered into *S₃* and the *past* of *S₁* gets lowered into the
structure generated by the earlier lowering. This approach is largely based on the classical logical analysis of tense as a sentential operator. Consider the complex sentences in (8) (from Enç 1987).

(8) a. Mary found out that John failed the test.
   b. \text{PAST} [s_1 \text{Mary find out} [\text{PAST} [s_2 \text{John fail the test}]]]

In (8b), notice that the \text{PAST} of the complement clause is embedded under the \text{PAST} of the matrix clause. The tense of the sentence $s_2$ is evaluated with respect to the \text{PAST} of the higher clause. Therefore, the event of failing the test should be predicted to be prior to Mary’s finding out about it. The complement tense in (8a) has a “shifted reading” according to Enç’s (1987) analysis.¹

Now let us consider some Korean examples. Sentence (9a) where the reduplicated tense/aspect suffix -ess-ess occurs may be represented in (9b) as the generative semantic approach (cf. Sohn 1974).

    the bird-Nm die
    ‘That bird had died.’
   
   b. I REPORT [\text{PAST} [\text{PAST} [\text{ku say-ka cwuk}]]]

The double tense/aspect form -ess-ess is usually regarded as denoting past in the past time. Therefore, postulation of (9b) as the underlying structure for (9a) seems to be well motivated from a semantic point of view. Similarly, observe the following examples from Song (1983).

(10) a. Hakkyo-ey ka-Ø-taka tolao-Ø-n-ta.
    school-Loc go return
    *(He) is coming back while on his way to school.’
   
   b. Hakkyo-ey ka-ss-taka tolao-Ø-n-ta.
    *(He) is coming back after he has been to school.’
   
    *(He) came back while on his way to school.’
   
    *(He) came back after he had been to school.’

Song (1983) proposes under the Generative semantic account that the respective sentences in (10) be represented schematically as in (11), where E stands for an event.
(11) a. [E1-PRESENT  taka  E2-PRESENT]  PRESENT
    b. [E1-PAST  taka  E2-PRESENT]  PRESENT
    c. [E1-PRESENT  taka  E2-PRESENT]  PAST
    d. [E1-PAST  taka  E2-PRESENT]  PAST

Another way of stating Song’s claim is that there is only a single past in the Logical Form (LF) of sentences like (10c), which has the entire remainder of the construction in its scope, and so pertains to both clauses, as shown in (12).

(12) $\begin{array}{c}
    \text{S} \\
    \text{S} \\
    \text{he goes to school and comes back}
\end{array}$

Although Song’s observation that, in his example sentences, the matrix clause -ess places the entire sentence in the past frame is insightful, this approach does not necessarily apply to other types of sentences. That is, evidence from other types of embedded clauses indicates that the embedded tense is not always in the scope of the matrix tense, as shown in (13).

    J.-Nm school-Loc go-Comp thing-Ac M.-Top know-Past-Dec
i. ‘Mary knew that John goes/will go to school.’
ii. ‘Mary knew that John was going to school.’

Although Song does not discuss this explicitly, when there are two occurrences of -ess in a complex sentence, there are two possible analyses. One analysis assumes that there are two potentially different times referred to. The second possibility is that the embedded clause past is in the scope of the main clause past tense. Then some special interpretation for the narrow-scope occurrence of -ess would apply. It has been suggested (cf. McCawley 1971) that the English perfect is a narrow-scope of the past, because of paraphrasability like that in (14).

(14) a. John believes that Mary left.
    b. ?John believes Mary to have left.

In the case of Korean examples, I will argue that the overt form -ess in embedded clauses like (10b) and (10d) denotes perfectivity, not past tense. Supporting evidence is primarily based on the distinction between the notion of pastness and perfectivity. (This will be discussed in
Chapter 2 in detail.) The difference in meaning between (10a) and (10b) on the one hand, and between (10c) and (10d), on the other, suggests that the embedded clause -ess shows a completed action of going home (that is, perfectivity), whereas its absence indicates an uncompleted action.

In short, the dual temporal interpretations associated with embedded clauses appear to constitute one of the major stumbling blocks in the generative semantic approach.

1.3 Reichenbach’s tense system
The most influential attempt at formalizing the relationship between event time and the use of tense has been Reichenbach (1947). Reichenbach’s system has been discussed in dealing with a wide variety of languages (e.g., Hornstein 1977, 1981, An 1980, Netsu 1981, Soga 1983, C. Lee 1985). Hornstein (1977) develops a “quasi-Reichenbachian” framework and proposes rules for adverbs, such as ‘now’, ‘yesterday’, ‘tomorrow’, and temporal conjunctions, such as ‘when’ and ‘before’. Despite his revision of part of Reichenbach’s system, his approach is still basically Reichenbachian.²

According to Reichenbach, there are three elements involved in the description of tense: a speech time (S), an event time (E), and a reference time (R). The speech time is the time at which the speech act itself takes place. The event time corresponds to any one of a large set of times at which an event takes place. In addition to speech time, there are alternative points of reference for speakers. They are not constrained to talk about the actual situations they are in; they can select any other time, and use that time as their principal reference point. This reference time is intuitively a point of reference that functions for each speaker as an alternative to the time of speaking (cf. Johnson 1981). The way in which these three are interrelated is exemplified in a sentence such as ‘John had left’. In this example, the event time is the time when John left; the reference time is a time between speech time and the event time as shown in (15).

(15) \[ \begin{array}{ccc}
E & R & S \\
\hline
\end{array} \]

Although the notion of reference time (R) has been controversial among scholars (e.g., Comrie 1985), R-time appears useful in the interpretation of time adverbials, as exemplified in (16) (from Dinsmore 1982: 224).
(16) a. At sunrise Mabel had a big breakfast.
    b. At sunrise Mabel had had a big breakfast.

The reference time R of (16a) and (16b) is the time at which the sun rises, as in (17).

(17) \[ \begin{array}{c}
R \\
\hline
\text{sunrise}
\end{array} \]

For (16a) R = E in Reichenbach's system, whereas for (16b) E is prior to the time at which the sun is rising. These are represented in (18a) and (18b), respectively.

(18) a. \[ \begin{array}{c}
R \\
\hline
E \\
\text{sunrise}
\end{array} \]

b. \[ \begin{array}{c}
E \\
\hline
R \\
\text{sunrise}
\end{array} \]

According to Dinsmore (1982), by virtue of R, we can predict different entailments about the event time. That is, while (16a) entails that Mabel's breakfast occurs at sunrise, (16b) entails that it occurs prior to sunrise. Furthermore, the R time can characterize meaning differences in such sentences as the examples from Dinsmore (1982: 216) in (19).

(19) a. The turtle hopped across the road.
    b. The turtle has hopped across the road.
    c. The turtle had hopped across the road.
    d. The turtle would/was going to hop across the road.

In (19a–c), E precedes S (E < S). But while for (19a) R coincides with E (R = E), for (19b) R = S, for (19c) R is between E and S, and for (19d) R < S and R < E. Notice that the different ordering of the three time points are associated with different time-related meanings.

Reichenbach (1947) claims that the three elements (S, E, and R) are relevant to every temporal expression. In his system, therefore, tense is represented in terms of positional relationships of the three time points, as illustrated in (20), where dashes indicate an interval of time and commas indicate simultaneity.
(20)  

\begin{tabular}{lll}
Structure & Examples & Names \\
\hline
a. E – R – S & I had seen John. & Past perfect \\
b. E, R – S & I saw John. & Past \\
c. R – E – S & I would see John & Conditional \\
& R – S – E & \\
d. E – S, R & I have seen John. & Present perfect \\
e. S, R, E & I see John. & Present \\
f. S – E – R & I will have seen John. & Future perfect \\
& S, E – R & \\
g. S – R – E & I will see John. & Future \\
& S, R – E & \\
\end{tabular}

Not all tenses in Reichenbach’s sense are formally distinguished in Korean as separate grammatical categories. I maintain that in Korean there are only two tenses—past and nonpast, with the nonpast tense regarded as including present and future times. In Chapter 2, I will argue in detail for the two-way contrast of the tense system in Korean.

According to Reichenbach, the time points E, R and S are interpreted as either durative stretches or punctual points of time, depending on aspectual characteristics. In some forms, an additional indication is given concerning the time extension of the event (1947: 290). For example, English uses the present participle to indicate that the event covers a certain stretch of time. Thus, in Reichenbach’s system, notions such as “extended” and “perfect” are treated under the label “tense,” although they are concerned with states of events (which are aspectual notions) rather than with points in time.\(^3\)

In the Reichenbachian system, tense in complex sentences can also be represented in terms of a configuration of S, R, and E, as in (21), from Reichenbach (1947: 293).

(21)  

\begin{tabular}{lll}
a. I had mailed the letter & Clause 1: & E1 – R1 – S \\
when John came & Clause 2: & R2, E2 – S \\
and told me the news. & Clause 3: & R3, E3 – S \\
b. He was healthier & Clause 1: & R1, E1 – S \\
when I saw him & Clause 2: & R2, E2 – S \\
than he is now. & Clause 3: & S, R3, E3 \\
\end{tabular}

Thus, in the Reichenbachian system, tenses in both simple and complex sentences are represented by the positional relationships between
E, R, and S. Further notice in the vertical positioning above that in (21a) all the three reference times coincide, whereas in (21b) only two reference times coincide. The Reichenbachian analysis explicates dependency between a subordinate clause and its main clause (or a next higher clause) in terms of reference times.

Reichenbach’s tense system will be partly modified in this study, not only to attain greater generality in linguistic description but to accommodate the typological characteristics of Korean. The elaboration of such modifications will be presented in the immediately following section. In biclausal (and multiclausal) constructions in Korean, which I will focus on in the present study, R coincides with a matrix-clause event time. Thus, for simplicity, I will assume from now on that R is equivalent to the matrix-event time, as illustrated in (22).

(22) a. John-un cip-ey ka-Ø-se Mary-lul manna-ss-ta.
   J.-Top home-Loc go-past-and M.-Ac meet-Past-Dec
   ‘John went home and then met Mary.’

   |-------------------------|
   E1    E2 (= R)    S

   while
   ‘While going home, John met Mary.’

   |-----------------|
   E1    S

   E2 (= R)

The diagram in (22a) indicates that E1 precedes E2. Since the conjunctive suffix -se ‘and then’ requires E1 to precede E2, the position of E1 in the diagram must be located prior to E2 which precedes speech time. In this case, the matrix-clause event (E2) provides a reference time for the interpretation of the embedded-clause event (E1). In (22b), the conjunctive suffix -myense ‘while’ requires two events to overlap. Since the matrix event takes place in the past, the embedded event also must occur in the past. Thus, again E2 provides the reference time for E1. In 1.4, I will discuss the typological reasons for the determination of E2 (= R), rather than E1 (= R).
1.4 Proposed approach

1.4.1 Tense, event time, and aspect

This study makes an important distinction between tense and event time—a distinction that is crucial in any discussion of tense. The basic premise is stated in (23).

(23) Tense is a grammatical category which names a relationship between one time and another—the relation between an event time and a speech time. Past tense names the relation in which the event precedes speech time and nonpast tense names the relation in which the event either follows or is simultaneous with the speech time.

This definition of tense contrasts with the more common view (cf. Hornstein 1981, Soga 1983, Comrie 1985) that tense categories refer to event times that bear a particular relation (before or after) to speech time. On this latter view, tense can have indefinitely many values since there are indefinitely many event times.

While tense in Reichenbach’s system is defined in terms of the positional relationships of S, R, and E, tense in the present study refers to a relation between E and S. As noted earlier, past and nonpast tenses are defined as in (24).

(24) a. X is past tense iff X names the temporal relation in which the event precedes speech time.

b. X is nonpast tense iff X names the relation in which the event follows or is simultaneous with speech time.

In the theory I propose, the actual event time is determined through the interaction of tense and a variety of lexical and pragmatic factors. Thus, in the sentence John-i itena-ss-ta ‘John left’, for example, the past-tense category indicates only that the event of leaving takes place at a time preceding the speech time. Other information about the event time must be supplied pragmatically (e.g., by the linguistic and extralinguistic context in which the sentence is uttered) or by modifiers with specific semantic content (e.g., ecy ‘yesterday’).

In the case of Korean, I have proposed that there are only two tenses, past and nonpast. Past tense is represented typically by the past tense morpheme -ess, which has a phonologically conditioned variant -ass (occurring after a syllable containing the vowel /a/ or /o/) and a morphologically conditioned variant -ss (occurring after the verb ha(y)- ‘do’).
The form -ass is contracted to -ss after a verb stem ending in the vowel a. Nonpast tense is formally represented by the null form -Ø.

Since tense names a temporal relation, it has the property of a referring expression like a noun phrase. Moreover, in the case of complex sentences, one tense can be coindexed with another to indicate that each names the same time relation, as shown in (25).

(25) John-un cip-ey ka-Ø₁-se ca-ss₁-ta.
    J.-Top home-Loc go-Past-and sleep-Past-Dec
    ‘John went home and slept.’

The tense system of embedded clauses is particularly complex in that the embedded tense often shifts the interpreted time away from the time at which a matrix clause is interpreted (cf. Enç 1987: 635). The embedded tense in Korean is sometimes interpreted with respect to speech time and sometimes with respect to matrix-clause tense, as we will see repeatedly in this study. No satisfactory solution for embedded tense has been proposed thus far, although the problems involved have often been discussed (e.g., Choi 1965, Nahm 1978, An 1980, Kwon 1985, C. Lee 1985).

While in simple sentences tense relates a given event to speech time, in complex sentences the embedded-clause tense is interpreted with regard to the speech time or matrix-clause event time. Thus, the interpretation of tense varies depending upon the types of syntactic structure.⁵

In addition, the Korean temporal system is often described in terms of aspect (cf. Nahm 1978), such as perfective vs. imperfective or prior vs. nonprior,⁶ rather than in terms of tense. One of the reasons for this proposal is that in Korean there is often a shift of viewpoint in time reference. For example, the so-called past marker may occur in reference to a future event as well as a past one in many constructions. The notion of aspect is distinct from tense. Aspect is a matter of relative ways of viewing an event (cf. Lyons 1968, Soga 1983), whereas tense is a matter of relative time points, such as past and nonpast. In Chapter 2, I will argue that both tense and aspect categories exist in Korean.

### 1.4.2 Descriptive model

The framework that I adopt for the present study is Government and Binding (GB) theory, in particular, the Binding Theory (cf. Chomsky 1981, 1986). I will argue for two main proposals throughout this study. First, I will propose that the overt form -ess has the status of a name or R-expression in that it has inherent reference. That is, -ess always names
a relation in which the event precedes the speech time, henceforth termed the “past relation.” My second claim is that whereas -ess is a name or R-expression, -Ø is a pronominal in the sense that its reference can vary: it can name either the past or the nonpast relation. More specifically, the overt tense form -ess enters into the same interpretive pattern as names while a null-form tense enters into the same interpretive pattern as pronominals. The first claim will be supported by showing that the interpretation of -ess is subject to the same principle of the Binding Theory as the interpretation of names (cf. Chapter 3).

Thus far, the Binding Theory has been largely restricted to referential dependences involving arguments NPs. In this thesis, I extend the Binding Theory to tense/aspect phenomena in Korean. Specifically, I discuss two types of parallelism: the parallelism between the null tense and pronominals, and the parallelism between the overt form -ess and R-expressions. Observe the Korean examples in (26) and (27).

   J.-Top home-Loc go-Past-and then M.-Ac meet-Past-Dec
   ‘John went home and then met Mary.’


   while
   ‘While John was going home, he met Mary.’


The embedded clauses in (26) and (27) do not allow the overt tense form -ess. There are two possible analyses for the ungrammaticality of (26b) and (27b). I will compare the more common view, a Reichenbachian approach, with my analysis based on Binding Theory. First, in the Reichenbachian analysis, tense in embedded clauses may take a main-clause event time as a reference time. For instance, (26a) and (27a) would be represented as in (26a') and (27a'). (For the postulation of reference times, see 1.5.2.)
As discussed earlier, the matrix-clause event (E2) provides the R-time for the interpretation of the embedded-clause event (E1). Thus, following the Reichenbachian approach, the embedded-clause tense above would be interpreted as past, the same as the matrix-clause tense.

My analysis of Korean tense and aspect differs from the Reichenbachian approach in several essential ways. For one thing, while Reichenbach’s system does not distinguish tense and aspect as separate grammatical categories, my analysis proposes that the two notions should be separate in the description of Korean.

Second, my analysis will dispense with the notion of reference time, so far as complex sentences are concerned, in favor of extending the notion of event time to cover Reichenbach’s reference time. This is because, among other things, in a complex sentence, Reichenbach’s reference time is simply the matrix-clause event time in Korean. The notion of reference time, however, is useful in the discussion of the past perfective suffix -ess-ess, retrospective-related suffix sequences like -Ø-te, -ess-te, and -ess-ess-te, and temporal adverbials.

Third, my analysis will introduce the notion of indexing and binding in an effort to lay a basis for the explication of temporal phenomena in Korean, as will be elaborated in Chapter 3. Thus, for example, the non-occurrence of the overt past-tense suffix -ess in the embedded clauses of (26) and (27) and many other complex sentences, and its occurrence in certain other sentences, will be explained in a more systematic way. More specifically, the ungrammaticality of (26b) and (27b) can be accounted for by the Binding Theory. I will claim that the overt tense -ess enters into the same interpretive pattern as names and is constrained by the same well-formedness condition on indexing names. Let us consider two cases that have different syntactic structures: relative clauses and conjunctive clauses. First, in the case of the relative clause, example (28) shows that the relative-clause tense has two readings.

    J.-Nm read-Mod book-Ac M.-Nm read-Past-Dec
    a. ‘Mary read (or has read) the book that John is reading.’
    b. ‘Mary read the book that John was reading.’
In (28), the matrix clause has the past (or perfective) form -ess, while the relative clause has a null-form tense -Ø. As the English translation indicates, the relative tense in (28) can be interpreted with respect to either speech time or a matrix-clause tense. In the case of the former, the null tense is interpreted as nonpast, whereas in the latter it is interpreted as past.

Second, observe the case of conjunctive clauses.

    J.-Nm home-Loc go in order to M.-Ac meet
    ‘John met Mary in order to go home.’

In (29), the event of John’s going home (E1) is interpreted as occurring after the event of meeting Mary (E2), as shown in (29i).

(29) i.

```
R (= E2)   E1

          meeting Mary   going home
```

ii.

```
R (= E2)   E1   S   E1

          (a)         (b)

PAST       PAST     NONPAST
```

However, the event of John’s going home can take place before or after speech time as in (29ii). In other words, (29ii) is appropriate for the situations described by (29iii).

(29) iii.a. John-i  eccey ohwu-ey    cip-ey ka-Ø-lyeko,
          J.-Nm       yesterday afternoon
          ocen-ey       Mary-lul manna-ss-ta.
          in the morning
    ‘In order to go home yesterday afternoon,
    John met Mary in the morning.’

b. John-i  nayil    cip-ey    ka-Ø-lyeko,
          J.-Nm      tomorrow   home-Loc    go-in order to
          eccey       Mary-lul    manna-ss-ta.
          yesterday  M.-Ac     meet
    ‘In order to go home tomorrow,
    John met Mary yesterday.’
The tense interpretations in the complex sentences in (28) and (29) are accounted for in both Reichenbachian and in my own approaches. However, in addition to the correct prediction of the ungrammaticality of various complex sentences, the theory I propose predicts the interpretation of the null tense in sentences like (28) and (29). Since I claim that -Ø is a pronominal, -Ø can receive its interpretation from an antecedent or it can refer freely. (That is, -Ø can be interpreted deictically.) In the former case, the null tense is interpreted with regard to matrix tense, and in the latter case, with regard to speech time.

It is important to notice that the lexical meaning of the conjunctive suffix constrains the possible interpretation of the null tense. That is, in (26) the temporal conjunctive suffix -(e)se ‘and then’ requires the first-clause event to take place before the second-clause event. In (27) the suffix -(u)myense ‘while’ requires the two events to overlap. This is schematized in (i) and (ii) below. Unlike relative clauses, neither construction allows -Ø to have the deictic nonpast interpretation. (For details, see Chapter 4.)

(i)  
\[
\begin{array}{c|c|c|c}
E1 & E2 & S \\
\hline
-Ø & -ess \\
Past & Past \\
\end{array}
\]

(ii)  
\[
\begin{array}{c|c|c|c}
-Ø (Past) & S \\
E1 & E2 \\
\hline
-ess (Past) \\
\end{array}
\]

1.5 Typological characteristics

1.5.1 Syntactic structure

In this and following subsections, I will give a brief overview of the typological characteristics of Korean that are relevant to the present study. Korean is a typical Subject–Object–Verb (SOV) language. While nominal elements are relatively free in order, the verbal expression always comes at the end of a clause, whether the clause is a matrix one or an embedded one. All kinds of modifying elements, whether adjectival, adverbial, conjunctive, or quotative, must precede the element they
modify. Thus, for example, a time adverbial always precedes the verb it modifies, and a conjunctive clause always precedes its matrix clause. Thus, Korean is a typical left-branching or head-final language.

Furthermore, Korean is a typical agglutinative language. Thus, in Korean, words are formed agglutinatively by suffixing clear-cut meaningful units one after another to a stem. For example, as was observed in Martin’s (1963) morphological analysis given in 1.2.1, various grammatical categories, such as subject and hearer honorifics, tense, aspect, modal, mood, and sentence types, follow the verb stem in the form of verbal inflectional suffixes. Two or more clauses in various complex sentences, including conjunctive and relative constructions, can be combined with each other by means of many kinds of verbal suffixes. For instance, a conjunctive clause is related to its matrix clause by attaching a conjunctive suffix to the verb of the former clause, as has been observed thus far.

Korean may be called a discourse-oriented language, in that discourse contexts and speech situations frequently play a major role (cf. Sohn 1994). For example, the notion of topic is as important as the notion of subject, and any major constituent of a sentence, such as the subject, object, adjunct, adverbial, or predicate, may be freely omitted, if recoverable from the discourse or situation.

Since complex sentences are the main concern of the present study, their classification is in order. There are five main types of embedded clause in complex sentences: (a) conjunctive clauses, which include both coordinate and subordinate constructions, (b) adnominal clauses, which include both relative and noun complement types, (c) verbal complement clauses, (d) quotative clauses, and (e) nominal or nominalized clauses.

1.5.2 Sequence of tenses
One of the most noteworthy tense-related characteristics of Korean is its total lack of tense agreement in complex sentences. The notion of tense agreement is treated in Ross (1967: 333) in feature changing rules, as shown in (30a, b), which are exemplified by (31a, b), respectively.

\[
\begin{align*}
(30) & \quad \text{(a)} \quad X - [+V \ @\text{Tense}] - Y - [+V] - Z \\
& \quad \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \rightarrow \\
& \quad \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad [@\text{Tense}]
\end{align*}
\]
b. \( X - [+V] - Y - [+V \ @Tense] - Z \)
\[
\begin{array}{cccccc}
1 & 2 & 3 & 4 & 5 & \rightarrow \\
1 & 2 & 3 & 4 & 5 & \\
@Tense
\end{array}
\]

(31)  
\( a. \) I believed that the sun was out.  
\( b. \) That the sun was out was obvious.

Thus, for instance, when a matrix verb has a past tense, the pastness is morphologically copied into a complement present (cf. Comrie 1985: 104–107; Noonan 1985). Furthermore, depending on the kind of matrix verb, certain sentences require the verbal-complement tense to agree with the matrix-verb tense, as in (32a), while certain other sentences do not have this requirement, as in (32b).

(32)  
\( a. \) Yesterday, John managed to open the door.  
\( b. \) John promised to leave yesterday.

The total lack of tense agreement in Korean may be due to the SOV word order and discourse-orientedness of Korean. According to Kuno (1978: 104), Japanese, which is very much like Korean, shows a typological characteristic whereby the tense referred to by an embedded-clause verb does not always agree with the tense reference of the main-clause verb. In Korean, however, I will claim that there is no case where tense agreement holds. This typological property is particularly significant in the present study, because of its having direct bearing on the R-expression interpretation of -ess and the pronominal interpretation of the null-form tense.

Compare the sentences in (33) and (34)—the Korean counterparts of Kuno’s (1973: 261) Japanese examples—with the corresponding English translations. Notice the presence in English and the absence in Korean of tense agreement.

(33)  
\( a. \) John-un [pro chayk-ul ssu-ko iss-Ø-ta]-ko malhay-ss-ta.  
\( J.-\text{Top} \quad \text{book-Ac write-Comp be Quot} \quad \text{say-Past-Dec} \)
\( \text{‘John said that he was/is writing a book.’} \)

\( b. \) John-un [pro chayk-ul ssu-ko iss-ess-ta]-ko malhay-ss-ta.  
\( J.-\text{Top} \quad \text{book-Ac write-Comp be Quot} \quad \text{say-Past-Dec} \)
\( \text{‘John said that he had been writing a book.’} \)

(34)  
\( a. \) John-un [caki-ka popo-i-Ø-la]-ko malhay-ss-ta.  
\( J.-\text{Top} \quad \text{self-Nm fool-Cop-Ø-Dec-Quot} \quad \text{say-Past-Dec} \)
\( \text{‘John said that he was/is stupid.’} \)
   J.-Top self-Nm fool-Cop-ess-Dec-Quot say-Past-Dec
   'John said that he had been stupid.'

The interpretation of the embedded-clause tense in (33a) and (34a) is ambiguous between past and nonpast. No tense agreement is observed in all these Korea sentences. Examples (33b) and (34b) cannot be interpreted as (33a) and (34a). This indicates that, in complement-clause tenses in Korean, a null tense can be used to refer to the same time relation as the matrix-clause tense. The occurrence of -ess in the embedded clause in these sentences indicates that it names a relation different from that denoted by the null form. Namely, the embedded -ess indicates perfectivity, in that the embedded-clause event has to be completed before the matrix-clause event takes place. Thus, the embedded -ess and the matrix -ess in (33b) and (34b) have different functions. The embedded -ess denotes past perfect in relation to speech time in my analysis. Additional examples follow (cf. Kuno 1978: 104).

   J.-Top exam-Nm difficult-Nonpast-Dec-Comp fact-Ac
   a-Ø-n-ta.
   know-Nonpast-Ind-Dec
   'John knows that the exam is/will be difficult.'

   al-ass-ta.
   know-Past-Dec
   'John knew that the exam was/is difficult.'

   'John knew that the exam had been difficult.'

While the complement clause in (35a) has one interpretation, (35b) has two interpretations: 'John knew that the exam was difficult' and 'John knew that the exam is difficult'. On the former reading, the null tense names the same temporal relation as named in the matrix clause. In contrast, on the second reading, the matrix-clause tense is irrelevant for the interpretation of the complement-clause tense. In other words, on the second reading, the complement-clause tense is interpreted with respect to the speech time. Note further that in (35c) the form -ess in the complement clause encodes a time period prior to the time of the main-clause verb and hence it is past perfect with regard to the speech time.
Another noteworthy phenomenon of tense disagreement is that, in Korean, sentences with multiple verbs denoting the same time relation usually leave out all the overt tense markers except on the main verb, which falls in the last position of the sentence and at the highest position in the tree structure. Thus, for example, there is a class of temporal conjunctive suffixes in Korean that does not allow the overt tense marker -ess in the first conjunct at all. In such cases, the temporal conjunctive suffixes always reveal the temporal relation between the two events. As we have already seen in (26) and (27), which are repeated in (36) and (37), when conjunctive suffixes like -(e)se ‘and then’ or -(u)myense ‘while’ already impose a temporal ordering between the two events, any overt occurrence of -ess in embedded clauses is ungrammatical.

    J.-Top home-Loc go-Past-and then, M.-Ac meet-Past-Dec
    ‘John went home and then met Mary.’


    while
    ‘While John was going home, he met Mary.’


Some might suggest that the embedded clause in such cases simply deletes the overt form -ess. I will argue in Chapter 3, however, that the null tense must be base-generated, while arguing against the deletion analysis in view of the insurmountable problems involved therein.

Tense disagreement of the sort illustrated in (36) and (37) leads us to postulate Reichenbachian reference times in a way different from the practice in English. In the English gloss corresponding to (36), for example, the first-clause tense should function as a reference time (à la Reichenbach) or an implicit reference time or an antecedent (à la McCawley 1971: 111). In Korean, however, not only does the syntax of the first clause lack any overt tense marking, but the semantics as well do not permit any temporal interpretation unless the second clause with tense marking is expressed. That is, the interpretation of the first clause tense is crucially dependent upon the matrix tense in such complex sentences. Hence, unlike in English, postulation of the tense of the matrix (or immediately higher) clause as a reference time in complex sentences in Korean is justified.
The discussion so far indicates that the use of the null tense in complex sentences is not an accident, but rather is based on cogent syntactic and semantic evidence. In other words, instead of the rule of tense agreement, the Korean language systematically employs the null tense to indicate a temporal relation between clauses.

1.6 Scope of the study
The organization of the present monograph is as follows. Since preliminary remarks have been made in this chapter, I will elaborate the main themes in the subsequent chapters. In Chapter 2, I will discuss all the essential temporal categories that constitute an integral part of temporal expressions in Korean. The chapter is intended not only to present linguistic facts and phenomena and their typology, but to present my alternative proposals that are consistent with the overall claims made in this study. Furthermore, it will be shown how nontense categories interact with the tense category in the overall temporal expressions in Korean.

In Chapter 3, I will argue for the importance of tense indexing and binding. I will discuss a mechanism for interpreting coindexed tenses. A dual function of a null-form tense is suggested. A base-generated null tense in embedded clauses is better motivated than the more commonly employed deletion analysis. This chapter also explores some syntactic behavior of the null-form tense in conjunctive sentences, using an X-bar scheme and the Binding Theory.

In Chapter 4, I classify two types of conjunctive sentences according to their temporality features. I discuss how such subclasses are correlated with their respective syntactic behaviors. Subordinate and coordinate clauses show different patterns with regard to the interpretations of the null-form tense.

Chapter 5 focuses on tense in such nonconjunctive clauses as adjectival, verbal complement, and nominal constructions. It will be shown that the main proposals made in previous chapters also hold true for the other types of embedded constructions.

Chapter 6 summarizes the observations and findings made in the preceding chapters and suggests some significant theoretical implications. It also enumerates some unresolved issues and suggests some future directions for research.
Chapter 2
Temporal Categories in Korean

2.1 Overview
In this chapter, I shall discuss the grammatical categories that have bearing on temporal reference in Korean. Of primary interest among linguists dealing with Korean temporal expressions have been the morphological, syntactic, or semantic oppositions involving the so-called tense and aspect inflectional suffixes. In the temporal categories of Korean in a broad sense, however, I propose to include not only such tense and aspect suffixes as the past -ess, the perfect -ess, the pluperfect -ess-ess, and the null tense category -Ø, but also such temporal modality elements as the retrospective mood suffix -tel-ti, temporal conjunctive suffixes (e.g., -tolok ‘in order to’), and temporal adverbials (e.g., ecêy ‘yesterday’, cen-ey ‘before’, hwu-ey ‘after’). This chapter will conclude with a brief discussion of lexical (or phrasal) aspectual constructions, although these are not the main concern of this dissertation. An analysis that did not take these categories into account would lack descriptive adequacy, in that it would inevitably fail to provide an exhaustive description of the Korean tense and aspect system. As we will see, all these temporal categories interlock and coordinate with each other for temporal interpretations of sentences. The purposes of this chapter are thus threefold: (a) to present the typological characteristics of Korean temporal categories, (b) to attempt an integrated description of temporal interpretations in this and subsequent chapters, and (c) to delineate my alternative proposals regarding the explication of the temporal categories and their members.

Some brief elaboration of the syntactic structure underlying the above-mentioned temporal categories is in order. Except for adverbials and lexical aspects, all the temporal categories have inflectional suffixes as members. This is a reflection of the fact that Korean is a typical agglutinative language. As will be seen, even phrasal aspects and many of the adverbial constructions are composed of an inflectional suffix followed by an auxiliary verb or a nominal. The typical order of the inflectional category slots that I propose may be presented informally as in (1) (cf. Martin 1954, 1963, as discussed in 1.3.1). Notice that only the categories that are relevant to the present discussion will be further expanded,
with morphemic members given in parentheses. In (1), parenthesized inflectional categories are optional, while the others are obligatory. For instance, aspect is optional, while tense is obligatory in Korean.

(1) \begin{align*}
\text{VERB} & \rightarrow \text{STEM + INFLECTIONAL CATEGORIES} \\
\text{INFL. CAT.} & \rightarrow (\text{SUBJECT HONOR}) + (\text{ASPECT}) + \text{TENSE} + (\text{MODAL}) + (\text{ADDRESSEE HONOR}) + \text{MOOD} + \text{CLAUSE-ENDER} \\
\text{CLAUSE-ENDER} & \rightarrow \text{COMPLEMENTIZER} \text{ S-TYPE} \\
\text{COMPLEMENTIZER} & \rightarrow \text{Conjunctive } (-ese, \text{ etc.}) \\
& \text{Adverbial } (-key, -e, \text{ etc.}) \\
& \text{Adnominal } (-n, \text{ etc.}) \\
& \text{Nominal } (-ki, -um) \\
\text{ASPECT} & \rightarrow \text{Perfect } (-ess) \\
\text{TENSE} & \rightarrow \text{Past } (-ess, -\emptyset) \\
& \text{Nonpast } (-\emptyset) \\
\text{MODAL} & \rightarrow \text{Volitive } (-keyss) \\
& \text{Presumptive } (-keyss) \\
& \text{Predictive } (-u)l(i) \\
\text{MOOD} & \rightarrow \text{Indicative } -(n)un\-ni) \\
& \text{Retrospective } (tel\-ti) \\
& \text{Requestive } (-si, -\emptyset)
\end{align*}

The organization of this chapter is as follows. In 2.2, I will argue for the postulation of separate categories of tense and aspect, despite the fact that past and perfect are realized on the surface in the same suffix -ess. This proposal coincides with my claim that the double form -ess-ess is past perfect (or pluperfect). I will also argue for the postulation of a null form -\emptyset, which exhibits not only nonpast tense (present and future reference), but also past tense.

Section 2.3 will be devoted to the discussion of modality suffixes. In particular, it will be argued that the retrospective suffix has an inherent semantic feature of past time, as against the indicative and requestive mood suffixes that inherently contain a speech-time feature. Furthermore, the retrospective suffix has the function of setting a reference time preceding speech time, on the basis of which the propositional event time is oriented. The widely held view that the inflectional suf-
fixes -keyss and -ul(i) are future markers will be repudiated, in favor of the minority view that they are purely modal markers.

Section 2.4 will limit its discussion to the basic nature of Korean temporal conjunctive suffixes, introducing the [+temporal] feature. Their detailed syntactic description is the concern of chapters 3 and 4.

Section 2.5 will concern the various types of temporal adverbials. It will show that ambiguity in the temporal interpretation of a sentence is disambiguated by an adverbial, and that there is a rather strict agreement between a tense or aspect form and a temporal adverbial.

Finally, 2.6 will focus on a variety of semantically based lexical distinctions in aspect, which contrast with the inflectional aspect -ess.

2.2 Tense and aspect categories

It has often been claimed that Korean has only tense, and not aspect (e.g., Choi 1965), or alternatively that aspect is more essential than tense (e.g., Nahm 1978). Others have claimed that tense and aspect are inseparable as a single inflectional category (e.g., Suh 1976). C. Lee (1985), on the other hand, claims that whereas tense is obligatory, aspect is optional. Part of this disagreement arises from the loose usage of the terms. Since both tense and aspect have to do with the human conception of time, it is sometimes hard to separate the function of one from that of the other and to delineate the borderline between them. But the concepts are distinct from each other. Tense relates a given event time to speech time. (Lyons [1968] describes it as “location in time.”) Aspect, on the other hand, has to do with the “temporal distribution or contour of an action, event, or state of affairs” (Lyons 1968: 315), regardless of the speech time. In other words, tense names the relation between an event and speech time, but aspect does not name a particular relation such as past or nonpast.1 Rather, the latter is concerned with the “internal temporal constituency of the one situation” (Comrie 1976: 5).

Typically, tense is classified according to three temporal perspectives—past, present, and future. In the case of Korean, however, there is sufficient reason to believe that there are only two tenses, past and nonpast, as will be discussed shortly. Aspect is usually classified according to two perspectives—imperfective and perfective. These reflect how the speaker conceives of an action or state of affairs with respect to its course. When speakers view a situation as a whole, without distinguishing the various separate phases that make up that situation (Comrie
1976: 16), they can employ perfective aspect. But if speakers focus on
the internal structure of the situation, they are likely to choose imper-
fective aspect. Under the imperfective aspect, there might be various
aspectual distinctions, such as inchoative, iterative, habitual, punctual,
durative, and so on. However, in Korean these distinctions do not corre-
spend to separate inflectional categories, but are expressed by means of
special auxiliaries, such as -ki sicakha- 'to begin' (inchoative), -hay
tay- 'to repeat' (iterative), and -kon ha- 'used to' (habitual). I distinguis-
hish the notion of aspect from the aspectual features of verbs in the
present study. For instance, Gim (1985) claims that aspect is determined
through the interaction of the semantic features of verbs and extralinguistic elements. Yet, I will not consider this lexical sense of
aspect here. I will be mainly concerned with two types of aspect, inflec-
tional (i.e., -ess) and phrasal, and will discuss the former in the follow-
ing section, while taking up the latter in 2.6.

2.2.1 Past and perfect form -ess
Common descriptions of -ess treat it as a past marker or as a perfective
marker. Thus, most scholars who have considered -ess as a past marker
have claimed that tense, but not the aspect category, is needed for an
adequate account of Korean. On the other hand, those who regard -ess
as a marker of perfective rather than past tense have denied the exist-
ence of any tense category. Previous studies of -ess can be divided into
at least three different approaches. The first approach considers -ess to
be perfective aspect, and not past tense (e.g., Na 1971, Huh 1987, Nahm
1978). For instance, according to Na (1971), who treats the tense sys-
tem of Korean as a three-way division of modality–aspect–tense, -ess
refers to perfective aspect, whereas its covert form -Ø represents pro-
gressive aspect. This view is further supported by authors like Nahm
(1978) and Huh (1981, 1987). The second approach which has been
accepted by most traditional Korean grammarians (e.g., Choi 1965, Gim
1980a/b, 1985), maintains that -ess marks past tense, and not perfect-
ive. The third approach (e.g., Suh 1976, S. Kim 1974) claims that the
suffix -ess simultaneously represents tense and aspect, and thus sug-
gests a single category term "tense-aspect" to cover the dual function.
Suh (1976), for example, claims that -ess has both tense and aspect
features, suggesting seventeen meanings of -ess.

This thesis takes the position that the primary function of -ess is to
name a past relation. This suffix is a grammatical marker on the predi-
cate that distinguishes a past relation from a nonpast relation. The tense
system in Korean exhibits a two-way division, namely, past and nonpast. The past tense names the relation in which the event precedes speech time and the nonpast tense names the relation in which the event either follows or is simultaneous with speech time. Therefore, in this view, tense can have only two values—past and nonpast—with the nonpast tense including future as well as present times. While the past tense is represented by the overt form -ess or by -Ø, nonpastness is expressed only by means of the null form.

Example (2) is a minimal pair that illustrates tense contrasts in Korean. The differences between (2a) and (2b) reflect the distinction between a nonpast and a past relation. This is clear from the cooccurrence relations between temporal adverbials and the tense marker in a verb.

(2) a. Ku-ka chayk-ul ilk-ko iss-Ø-ta. 
    he-Nm book-Ac read-Comp be-Nonpast-Dec 
    ‘He is reading a book.’

\[
\begin{array}{cccc}
    & S & E & \\
    & & & \\
    -Ø & & \\
    \text{Nonpast} & & \\
\end{array}
\]

   Past

‘He was reading a book.’

\[
\begin{array}{cccc}
    & E & S & \\
    & & & \\
    -ess & & & \\
    \text{Past} & & & \\
\end{array}
\]

    yesterday/five minutes ago 
    ‘He is reading a book yesterday/five minutes ago.’

    yesterday/five minutes ago Past 
    ‘He was reading a book yesterday/five minutes ago.’

    J.-Top now leave-Comp be-Dec 
    ‘John is leaving now.’

   ‘John was leaving now.’
The unacceptability of (3a) and acceptability of (3b) indicates that the past-time adverbs, such as ‘yesterday’ and ‘five minutes ago’, are compatible with a predicate marked by -ess, but not with a predicate without -ess. The reverse situation holds with the examples in (4). All these indicate that -ess names the past relation.

Even though the past function of -ess is predominant in most cases, -ess also functions as a marker of perfective aspect. First, consider the minimal pairs in (5) and (6) that illustrate the contrast between perfectivity and imperfectivity. The differences in meaning between (5a) and (5b) on the one hand, and (6a) and (6b) on the other, are related to the distinction between perfective and imperfective rather than the distinction between past and nonpast. In other words, the verb in the bracketed clause refers to an uncompleted event in (5a) and (6a), but to a completed event in (5b) and (6b), although the time reference of both is in the past.

(5)  
       flowers-Nm bloom-Trans fade-Past-Dec 
       ‘The flowers died while they were still blooming.’

       Perf Past 
       ‘The flowers bloomed and died.’

(6)  
   a. [e ip-te-n] os-ul pes-ess-ta. 
       wear-Ret-Rel clothes-Ac take off-Past-Dec 
       ‘I took off the clothes that I started putting on.’

       ‘I took off the clothes that I was already wearing.’

Second, -ess cooccurs with adverbials indicating present time. That is, in Reichenbachian terms, the reference time is present and the event time is past, hence the temporal interpretation of present perfect, as observed in (7) and (8).

(7)  
   Icey cip-ey ta wa-ss-ta. 
   now home-Loc almost come-Perf-Dec 
   ‘We are almost home now.’

(8)  
   SUNI-ka cikum mak ttena-ss-ta. 
   S.-Nm now just leave-Perf-Dec 
   ‘Suni has left just now.’
Third, -ess is even compatible with adverbials indicating future time in some limited types of construction.

(9) [Naynyen-ey Seoul-ey ka-ss-ul ttay],
next year S.-Loc go-Perf-Adn time
Kim-ul manna-l kes-i-ta.
K.-Ac meet-Adn fact-Cop-Dec
‘Next year when I go to Seoul, I will meet Kim.’

(10) Nayil/ittaka ne-nun honna-ss-ta.
tomorrow/later you-Top be in trouble-Perf-Dec
‘You will be in trouble tomorrow/later.’

If -ess is a suffix that marks only past tense, we would not be able to account for the fact that in (9) and (10), future time adverbs can occur with -ess.

Fourth, in most cases, the form -ess is ambiguous between perfective and past functions. This ambivalence is disambiguated by means of a temporal adverbial indicating the reference time, semantic features of the verbs involved, or a variety of discoursal or pragmatic information. Thus, in (11), time adverbs decide the function of -ess.

(11) a. Suni-ka cikum mak tochakhay-ss-ta.
S.-Nm now just arrive
‘Suni has just now arrived.’

b. Suni-ka ecey tochakhay-ss-ta.
yesterday
‘Suni arrived yesterday.’

c. Suni-ka seysi-ey tochakhay-ss-ta.
3 o’clock
‘Suni arrived at 3 o’clock.’

What decides the interpretation between pastness and perfectivity in the ambivalent -ess is the occurrence of a specific time adverb. That is, in (11a), the sentence has the perfective meaning because of the present time adverb cikum mak ‘just now’. In (11b), due to the past time adverb ecey ‘yesterday’, the sentence has a past meaning. And in (11c), the time adverb seysi-ey ‘at three’ cannot refer to the present moment, and hence the sentence has only a past reading. For the disambiguating function of verbs, see Nahm (1978), among other works.

The examples so far support the claim that the morpheme -ess has two functions, past and perfective. Now the question that has been posed
is whether the two functions constitute one category, such as tense-aspect, or two separate categories, one tense and the other aspect. The former proposal is based essentially on the semantic closeness and formal identity of the two morphemes. In view of the syntactic and semantic properties of the double form -ess-ess and the null-form tense, as well as the coindexability only in tense, I will postulate two different categories in 2.2.2 and 2.2.3. Furthermore, I will propose that in sequential order, the optional aspect category precedes the obligatory tense category, as alluded to in (1) earlier.

2.2.2 Pluperfect form -ess-ess
In addition to the single form -ess, Korean sentences allow the occurrence of the double form -ess-ess, which has usually been called a past-past (e.g., Martin 1954) or a past-perfective (e.g., Choi 1965) marker. In particular, previous studies of the double form have focused on its meaning difference with respect to the single form. There are, by and large, three different definitions given to the double form.

(i) ceasing or discontinuous
(ii) past in the past
(iii) past perfective

I will discuss these one by one, arguing for the third definition, but showing that the second definition is in fact a proper subset of the third.

The definition of -ess-ess in terms of “ceasing” or “discontinuity” has been proposed by Nahm (1978) and C. Lee (1985). Nahm considers the double form a separate morpheme distinct from -ess, claiming that the former is a “discontinuous” aspect marker, whereas -ess is a perfective marker. Similarly, C. Lee maintains that the double form means that there was an event in the past and that the event, or the result of the event, discontinued at some time between the event time and speech time. Lee proposes that the single form means that some event occurred in the past and pragmatically implies that the result of the event continues until the speech time. Lee presents the diagram in (12) to demonstrate the contrast between -ess and its doubled form.

    I.-Nm U.S.-Loc go-Past-Dec
    ‘Insu went to the United States.’

    \[
    \begin{array}{c}
    \text{E} \\
    \{\text{Resulting State}\}
    \end{array}
    \]}
b. Insu-ka mikwuk-ey ka-ss-ess-ta.
   ‘Insu had gone to the United States.’

   \[\text{Resulting State}\]

   In terms of truth conditions, Lee asserts, the single form -ess can replace the double form, but the reverse brings about a meaning change, in that “the implicated meaning of the continued result state is sacrificed by the truth-conditional meaning of discontinuity.” Let us take up some more examples below to observe the meaning distinction that exists between -ess and its doubled form.

   that person-Nm die
   ‘That person has been dead.’

   ‘That person had been dead (but he may be alive now).’

(14) a. Suni-ka cip-ey ka-ss-ta.
   S.-Nm home-Loc go
   ‘Suni went/has gone home.’

b. Suni-ka cip-ey ka-ss-ess-ta.
   ‘Suni had been home.’

   I-Top ten-years ago U.S.-Loc come-Past-Dec
   ‘I came to the United States ten years ago.’

   I-Top ten-years ago U.S.-Loc come
   ‘I have the experience of coming to the United States ten years ago.’

The entailment of (13a) differs from that of (13b), since the former indicates that the person is dead, while the latter implies that the person is most likely alive now. Similarly, in (14a) Suni’s going home takes place in the past, with the presupposition that Suni is not present at the place where the speech act is being performed. In contrast, (14b) has the implication that Suni had gone home, and she may have already come back (so, she may be at the speaker’s place at speech time). Sentence (15a), from C. Lee (1985), shows a contrast with (15b), the former
indicating the resulting state of the past event continuing until speech
time, and the latter the sense of ‘ceasing’ or ‘suspension’. ⁴

In view of the ceasing function, according to Lee, the double form
causes ungrammaticality in examples like (16) (from C. Lee 1985).

(16) *?Na-nun nay anay-lul o-nyen cen-pwuthe
     I-Top my wife-Ac 5-years ago-since
cikum-kkaci kyeysokhayse salanghay-ss-ess-ta.
     now-until continuously love
     ‘I used to love my wife continuously from five years ago until now.’

Lee claims that the double form cannot occur with cikum-kkaci
kyeysokhayse ‘continuously until now’ because of its ‘ceasing’ sense.
Because the sense of ceasing or suspension is the distinct feature of
-ess-ess, Lee argues, a sentence like (17) is unacceptable. That is, the
double form occurring in (17) serves as a counterexample to the ‘past in
the past’ definition.

(17) ??Suni-ka Seoul yek-ey tochakhay-ss-ul ttay
     S.-Nm S. station-Loc arrive-ss-Adn time
     kicha-nun ttena-ss-ess-ta.
     train-Top leave
     ‘When Suni arrived at Seoul station, the train had left.’

Although it is true that (17) sounds slightly unnatural as it stands, it
becomes perfectly natural, if a past time adverb such as imi ‘already’ is
provided. With such an adverb explicitly specified, -ess-ess denotes past
in the past, in that the matrix-clause event definitely occurs in the past
time that precedes the embedded-clause event.

(17') Suni-ka Seoul yek-ey tochakhay-ss-ul ttay
     S.-Nm S. station-Loc arrive
     kicha-nun imi ttena-ss-ess-ta.
     train-Top already leave
     ‘When Suni arrived at Seoul station, the train had already left.’

Thus, Lee’s criticism of the ‘past in the past’ is not particularly war-
ranted. Furthermore, treating -ess-ess as if it had little morphological or
semantic relation with -ess is counterintuitive, let alone being descript-
ively unsatisfactory. I will argued later that the ‘ceasing’ sense derived
from the second -ess, which always names the past relation, provides a
reference time and thereby insulates the event from current relevance.

Next, let us consider the second claim, namely, that the suffix -ess-
ess denotes past in the past. This definition has been proposed by Mar-
tin (1954), Huh (1987), and Gim (1985). Martin (1954: 35), for example, treats the double form as the past-past marker, defining it as “more remote or more definitely complete than that of past -ess.”

While C. Lee (1985) and Nahm (1978) treat the double form as a separate morpheme unrelated to -ess, Gim’s (1985) position is that the double form is a reduplication of the single form -ess, in that both refer to a past relationship. Consider Gim’s (1980a) example in (18). Regarding the double form -ess-ess in the matrix clause, Gim claims that the second -ess refers to a time prior to the speech time and the first -ess denotes a time prior to the time in which the second -ess refers to. In other words, the time designated by -ess-ess in his analysis can be diagrammed as in (19).

(18) Nay-ka ku-lul manna-ss-ul ttay, ku-nun koki-lul
    I-Nm him-Ac meet-ss-Adn time he-Top fish-Ac
    han mali-lul cap-ess-ess-ta.
    one Cl-Ac catch
    ‘When I met him, he had caught one fish.’

(19) \begin{equation*}
\begin{array}{lll}
E & R & S \\
\hline
-ess & -ess \\
\end{array}
\end{equation*}
\text{ (aspect) (tense)}

Observing that the meaning denoted by -ess-ess is in fact the same as the discontinuity sense discussed above, Gim concludes that we do not have to set up two different morphemes, -ess and -ess-ess.

This second definition of the double form, the ‘past in the past’ sense, however, is not sufficient to explain perfectiveness denoted by -ess-ess, as illustrated in (20).

(20) a. John-i ku ttay mak tochakhay-ss-ess-ta
    J.-Nm that time just arrive
    ‘John had just arrived at that time.’

    this flower-Nm last year-in die
    ‘This flower was dead last year (but it is alive now).’
    ‘This flower died last year.’

The sentences in (20) indicate that the event is just completed at the time denoted by the past time adverb \textit{ku ttay} ‘at that time’ or \textit{caknyen-ey} ‘last year’.
This leads us to the third definition of -ess-ess, namely, past perfective. Choi (1965: 441–442) considers the double form to be past perfective. In a similar way, Na (1971: 100–101) considers the first -ess to mark perfective aspect and the second -ess to mark past tense. The treatment of -ess-ess as past perfective is based on a consideration of the aspectual feature of -ess. As indicated earlier, -ess marks both pastness and perfectivity.

In more or less the same vein as the second and third definitions, I propose that -ess-ess is pluperfect. I use this term with the intention that it should encompass both the notions of past in the past and past perfective that we have dwelled on thus far in the second and third definitions of -ess-ess. Comrie says of the pluperfect that “there is a reference point in the past, and ... the situation in question is located prior to that reference point” (1985: 65). This past-in-past definition is more or less what I mean by pluperfect, provided that “the situation in question” includes a perfective situation as well as a past situation. Thus, in the first place, the double form names the relation in which an event E precedes a time that precedes the speech time. In addition, it also describes a phenomenon in which one event has been completed sometime before the speech time. This is shown in (21), where the time of E1a or E1b in relation to E2 is represented essentially by the double form -ess-ess.

(21) E1a R (= E2) S
    |     |     |
    E1b  ->

(E1 = aspect, E2 = past tense)

At this point, there are several important points incidental to my proposal that need to be clarified. First, the time of E2 in (21) corresponds to the second -ess in the double form, which functions as a reference time for E1. One may naturally ask how we know that the first -ess is not the reference time. My argument is, first of all, the putatively universal order of aspect + tense, rather than of tense + aspect. According to Lyons (1977a: 705), aspect is ontogenetically more basic than tense, in that children whose native language has both come to master the former more quickly than the latter. Also, Matthews (1974: 146) notes that in Ancient Greek, which has both tense and aspect as inflectional categories, tense is relatively at the periphery of the word-form, whereas aspect is the most central of the inflectional categories of a verb.\(^5\)
Second, Korean inflectional suffixes are ordered in such a way that the later a suffix comes, the wider is its semantic scope, as has been proposed in the generative semantic approach (1.2.2). This means that if two temporal suffixes occur in sequence, the latter one functions as a reference time for the former. For example, in John-i wa-ss-te-la ‘I saw that John had come’, the past tense -ass has the retrospective mood suffix -te ‘I saw’ as its reference time.

Another piece of evidence that aspect precedes tense is provided by the constructions involving lexical aspect to be discussed in 2.6. In these constructions, as illustrated in the progressive phrase ca-ko iss-ess-ta ‘was sleeping’, aspect (progressive -ko iss- in this example) necessarily precedes tense (past -ess in this example).

Another noteworthy fact is that the second -ess that functions as a reference time invariably marks past tense, and never perfective. Thus, the notion of double perfectiveness is not linguistically encoded in Korean. The invariable pastness was amply observed in the discontinuity function of -ess-ess. That is, due to the presence of a past reference time indicated by the second -ess, the event time is insulated from the speech time. Hence, the ceasing sense is pragmatically derived. If the event time has current relevance, there is no reason to insert an unnecessary past-tense suffix as an unspecified reference time. Thus, the second -ess of the double form serves as a temporal insulation device, so to speak, hence we obtain the ceasing, discontinuity, or even past experience sense as a pragmatic consequence.

The existence of the invariable pastness sense is also observed in the fact that the double form -ess-ess does not occur with a future time adverb, such as nayil ‘tomorrow’ or naynyen ‘next year’, or a current time adverb, such as mak ‘just now’, while the single -ess allows it.

(22) Naynyen-ey Seoul-ey ka-ss/*ss-ess-ul ttay,
next year S.-Loc go-Perf-Adn time
Kim-ul manna-l kes-i-ta.
K.-Ac meet-Adn thing-Cop-Dec
‘Next year when I go to Seoul, I will meet Kim.’

(23) Nayil/ittaka ne-nun honna-ss/*ss-ess-ta.
tomorrow/later you-Top be in trouble-Perf-Dec
‘You will be in trouble tomorrow/later.’

(24) Icey cip-ey ta wa-ss/*ss-ess-ta.
now home-Loc almost come-Perf-Dec
‘We are now almost at home.’
    J.-Nm now just leave-Perf-Dec
    ‘Suni has left just now.’

(26) Nayil Suni-lul mannapo-ass/*ass-ess-ca,
    tomorrow S.-Ac meet-Perf-although
    soyong-i eps-ta.
    use-Nm not-Dec
    ‘It is useless to meet Suni tomorrow.’

While the two forms are not replaceable in the future event because of the invariable pastness in -ess-ess, they are naturally replaceable in the past event, as illustrated in (27) and (28).

    he-Nm yesterday mango-Ac eat-Perf-Past-Dec/eat-Past-Dec
    ‘He had eaten/ate a mango yesterday.’

(28) Kucekkey Suni-lul mannapo-ass-ess/ass-ciman,
    day before yesterday S.-Ac meet-Perf-Past-but
    soyong-i eps-ess-ta.
    use-Nom not-Past-Dec
    ‘Although I met Suni the day before yesterday, it was useless.’

Furthermore, I regard the first -ess of the double form as indicating perfective aspect. (Cf. the relationship between E1a or E1b and E2 in [21].) It is widely held (e.g., Soga 1983: vii) that tense is a matter of relative time points, such as past and nonpast, whereas aspect is a matter of either subjective ways of looking at an event, such as perfective, imperfective, durative, and punctual, or objective developmental stages of an event, such as inceptive, progressive, and resultative. When speakers use -ess-ess, they intend not to mark two past tenses per se, but to indicate a subjective way of expressing that the event in question is more remote than, or completed by, a certain specified or unspecified past reference time. Thus, for example, compare the two sentences in (29), where both convey the meaning that the event took place ten years ago. However, in (29a) the speaker objectively describes the occurrence of the event at a past time, whereas in (29b) the speaker conveys a subjective view that the event that took place in the past has no current relevance. This is accomplished by setting up a past reference time by means of the second -ess as an insulating device and making the past event perfective with regard to the reference time.
(29) a. Sipnyen cen-ey i kos-ey wa-ss-ta.
   ten years ago this place-Loc come-Past-Dec
   ‘I came here ten years ago.’

   b. Sipnyen cen-ey i kos-ey wa-ss-ess-ta.
   ‘I once came here ten years ago.’

All the previous examples with -ess-ess can be interpreted in the same light. For example, in (17'), repeated below, the second -ess in the matrix clause marks the past tense, which is the same as the embedded-clause tense. The first -ess of the -ess-ess denotes perfectiveness.

(17') Suni-ka Seoul yek-ey tochakhay-ss-ul ttay
   S.-Nm S. station-Loc arrive-Perf-Adn time
   kicha-nun imi ttena-ss-ess-ta.
   train-Top already leave-Past-Perf-Dec

   When Suni arrived at Seoul station, the train had already left.

The approach proposed here is somewhat parallel to calling the English construction had + past participle a past perfect, regardless of the past-past sense or past perfective sense that it may have.

2.2.3 Unmarked tense form -Ø

I have argued thus far that Korean has a perfective-aspect marker -ess, a past-tense marker -ess, and a pluperfect (past perfect) marker -ess-ess, and that the aspect category precedes the tense category, proposing, without argument, that the aspect category is optional, while the tense category is obligatory. I will argue in this subsection that the aspect category consists only of the perfective -ess, without a default counterpart that would be imperfective aspect, and that the tense category is composed of the overt -ess and the null form -Ø. If this is true, it follows that the aspect category is optional, while the tense category is obligatory. The natural corollary is that a marker for aspect cannot occur without one for tense.

In Korean, there does not seem to be any cogent reason to postulate an aspectual subcategory of imperfective alongside the perfective. (For the opposite view in favor of both perfective and imperfective categories, see Gim 1985). First of all, lack of the perfective suffix always and uniquely signals imperfectiveness. Second, the notion of imperfectiveness is semantically almost empty in Korean. It does not exactly signal progressivity, nor exactly inceptivity, habituality, or durativity, but simply lack of perfectiveness, in other words, simply nonperfectiveness. Third, it does not play any linguistic role significant enough to warrant
its existence as a linguistic subcategory. Thus, it follows that the notion of imperfectiveness is linguistically insignificant in Korean and should be dispensed with for simplicity.

One may argue against my claim that imperfectiveness in Korean is nearly contentless, by saying that it does in fact indicate progressivity, and that this aspect is represented by the covert form -Ø. One may present sentences like (30), where a perfective sentence appears to contrast with a progressive sentence.

   J.-Nm now   arrive-Perf-Nonpast-Dec
   ‘John has just arrived.’

b. John-i cikum tochakha-Ø-n-ta.
   J.-Nm now   arrive-Nonpast-Ind-Dec
   ‘John arrives/is arriving now.’

Indeed, sentence (30b) appears to contain a marginal degree of progressivity, as indicated by the English translation. However, the real English sense of progressivity is expressed by a phrasal construction (-ko iss-ta), which we will discuss in 2.6. If the counterpart of the perfective aspect is progressive aspect and thus the aspect category is also obligatory, then there should be a past progressive represented by the sequence -Ø (progressive) -ess (past). This is not the case, however. In Korean, all surface occurrences of -ess are associated only with simple past or perfective, but never with past progressive.

One may also claim that imperfectiveness is semantically rather conspicuous in certain types of constructions, such as in the so-called transferentive sentences. For example, observe the contrast (31a) and (31b).

   J.-Nm school-Loc   go-Perf-Ø-Trans come-Past-Dec
   ‘John went to school, and then came back.’

   ‘John was going to school but came back.’

In contrast with (31a), where distinct perfectiveness is expressed, John’s action of going to school in (31b) was not completed before he came back, thus showing rather clear imperfectiveness. Even here, however, it is simply the lack of the perfective -ess that leads to the interpretation of an incompletely action. Besides, the embedded -ess in -taka constructions is incompatible with a matrix clause whose meaning does not allow a completed event in the embedded clause. Consider (32).
    TV-Ac watch-Trans stereo-Ac turn on-Past-Dec
    ‘I was watching TV when I turned on the stereo.’

In (32), the second-clause event must occur in the middle of the first-clause event. The presence of -ess in the embedded clause is ungrammatical since the perfective function of -ess is in conflict with the interruption sense. This indicates that the nature of the verbs involved is responsible for the appearance of some instances of a clear imperfective sense. Thus, this does not support the claim that imperfective aspect is a significant inflectional subcategory in Korean. All in all, the postulation of the imperfective aspect is not warranted in Korean syntax.

The situation is quite different in the case of the tense category. As stated earlier, Korean has past and nonpast, -ess indicating past tense and the null form -Ø indicating nonpast tense. Although it is true that, in general, the meaning of a covert category indicates the absence of a certain property that the corresponding marked category has (cf. Jakobson 1957: 136), the null-form tense in Korean performs many more syntactic and semantic functions than the overt form -ess does. For one thing, the null form expresses not only present and future event times, but timeless or generic phenomena. As a result, the null tense may occur with a wide variety of temporal adverbials. Thus, its semantic range is much wider than that of the overt tense -ess covers. Second, its syntactic behavior varies, which is one of the main concerns of this dissertation. In particular, as we will discuss in great detail in the subsequent chapters, the -Ø tense in embedded clauses has two functions, deictic and anaphoric. By “deictic,” I mean that -Ø receives its nonpast interpretation with respect to speech time. By “anaphoric,” I mean that -Ø receives its temporal interpretation from an antecedent (a reference time) present in the sentence. Furthermore, the majority of conjunctive suffixes and other complementizers (such as verbal complement clause-enders) will allow only the null-form tense -Ø.

In (33), observe the variety of functions that the null-form tense (represented by -Ø) performs.

    art-Top long-Nonpast-and life-Top short-Nonpast-Dec
    ‘Art is long, life is short.’ [generic]

b. John-i ceki o-Ø-n-ta.
    J.-Nm there come-Nonpast-Ind-Dec
    ‘There comes John.’ [present]
c. John-i nayil o-Ø-n-ta.
   J.-Nm tomorrow come-Nonpast-Ind-Dec
   ‘John will come/is coming tomorrow.’
   [future]

   J.-Top M.-Nm cry-Past-Adn fact-Ac see-Past-Dec
   ‘John saw Mary crying.’
   [past]

e. Ku-ka mango-lul mek-Ø-keyss-te-la.
   he-Nm mango-Ac eat-(Non)past-Conject-Ret-Dec
   ‘I thought that he would eat mangos.’
   [future; past]

   J.-Nm school-Loc go-Perf-Past-Trans come-Past-Dec
   ‘John went to school, and then came back.’
   [past in conj. clause]

   J.-Nm mango-Ac eat-Past-Comp try-Past-Dec
   ‘John tried mangos.’
   [past in compl. clause]

h. Ne-nun nayil cwuk-ess-Ø-ta.
   you-Top tomorrow die-Perf-Nonpast-Dec
   ‘You will have died tomorrow.’ (literally)
   (or ‘You will be in big trouble tomorrow.’)
   [future]

Since the discussion of the various functions of -Ø illustrated here is one of the primary concerns of the subsequent chapters, it should not detain us here. Let me simply summarize what I have discussed in this and two previous subsections in the following paragraph.

The inflectional categories of Korean verbs contain seven sequential suffix slots, of which the second is occupied by the aspect category and the third by the tense category. The aspect category has a single member, namely, the perfective aspect represented by the suffix -ess, whose occurrence is optional. The tense category has two disjunctive members, past and nonpast, one of which must occur. Past tense is represented by either -ess or the null tense suffix -Ø. In the latter case, -Ø is coreferential with a matrix past tense, as we will see later. When both aspect and tense occur, two things happen: (a) perfective + past = pluperfect (i.e., past perfective), and (b) perfective + nonpast = nonpast perfective (i.e., present perfective and future perfective). All this can be schematized as in (34).
(34) a. Inflectional Categories
   / \
  ... (Aspect) Tense ...
  |   |
Perfective  Past
Nonpast

b. Past = -ess, -Ø
Nonpast = -Ø
Pluperfect (past perfective) = -ess-ess, -ess-Ø
Nonpast (present/future) perfective = -ess-Ø

As will be discussed in Chapter 5, the overt suffix -ess manifests some irregularity in its morphological shape when it occurs in the adjectival (or adnominal or relative) clause-ender.

2.3 Modality categories
As briefly sketched in 1.2.1, Martin (1954, 1963) assigns four of the seven inflectional slots to tense and aspect, as follows: II. past tense (-ess), III. past tense (-ess), IVa. future tense (-keyss), IVb. prospective aspect (-ul), and VI. indicative, subjunctive, retrospective, and processive aspects. In the preceding sections, I have argued that Korean has only past and nonpast, which disjunctively fill Martin’s slot III, and that Martin’s II is an aspect category slot filled by the perfective suffix -ess. The present section concerns Martin’s IVa, IVb, and VI. In particular, Martin’s retrospective aspect will be treated as a mood with an inherent pastness feature (in 2.3.1), whereas Martin’s future tense and prospective aspect will be viewed as modals (in 2.3.2).

2.3.1 Retrospective mood suffix
The so-called retrospective suffix -te (and its allomorph -ti) has been controversial as to its grammatical and semantic status. Some authors call it retrospective tense (e.g., Choi 1965: 348; Na 1971), some others consider it aspect, as Martin (1954: 37) does, and still others associate it with mood (e.g., Huh 1987; I. Yang 1972: 4) or manner (e.g., S. Chang 1973: 40). As these different terminological proposals imply, the suffix -te cuts across the definitions of mood, tense, and aspect, in that it not only expresses the past time and the speaker’s perception, but also the speaker’s subjective way of looking at an event (cf., Sohn 1975, 1986: 137–153). From a generative semantic approach, Sohn (1986) recognizes three semantic units in -te: PAST, REPORTER, and PERCEIVE. In what follows, I will review these three functions with regard to the
tense and aspect categories that I have proposed, with particular focus
on the pastness feature. In view of the inherent semantic features of the
suffix that contain the REPORTER’s PERCEIVING of an event in the PAST,
as well as its sharing the same slot with such other mood categories as
indicative, I would like to regard the retrospective suffix as a mood.

First of all, the past function of -te has been recognized by many
other scholars (e.g., Choi 1965, Huh 1987, Na 1971). However, as Sohn
correctly points out, -te is not restricted to past events alone. Consider
(35). Notice that while the retrospective suffix -te occurs with a future-
indicating adverb, this is not the case with the past-tense suffix. What
this indicates is that, although both indicate pastness, -te and -ass not
only belong to different morphological slots, but have different syntac-
tic functions. That is, the retrospective suffix behaves like a miniature
version of a matrix clause, with the speaker/hearer as the subject. De-
spite its morphological attachment to the verb, it is not directly related
to the event, nor does it directly refer to the event time.

   S.-Top tomorrow school-Loc go-Nonpast-Ret-Dec
   ‘(I found that) Suni is going to school tomorrow.’

b. *Suni-nun nayil hakkyo-ey ka-ss-ta.
  *‘Suni went to school tomorrow.’

I propose that a clause with -te involves one additional time other
than speech time and event time, and that this additional time functions
as a reference time. I further propose that this reference time is neces-
sarily in the past, and that when the past tense -ess and -te occur to-
gether, the time indicated by -ess always precedes the time indicated by
-te. When the unmarked tense -Ø and -te occur together, the time indi-
cated by the -Ø cannot precede the time indicated by -te.

More specifically, with -te, there is a time of PERCEIVING the event
involved, and this PERCEIVING necessarily takes place in the past. If
this PERCEIVING takes place in speech time, it is indicative in mood and
is represented by -ni, -(nu)n, or -Ø. Following a Reichenbachian sys-
tem, the PERCEIVING time corresponds to a reference time, which nec-
essarily precedes the speech time. For example, (35a) may be repre-
sented as in (35a’) in accordance with the Reichenbachian framework.

(35a’) Suni-nun nayil hakkyo-ey ka-Ø-te-la.
  ‘(I noticed that) Suni goes to school tomorrow.’
[I noticed] tomorrow
R: perception time
S: speech time
E: event time ‘tomorrow’

Compare (35a) with (36), which is its indicative counterpart. Note that the time of the speaker/hearer’s PERCEIVING in the indicative mood always coincides with the speech time. In view of the PERCEIVING time associated with -te, it has been claimed that -te marks past tense. However, as we have already seen, the pastness of -te has nothing to do with the past tense of the event, which is represented typically by -ess. Instead, -te contrasts with the speech time of the indicative mood suffixes.

(36) Suni-nun nayil hakkyo-ey ka-Ø-n-ta.
    ‘(I notice that) Suni goes to school tomorrow.’

S/R E
[I notice] tomorrow

When both the past tense -ess and -te occur together, the time indicated by the former necessarily precedes the time indicated by the latter. Observe (37), where a pluperfect occurs before -te. On the other hand, when a nonpast perfective -ess-Ø or a simple nonpast occurs, the event may take place either at a time simultaneous with or after the PERCEIVING time, but never before it. This claim is illustrated in (38). Thus, for example, the two interpretations of (38b) may be represented in (38b").

(37) Suni-nun hakkyo-ey ka-ss-ess-te-la.
    S.-Top school-Loc go-Perf-Past-Ret-Dec
    ‘I noticed that Suni had once gone to school.’

Aspect Tense R S
Perf -ess Past -ess -te

(38) a. ne-nun nayil cwuk-ess-Ø-te-la.
    you-Top tomorrow die-Perf-Nonpast-Ret-Dec
    ‘I noticed that you will be in big trouble tomorrow.’
b. Suni-ka ecey hakkyo-ey ka-Ø-te-la.
   S.-Nm yesterday school-Loc go-Past-Ret-Dec
i. 'I saw Suni going to school yesterday.'
ii. 'I noticed (e.g., the day before yesterday) that
   Suni would go to school yesterday.'

(38) b.
   i. E/R (yesterday)    S
       |------------------|
       Suni’s going (E)
       [I saw] (R)
   ii. R    E (yesterday)    S
       |------------------|
       [I noticed] Suni’s going

Next consider the REPORTER function. The suffix -te requires an agent argument, which Sohn (1986) calls the reporter. The reporter PERCEIVES a propositional content and may be either the speaker in a statement or the hearer in a question, as shown in (39) and (40) (from Sohn 1986: 141). In (39a) the reporter is the speaker, and in (40a) the hearer in performative terms. (Suh [1977] presents arguments in favor of this reporter function and Gim [1980a] presents arguments against it.)

   'I saw John going.'

   I-Top happy-AH-Ret-Dec
   'I felt that I was happy.'

(40) a. John-i ka-te-nya?
   'Did you see John going?'

b. Tangsin-un kippu-p-ti-kka?
   'Did you feel that you were happy?'

Third, the PERCEIVING function is the most distinct feature of -te. Sohn (1975) suggests that the abstract predicate of this performative sentence consists of the sense denoted by 'observe', 'experience', and 'infer', which are mutually exclusive, being conditioned by underlying structural relations. The notion of PERCEIVING is further confirmed in H. Shin (1980) and Gim (1980a), although they do not agree on details. Both the REPORTER and PERCEIVING functions of the retrospective have
led me to consider the suffix as belonging to the mood category, rather than to the tense or aspect category.

There are claims that the embedded-clause -te is a separate morpheme from the -te that occurs in matrix clauses, in view of their slightly different functions (e.g., Nahm 1978). I am of the view, however, that the occurrence of -te in the two cases is basically the same, as conceived by Gim (1980a) and Sohn (1986). Observe the examples in (41) and (42) from Sohn (1986: 147).

(41) a. [Ecey ha-te-n] il-ul onul kkuthmachi-ess-ta.  
yesterday do-Ret-Rel work-Ac today finish-Past-Dec  
‘I finished the work that I was doing yesterday.’

b. *[Ecey ha-n] il-ul onul kkuthmachi-ess-ta.  
‘Today I finished the work, which I did yesterday.’

(42) a. [Chayk-ul ilk-te-n] salam-i pakk-ulo naka-ss-ta.  
book-Ac read-Ret-Rel person-Nm outside-Dir go out-Past-Dec  
‘The person who was reading a book went out.’

‘The person who was reading a book completely went out.’

It has been claimed that -te has a ‘progressive’ (Na 1971: 24) or ‘durative’ (I. Yang 1972: 239) meaning. However, such imperfective senses are not associated with -te but rather arise from the lack of the perfective suffix -ess. Compare the minimal pair in (43).

put on-Perf-Ret-Rel clothes-Ac take off  
‘I took off the clothes which I already had on.’

b. [Ip-te-n] os-ul pes-ess-ta.  
‘I took off the clothes which I was putting on.’

The embedded event is perfective despite the occurrence of the suffix -te. In (43b), the imperfectivity results from the lack of -ess. The occurrence of -te has nothing to do with the imperfective sense. The function of -te in both sentences is again the speaker’s PERCEIVING of the embedded event.

### 2.3.2 Modal suffixes

In addition to the retrospective suffix -te, there are some other modality elements which have frequently been proposed as temporal categories. For instance, we have seen that Martin (1954, 1963) views the suffix
-keyss as the future-tense marker and -ul as the prospective aspect marker. Lukoff (1982: 102) calls -keyss ‘imperfect/future’ tense.\(^7\)

Despite the predominant view (especially among traditional grammarians) that -keyss and -ul\((i)\) mark future tense or aspect, I subscribe to the minority view that they are modal elements that have nothing to do with tense or aspect (e.g., Sohn 1986). That is, -keyss denotes the speaker’s (in statements) or the hearer’s (in questions) volition or evidential or circumstantial conjecture/presumption. In contrast, the suffix -ul\((i)\) refers to the speaker’s (in statements) or the hearer’s (in questions) prediction. In 2.2.3, I discussed various functions of the unmarked tense suffix -Ø, which deictically refers to both present and future. It is this hidden tense suffix that causes -keyss or -ul\((i)\) to look like a future-tense marker.\(^8\)

The set of telling examples in (44) are sufficient to refute the futurity thesis. Notice, first, that the suffixes in question can freely cooccur with the past-tense suffix, and, second, that no futurity sense shows up despite their presence.

(44) a. Ecey Seoul-ey pi-ka manhi wa-ss-keyss-ta.
yesterday S.-Loc rain-Nm much come-Past-Presume-Dec
(I presume that) it rained a lot in Seoul yesterday.’

b. Suni-ka cikum o-ko iss-keyss-ta.
S.-Nm now come-Comp be-Presume-Dec
‘Suni is presumably coming now.’

c. Suni-nun cikum ca-li-la.
S.-Top now sleep-Predict-Dec
‘Suni must be sleeping now.’

d. Ku i-nun cwuk-ess-ul salam i-ta.
that person-Top die-Past-Predict person be-Dec
‘That person is a person who was presumed dead.’

2.4 Conjunctive suffixes

Conjunctive suffixes are of paramount importance in the description of temporal expressions in Korean. First, they contain temporal information as an inherent semantic feature. Second, they play an essential syntactic role in constraining the occurrence of tense and aspect suffixes in the conjunctive clauses in which they occur. Third, they interpret the temporal status of tense and aspect suffixes with regard to matrix tense or speech time.
Chapter 3 will touch on conjunctive sentences and Chapter 4 will be entirely devoted to the syntactic description of temporal phenomena in conjunction. Therefore, this section is intended as a brief discussion of the classification of Korean conjunctive suffixes. From the structural point of view, these suffixes are members of Martin’s slot VII (mood), as shown in 1.2.1, and of my complementizers (which are in turn members of clause-enders), as presented in (1). It has been customary to classify conjunctive suffixes, by and large, into subordinating and coordinating suffixes, depending mainly on their semantic properties. For instance, Kwon (1985) classifies them as in (45).

(45) A. Coordinating

1. Connection
   -ko ‘and’
   -umye ‘and’
   -umyense ‘while doing’
   -kose ‘and then’
   -keniwa ‘as well as’

2. Contrast
   -una ‘but’
   -eto ‘but, although’
   -ciman ‘but, however’
   -utoy ‘but, although’
   -kenman ‘but, although’

B. Subordinating

3. Cause–effect relation
   -uni ‘since, as’
   -unikka ‘because’
   -ese ‘as, for, so’
   -nulako ‘as, because of doing’

4. Condition
   -umyen ‘if, when’
   -ketun ‘if, provided that’
   -eya ‘if only, on the condition that’
   -untul ‘even if’

5. Purpose
   -ule ‘for the purpose of’
   -ulyeko ‘in order to’
   -koca ‘intending to’
6. Evaluation
   -tasiph i 'as, in the same way that'
   -kentay 'judging from'

7. Result
   -key(kkum) 'so that'
   -tolok 'to the extent that, so that'
   -ulako 'so that'

8. Addition
   -tus(i) 'as if, in the same way'
   -ca 'as soon as'
   -taka 'and then, while doing'
   -ulswulok 'the more ... the more'

Semantically interesting though it is, Kwon’s (1985) classification is not supported by syntactic justification. In fact, the meaning-based division between coordinating and subordinating suffixes is vague, and there are many marginal cases. (Kuno [1973, 1978] has made a similar observation about Japanese). For example, the same suffix (e.g., -ko ‘and’) is used for coordinate- or subordinate-like clauses.

I propose to classify conjunctive suffixes according to their temporality features. As we will see in Chapter 4, this classification sheds significant light not only on the dichotomy between coordination and subordination, but on the syntactic explication of temporal interpretations regarding conjunctive sentences. Based on the presence or absence of temporality features, two major classes can be differentiated, with each having further subclasses. By temporality features, I mean a sequential or overlapping time-relationship between the conjunctive (called embedded hereafter) event time and the matrix event time. I will label the two classes: (a) [+temporal] (e.g., -ese ‘and then, as’, -ko₁ ‘and’, -kose ‘and then’, -ulyeko ‘in order to’, -tolok ‘so that’, -taka ‘while, and then’, -umyense₁ ‘while’); and (b) [–temporal] (e.g., -ko₂ ‘and’, -ciman ‘but’, -una ‘but’, -kenman ‘even though’, -nikka ‘because’, -umyense₂ ‘although’).

While [+temporal] suffixes impose constraints in temporal sequencing, such as succession or simultaneity, between embedded and matrix times, there are no such restrictions with [–temporal] suffixes. We have just observed above that suffixes like -ko ‘and’ and -umyense ‘while’ can show either temporal or nontemporal features. I regard such suffixes as homophonous pairs, in view of the different meanings involved. The two types of conjunctive suffixes are illustrated in (46).
(46) a. Hakkyo-ey ka-O-se, John-i Mary-lul manna-ss-ta. school-Loc go-Past-and J.-Nm M.-Ac meet-Past-Dec 'John went to school and then met Mary.' [+temporal] 

b. John-un hakkyo-ey ka-ss-una, Mary-nun an ka-ss-ta. J.-Top school-Loc go-Past-but M.-Top not go-Past-Dec 'John went to school, but Mary didn’t.' [−temporal]

In the [+temporal] type, the embedded clause does not allow the presence of the overt past -ess at all, although the embedded clause event is interpreted as past. This fact is illustrated in (46a). Nor do any of the other [+temporal] suffixes allow the perfective suffix -ess (except for -taka, as we have observed in earlier examples). In contrast, [−temporal] suffixes freely allow the overt past-tense suffix, as shown in (46b). As for those homophonous suffixes associated with [±temporal], the embedded clause allows only the null tense when they are [+temporal], but allows both tense forms when they are [−temporal].

Furthermore, the differentiation of conjunctive suffixes in terms of temporality contributes to the explication of at least two other important syntactic facts. For one thing, it provide a syntactic basis for the controversial semantic distinction between coordination and subordination. Examine (47) and (48), which contrast -ko₁ ‘and then’ and -ko₂ ‘and’.


It has been pointed out that conjunctive clauses with -ko have two meanings, one sequential ‘and then’ and the other coordinating ‘and’ (e.g., Lukoff 1982: 104). It is interesting that, on the former reading, the embedded clause allows only the null form -Ø, while on the latter reading, it allows both -Ø and -ess without any change in meaning. As stated earlier, the two meanings of -ko correspond respectively to the [+temporal] and [−temporal] type. I propose that the [+temporal] -ko is subor-
dinate and the [−temporal] -ko is coordinate. The other suffixes can also be classified in this way.

Second, the temporality feature that I propose also relates, in general, to my distinction between anaphoric and deictic tense. In other words, it helps determine whether the tense of the embedded clause is subject to a so-called endophoric interpretation (e.g., D. Yang 1977), which I call “anaphoric” in the present study, or an exophoric (deictic) interpretation in relation to the tense of the matrix clause. This suggests that [+temporal] suffixes cause embedded tense to receive an anaphoric (or endophoric) interpretation, whereas [−temporal] suffixes suggest a deictic (or exophoric) interpretation. The syntactic behavior of conjunctive suffixes will be discussed further in chapters 3 and 4.

2.5 Temporal adverbials
Temporal adverbials constitute another significant component of the temporal patterns of Korean, in that they play important roles not only in temporal reference but in the temporal interpretation of cooccurring tense and aspect suffixes. They are of two general types: lexical and clausal. The former include time adverbs and adverbial phrases, which are, in turn, commonly subclassified as in (49).

(49) a. points of time
   cikum, icey ‘now’
   onul ‘today’
   nayil ‘tomorrow’
   molay ‘the day after tomorrow’
   ecey ‘yesterday’
   kucey ‘the day before yesterday’
   encey ‘when’
   achim-ey ‘in the morning’
   caknyen-ey ‘last year’
   ku ttay ‘at that time’

b. duration
   hangsang ‘always’
   camkkan (tongan) ‘for a moment’
   seysi-kan ‘for three hours’
   olay (tongan) ‘for a long time’
c. relative time
   \textit{pelsse} ‘already’
   \textit{acik} ‘still, yet’
   \textit{cikum-kkaci} ‘up until now, still’
   \textit{kot, palo} ‘immediately’
   \textit{pangkum} ‘just now’
   \textit{nacwung-ey} ‘later’
   \textit{ittaka} ‘later’
   \textit{yocum} ‘lately, recently’

d. repetition/frequency
   \textit{nalmata} ‘everyday’
   \textit{ttayttay-lo} ‘sometimes’
   \textit{cacwu} ‘frequently’
   \textit{kakkum} ‘once in a while’
   \textit{maynyen} ‘every year’

I would like to propose another classification according to their relation to the speech time (ST), whether anterior (<), simultaneous (=), or posterior (>), and according to their ability to cooccur with tense and aspect suffixes. A classification of this sort will provide a better syntactic basis for an integrated temporal description. Such a classification is illustrated in (50) with some representative adverbs. Pluperfect (past perfective) behaves the same way as past tense in terms of + or –.

\begin{center}
\begin{tabular}{|c|c|c|c|c|}
\hline
 & Relation to ST & Tense & Aspect & \\
 & < & = & > & Nonpast & Nonpast & Perf \\
\hline
\textit{cikum} ‘now’ & – & + & – & – & + & + \\
\textit{onul} ‘today’ & – & + & – & + & + & – \\
\textit{nayil} ‘tomorrow’ & – & – & + & – & + & + \\
\textit{eceny} ‘yesterday’ & + & – & – & + & + & – \\
\textit{hansi-ey} ‘at 1 o’clock’ & + & – & – & + & + & – \\
\textit{hangsang} ‘always’ & + & + & + & + & + & – \\
\textit{pangkum} ‘just now’ & + & – & – & + & – & + \\
\textit{kumpang} ‘now’ & + & – & – & + & + & + \\
\textit{mak} ‘just’ & + & + & + & + & + & + \\
\textit{pelsse} ‘already’ & + & + & – & + & + & + \\
\hline
\end{tabular}
\end{center}

Relational values with regard to a reference time other than the speech time are expressed by demonstrative phrases, such as \textit{ku cen-ey} ‘previously’, \textit{i nal} ‘on this day’, \textit{ku taum cwu-ey} ‘the following week’, and \textit{ku cen nal} ‘on the previous day’.

Clausal temporal adverbials are composed typically of the so-called temporal connectives (or conjunctives), which consist of an embedded
clause and its temporal head noun followed by the particle -ey ‘at, in’. These include -ki cen-ey ‘before’, -ki-ey aphse ‘preceding the time when, before’, -n twi-ey ‘after’, -n taum-ey ‘following the time when, after’, -ul cek-ey ‘at the time when’, -ul ttay-ey ‘when’, and -ul mwulyep-ey ‘around the time when’. Notice that these adverbials also manifest relational values, but this time only with regard to the matrix-event time, which serves as a reference time. For example, -ki cen-ey ‘before’ is posterior to, -n twi-ey ‘after’ is anterior to, and -ul cek-ey ‘at the time when’ is simultaneous with the matrix-event time.

Temporal adverbials serve to denote an explicit time referent in the Reichenbachian sense. As a result, their most important syntactic function in temporal interpretation is to disambiguate potentially ambiguous structures. First of all, different senses associated with nonpast are disambiguated, as observed in (51).

(51) a. Suni-nun hang sang kongpuwa-Ø-n-ta.
   S.-Top always study-Nonpast-Ind-Dec
   ‘Suni always studies.’ [generic]

b. Suni-nun cikum kongpuwa-Ø-n-ta.
   ‘Suni is studying now.’ [present]

b. Suni-nun nayil kongpuwa-Ø-n-ta.
   ‘Suni will study tomorrow.’ [future]

Second, past tense and present perfective are disambiguated, as in (52).

(52) a. Suni-nun ece y ttena-ss-ta.
   S-Top yesterday leave-Past-Dec
   ‘Suni left yesterday.’

b. Suni-nun pangkum ttena-ss-Ø-ta.
   S.-Top just now leave-Perf-Nonpast-Dec
   ‘Suni has just left now.’

Third, the deicticity (exophorism) and anaphoricity (endophorism) of the unmarked null tense in an embedded clause are also disambiguated by means of adverbials. For example, (53a) is ambiguous in two ways, although (53ai) is more natural. This ambiguity is differentiated in (53b) and (53c).
(53) a. Ecey Suni-nun ilha-∅-ko iss-∅-nun ai-lul
   yesterday S.-Top working-∅-be-∅-Comp child-Ac
   scold-Past-Dec
   i. ‘Yesterday Suni scolded a child who was working.’
   ii. ‘Yesterday Suni scolded a child who is working.’

   ‘Yesterday Suni scolded the child who was working then.’

   ‘Yesterday, Suni scolded the child who is working now.’

Fourth, ambiguity occurring in a clause with a retrospective suffix is also differentiated. For example, (54a) is three-ways ambiguous, whereas (54b) is only two-ways ambiguous, and (54c) has no ambiguity.

(54) a. Suni-nun ka-∅-te-la.
   i. ‘I saw Suni going.’
   ii. ‘I noticed that Suni will go.’
   iii. ‘I had noticed that Suni was going.’

b. Suni-nun ecey ka-∅-te-la.
   i. ‘Yesterday, I saw Suni go.’
   ii. ‘I had noticed that Suni was going yesterday.’

c. Suni-nun nayil ka-∅-te-la.
   ‘I noticed that Suni will go tomorrow.’

Fifth, ambiguity also occurs in clausal temporal connectives. For example, observe (55) (from C. Lee 1985: 442).

   I-Top child come-∅-Nml before-Loc depart-Past-Dec
   i. ‘I departed before the child came.’
   ii. ‘I departed before the child will come.’ (lit.)

b. Ai-ka wa-ss-ta.
   ‘The child came.’

As C. Lee (1985) points out, sentence (55a) does not entail (55b). This is not only because the child’s coming may take place in the future (in relation to the speech time), but also because the child’s coming may not take place at all. The second reason is immaterial for the present purpose. Let us call the event of the speaker’s departure E1, and that of the child’s coming E2. The diagram in (56) illustrates that E2 can occur before or after the speech time.
The fact that the child’s coming can take place either before or after the speech time is very crucial for the pronominal function of the null tense. That is, when E2 precedes S, as shown in the a position in (56), then the null form -Ø refers to the same past relation as the matrix tense. In that case, the null form is anaphoric. In contrast, when E2 follows S, as shown in the b position, the null form refers to a nonpast relation, and hence it is deictic. Since such phenomena will be the major concern of the next chapters, let us return to the topic of disambiguation. By placing a temporal adverbial such as ecey ‘yesterday’ or nayil ‘tomorrow’ in the bracketed embedded clause in (55a), we can easily disambiguate the ambivalent temporal interpretations.

Along with the disambiguating function, temporal adverbials play another important role. As has been alluded to thus far (especially in [44]), they greatly constrain the occurrence of tense or aspect suffixes. This is largely due to their inherent temporal semantic features. This phenomenon can be illustrated with temporal connectives -ki cen-ey ‘before’ and -n twi/hwu-ey ‘after’. Observe (55a) again, and note that the overt past form -ess cannot occur in the embedded clause, as shown in the ungrammatical structure in (55’).

(55’) a. *... wa-ss-ki cen-ey ...

Incidentally, it is interesting to note that while a temporal connective like (55a) does not allow the overt form -ess, nontemporal connectives with the -ki nominalizer do freely allow -ess, as shown in (57). An explanation for this phenomenon will be offered in Chapter 3.

(57) Na-nun ai-ka wa-ss-Ø-ki ttaymwun-ey ttena-ss-ta.
I-Top child-Nm come-Perf-Ø-Nml because leave-Past-Dec
‘I departed because the child had come.’

Next, consider another temporal connective for clauses, -n hwu-ey ‘after’. Unlike cen ‘before’ clauses, the hwu ‘after’ clause in (58a) entails sentence (58b). The relative clause event (E1) must precede the matrix clause event (E2), as shown in (59). Because of the inherent temporal feature (anterior to the matrix-event time) of hwu, (59a) allows only the past or perfective adnominal form -n (to be discussed in Chapter 5).
   M.-Top J.-Nm come-Adn after-Loc leave-Past-Dec
   ‘Mary departed after John came.’

   ‘John came’.

(59) E1 E2 S
     ___________ ___________

2.6 Lexical aspect
In Korean there are, by and large, two different ways of expressing aspectual phenomena: inflectional and lexical\(^{10}\) (cf. Nahm 1978, C. Lee 1982, Gim 1985). Since I have examined suffixal aspect in 2.2.1, I will focus on the second type of aspect in this section, although the description of lexical aspect is not the main concern of this study.

Lexical aspects include auxiliary verbs that express aspectual distinctions, such as -ki sicakha- (inchoative), -e iss- (perfective), -e tay- (iterative), and -ko iss- (progressive). These aspectual auxiliaries are preceded by main verbs, forming a compound verb (or, in transformational terms, verbal complementation). Each auxiliary verb is obligatorily preceded by its own fixed complementizer, such as -ki, -e, or -ko, which must be suffixed to a preceding verb.

The first major division in aspectual oppositions is between perfectivity and imperfectivity. Perfectivity does not distinguish among different phases of a situation, thereby viewing the situation as a single unit, whereas the imperfective does recognize the situation’s internal structure (Comrie 1976: 16). Since the imperfective aspect is concerned with the internal structure of the situation, there can be a number of subdivisions, for example, habitual, progressive, inchoative, and so on. These are expressed by various auxiliaries in Korean.

Lexical perfectivity in Korean is expressed by the auxiliary verb construction -e iss- (i.e., infinitive suffix + the existential verb). Compare sentence (60a) where a suffixal perfective occurs, with (60b) where a lexical perfective occurs.

   J.-Nm home-Loc go-Perf-Trans come-Past-Dec
   ‘John went home and came back.’
   J.-Nm home-Loc go-Comp be-Trans come-Past-Dec
   ‘John had been home and came back.’

As the English translations indicate, both -e iss- and -ess are used to refer to the completion of ‘going home’. Yet, their aspectual implications are not precisely the same: -e iss- puts emphasis on the final stage of the situation, whereas -ess emphasizes its totality. Consider more examples.

(61) a. Os-ey hulk-i mwut-e iss-ta.
   cloth-Loc dirt-Nm put-Perf-Dec
   ‘There is dirt on the clothes.’

   b. Os-ey hulk-i mwut-ess-Ø-ta.
      put-Perf-Nonpast-Dec

   south part-Loc now cherry-Nm bloom-Perf-Dec
   ‘The cherry blossoms are in bloom in the south now.’

      bloom-Perf-Nonpast-Dec

Sentences (61a) is symmetric with (61b) since the results of the past situation still hold, namely, the continuing result of a previous situation.11 However, (61a) and (62a) put more emphasis on the final stage of the situation, on the termination of the situation. In contrast, (61b) and (62b) put no more emphasis on the end of the situation than on any other part of the situation. Rather, all parts of the situation are presented as a single whole.

It has been claimed that the suffix -ess is historically derived from -e iss- through historical contraction (e.g., Huh 1987, K. Lee 1981, Gim 1980b). In contemporary Korean, -e iss- appears only with a limited number of intransitive verbs, while -ess does not have such a restriction.

In what follows, I will discuss other types of lexical aspect that involve imperfectivity. The table in (63) represents the subdivisions of aspect and their representative form.

(63) Classification of aspectual oppositions

i. Perfective:    -e iss- (lexical)
                  -ess (suffixal)
ii. Imperfective:
    Progressive    -ko iss-
    Inchoative     -ki sicakha-
    Habitual       -kon ha-
    Iterative      -hay tay-

As we saw above, imperfectivity is concerned with the internal temporal structure of a situation, with a situation viewed from within (Comrie 1976: 24). I will focus only on the progressive aspect below in view of its having been controversial.¹²

(64) John-i cip-ul cis-ko iss-ta.
    J.-Nm house-Ac build-Comp be-Dec
    ‘John is building a house.’

The progressive meaning in (64) comes from the auxiliary verb construction -ko iss- (i.e., ko₁ ‘and’ + existential verb). -Ko iss- occurs only with an action verb and expresses a progressive event or action. Next, let us compare the progressive -ko iss- with the perfective -e iss-.

    J.-Top home-Loc go-Comp be-Dec
    ‘John is at home.’

   ‘John is going home.’

The progressive form -ko iss- and the perfective form -e iss- resemble each other, in that both consist of a complementizer followed by the existential verb iss-. However, -ko iss- occurs with intransitive or transitive verbs freely, while -e iss- occurs only with a limited number of intransitive verbs, as exemplified in (66).

    J.-Nm book-Ac close-Comp be-Dec

    J.-Nm book-Ac close-Comp be-Dec
   ‘John is closing the book.’

Although -ko iss- carries progressive aspect, with the meaning ‘be in the process of’, its function differs from that of the English progressive be + -ing. Consider (67).
(67) a. I chayk-ul ilk-k’o iss-ta.
   this book-Ac read-Comp be-Dec
   ‘I am reading this book.’

b. I chayk-ul ilk-k’o iss-kela.
   this book-Ac read-Comp be-Imp
   ??‘Be reading this book.’

While Korean allows the progressive aspect to frequently occur in an imper- active sentence, English allows it only very rarely. In addition, -ko iss- can occur with ‘stative’ verbs, such as alta ‘know’, mitta ‘believe’, and kkaytatta ‘recognize’. In English, on the other hand, subclasses of verbs like these do not occur in the progressive form, as shown in (68).

(68) a. Na-nun chayk-ul kaci-k’o iss-ta.
   I-Top book-Ac have-Comp be-Dec
   *‘I am having a book.’

b. Na-nun ku sasil-ul al-k’o iss-ta.
   I-Top the fact-Ac know-Comp be-Dec
   *‘I am knowing the fact.’

Even in Korean, the -ko iss- constructions above indicate a considerable degree of stativity. Furthermore, -ko iss- represents stativity as well as progressivity, as in (69).

   J.-Nm red-Mod clothes-Ac wear-Comp be-Dec
   i. ‘John is in the process of putting on red clothes.’
   ii. ‘John is in the state of wearing red clothes.’

b. John-i sin-ul
   J.-Nm shoes-Ac wear-Comp be-Dec
   i. ‘John is in the process of putting on shoes.’
   ii. ‘John is in the state of wearing shoes.’

c. John-i mwukewun kapang-ul tul-k’o iss-ta.
   J.-Nm heavy suitcase-Ac carry-Comp be-Dec
   i. ‘John is in the process of picking up a heavy suitcase.’
   ii. ‘John is in the state of holding a heavy suitcase.’

Sentences in (69) are ambiguous between two interpretations: progressive and stative. The verbs sin- ‘wear’, ip- ‘wear’, and tul- ‘carry’ are all action verbs, not stative verbs. But when they are combined with -ko iss, they can refer to a stative situation (‘in the state of V-ing’) as well as a progressive action. From this perspective, the two lexical as-
pects, *ko iss- and *e iss- share the sense of a resulting state. It is interesting that *e iss- is not acceptable in environments where *ko iss- can have the stative meaning, as shown in (70).

   J.-Top red-Mod clothes-Ac wear-Comp be-Dec
   i. ‘John is in the process of putting on red clothes.’
   ii. ‘John is in the state of wearing red clothes.’


Notice that (70b) is ungrammatical, while (70c) is acceptable. Although the ungrammaticality of (70b) may be due to the constraint that *e iss- cannot occur with a transitive verb, in many cases, the perfective suffix *ess and the lexical perfective -e iss- are in complementary distribution.13

One final note is in order. It should be noted here that subjectivity is involved in the aspectual system (Lyons 1977a). The same situation may be represented as either a process or an event according to whether the speaker is concerned with its internal temporal structure or not. Such aspectual notions as stativity, progressivity, and iteration are also subjective. Korean cannot be an exception.

In summary, aspect in Korean is realized in both inflectional and lexical forms. In the latter case, the syntactic and semantic characteristics of the verbs involved are also closely related to aspectual expressions.
Chapter 3
Tense Indexing and Binding

This chapter will deal with tense indexing and binding, the two most significant syntactic notions in the present study. As discussed in previous chapters, I maintain that there are only two tenses in Korean, past and nonpast, and that there are two forms expressing tense, \(-ess\) and \(-\emptyset\). This chapter will argue for two proposals. First, the overt tense form \(-ess\) is an R-expression subject to Principle C of the Binding Theory and entering into the same interpretive patterns as names. Second, \(-\emptyset\) is a pronominal entering into the same interpretive patterns as \(pro\) (or pronominals).

3.1 Two forms of tense

3.1.1 \(-ess\): R-expression

While tense in Reichenbach’s system is defined in terms of positional relationships involving speech time (S), reference time (R), and event time (E), tense in the present study refers to a relation between E and S. The definitions of past and nonpast tenses are repeated in (1).

(1)   a. \(X\) is past tense iff \(X\) names the relation in which an event precedes the speech time.

b. \(X\) is nonpast tense iff \(X\) names the relation in which an event follows or is simultaneous with the speech time.

As discussed earlier, the tense suffix \(-ess\) always names the past relation, whereas the null form can name either a past or nonpast relation. I take the position that \(-ess\) has the status of a name or an R-expression in that it has inherent reference. In particular, it always names a relation in which an event precedes the speech time, in other words, the past relation. To see that \(-ess\) has the properties of an R-expression, observe the parallel between the R-expression, \(John\), and \(-ess\) in (2).

      J.-Top school-Loc go-Past-Dec
      ‘John went to school.’

      J.-Top school-Loc go-Past-and J.-Top study-Past-Dec
      ‘John went to school and studied.’
   J.-Ac meet-in order to go-Past-but J.-Nm not exist-Past-Dec
   ‘(I) went to see John, but John was not there.’

Notice, first, that both John and -ess maintain their inherent sense
wherever they occur, without being affected by their syntactic position.
Second, as noticed in (2b), the suffix -ess is not allowed in the embed-
ded clause of certain types of sentences in the same way that John can-
not be repeated in certain constructions. Third, as observed in (2c), both
John and -ess may be repeated in certain definable contexts, the exact
nature of which will be discussed later.

The above pretheoretical observations will be cast into a more rigor-
ous theoretical framework in later sections.

3.1.2 -Ø: Pronominal
As for the second form used to express tense contrasts in Korean, namely,
the null element -Ø, I take the position that it differs fundamentally
from the suffix -ess. In particular, this study argues that, whereas -ess is
a name or R-expression, -Ø is a pronominal. Prima facie evidence for
this view comes from the fact that the reference of -Ø can vary: it can
name either the past or the nonpast relation. This stands in contrast with
the overt form -ess, which names only the past relation. Now, consider
(3).

   J.-Top home-Loc go-Past-and M.-Ac meet-Past-Dec
   ‘John went home and met Mary.’

      while
   ‘While John was going home, he met Mary.’

In (3) the null tense is interpreted as past, which is the same as the
matrix-clause tense. I treat this as a case in which -Ø receives its inter-
pretation from an antecedent, that is, the matrix-clause tense. This phe-
nomenon is similar to empty pronouns in Korean. That is, the null tense
in (3) is anaphoric in the same sense that an empty pronoun in Korean is
anaphoric when it refers to a tautosentential antecedent. See (4), from

   J.-Nm arrive-Past-when M.-Nm meet-Past-Dec
   ‘When John arrived, Mary met pro.’
   M.-Top home-Loc go-Past-as soon as sleep-Past-Dec
   ‘As soon as Mary went home, pro went to bed.’

The empty object in (4a), which I term pro (cf. D. Yang 1982, Chomsky 1986), is coreferential with John, while the empty subject in (4b) refers to Mary. In the the same way, the embedded -Ø in (4a) is coreferential with the matrix past tense -ess in both (4a) and (4b). Thus, a parallel is observed between the null tense and empty pronouns, in that both can be interpreted as anaphoric when there is a tautosentential antecedent.

Furthermore, both the tense and empty pronouns can be taken to be deictic, as in (5).

(5)  
   J.-Nm M.-Ac meet-ss-Dec-Quot say-Past-Dec
   ‘John said that pro met Mary.’

b. [ pro ku il-ul cey tayey kkuthnay-Ø-nun] kes-un
   that work-Ac in time finish-Ø-Comp thing-Top
   John-eykey cwungyoha-Ø-ta.
   J.-Dat important-Ø-Dec
   ‘It is important to John that pro finish the work in time.’

In (5), pro may refer to John (anaphorically) or to somebody else (deictically). Similarly, the null form can refer freely without being coreferential with the matrix tense. Observe (6) and (7), in which -Ø can name either the past or nonpast relation.

(6)  
John-i ka-Ø-nikka Mary-to ka-ss-ta.
   J.-Nm go-because M.-also go-Past-Dec
   i. ‘Mary went there because John went.’
   ii. ‘Mary went there because John goes.’

(7)  
   J.-Nm read-Rel book-Ac M.-Nm read-Past-Dec
   i. ‘Mary read the book that John was reading.’
   ii. ‘Mary read the book that John is reading.’

Let me touch on some further parallels between the null-form tense and empty pronouns in Korean. Consider some examples in which pro appears in either subject or object position.
(8)  a. Mary-ka pro manna-ss-ta.
    M.-Nm pro meet-Past-Dec
    ‘Mary met pro.’

    J.-Nm arrive-as soon as M.-Ac meet-Past-Dec
    ‘As soon as John arrived, pro met Mary.’

    c. [John-i tochakha-Ø-camaca] Mary-ka pro manna-ss-ta
    J.-Nm arrive-as soon as M.-Nm meet-Past-Dec
    ‘As soon as John arrived, Mary met pro.’

Korean allows omission of overt arguments, as in (8), without any morphological reflex on verbs or any auxiliaries giving information about the identity of the missing arguments (cf. Whitman 1988). The interpretation of the missing pronouns in (8) is dependent upon the discourse or pragmatic context.

This parallels the deictic use of the null-form tense. Specifically, *pro* is preferred to an overt pronominal when there is discourse-recoverable information or a tautosentential antecedent. Similarly, null tense can be used deictically or anaphorically. Consider (9), in which *pro* is interpreted as deictic in (9a) and (9b), or as anaphoric in (9c). Sentences (9a) and (9b) lack the deictic pronoun ‘you’, while sentence (9c) does not allow the potential pronoun *kunye-nun* ‘she’ in the position of *pro*.

(9)  a. pro annyengha-Ø-sey-yo?
    peace-Nonpast-Hon-Q
    ‘How are you?’

    b. pro eti ka-Ø-sey-yo?
    where go-Nonpast-Hon-Q
    ‘Where are you going?’

    c. [Mary_i-nun cip-ey ka-Ø-camaca] pro ca-ss-ta.
    M.-Top home-Loc go-as soon as sleep-Past-Dec
    ‘As soon as Mary went home, she went to bed.’

Second, a null tense in a simple clause is always taken to be deictic, since there is no tautosentential antecedent with which the null form can be coindexed. Similarly, empty pronouns in simple clauses are interpreted as deictic. For instance, both *pro* and the null tense in simple sentences such as (9a) and (9b) are interpreted as deictic, since there is no tautosentential antecedent.
Third, as we have seen, the interpretation of the embedded null tense in a conjunctive sentence can depend on semantic features of the subordinating or coordinating conjunctive suffix involved. For instance, one set of temporal suffixes, such as -ese ‘and then’, -kose ‘and then’, -umyense ‘while’, and -taka ‘while’ allow only the anaphoric interpretation. Another set of suffixes, such as -tolok ‘in order to’ allows both the anaphoric and the deictic interpretation. Furthermore, a third set of suffixes, including -eto ‘although’, -ciman ‘but’, and -kena ‘or’, allow only the deictic interpretation. The semantic features of such conjunctive suffixes also help determine the interpretation of pro.

(10) \[ pro_i \quad nolay-lul \quad pwulu-Ø-myense] 
\quad song-Ac \quad sing-while 
\quad wuli-nun \quad keli-lul \quad hayngcinhay-ss-ta. 
\quad we-Top \quad street-Ac \quad march-Past-Dec 
‘While singing a song, we marched along the street.’

(11) \[ pro_i \quad hwa-ka \quad na-Ø-se] \quad Chelswu-nun pang-ul naka-ss-ta. 
\quad anger-Nm \quad get-and \quad C.-Top \quad room-Ac \quad leave-Past-Dec 
‘Chelswu got angry and left the room.’

(12) \[ pro_i \quad cip-ey \quad ka-Ø-taka] \quad John-i-i \quad Mary-lul manna-ss-ta. 
\quad home-Loc \quad go-while \quad J.-Nm \quad M.-Ac \quad meet-Past-Dec 
‘While John was going home, he met Mary.’

In (10)–(12), pro is coreferential with the matrix subject (cf. D. Yang 1984), as the coindexing indicates. Thus, only the anaphoric interpretation is allowed. Note that the subordinate conjunctive suffixes, such as -umyense, -ese, and -taka, allow only an anaphoric tense interpretation, as illustrated in (10')–(12'). This contrasts with (13)–(14), in which pro is interpreted as either deictic or anaphoric.

(10') \[ pro \quad nolay-lul \quad pwulu-Ø-myense] 
\quad song-Ac \quad sing-Past-while 
\quad wuli-nun \quad keli-lul \quad hayngcinhay-ss-ta. 
\quad we-Top \quad street-Ac \quad march-Past-Dec 
‘While singing a song, we marched along the street.’

(11') \[ pro \quad hwa-ka \quad na-Ø-se] \quad Chelswu-nun pang-ul naka-ss-ta. 
\quad anger-Nm \quad get-Past-and \quad C.-Top \quad room-Ac \quad leave-Past-Dec 
‘Chelswu got angry and left the room.’

(12') \[ pro \quad cip-ey \quad ka-Ø-taka] \quad John-i \quad Mary-lul manna-ss-ta. 
\quad home-Loc \quad go-Past-while \quad J.-Nm \quad M.-Ac \quad meet-Past-Dec 
‘While John was going home, he met Mary.’
Thus the interpretation of *pro* can be taken to be anaphoric (that is, referring to the matrix subject) or deictic (that is, referring to someone else).

Semantic features of the matrix verb also help to determine the interpretation of *pro*, as in (15) and (16). In (15), *pro* is coreferential with *Mary*, while in (16) it is coreferential with *John*. This difference is due to the lexical properties of the matrix verbs *seltukhata* ‘persuade’ and *yaksokhata* ‘promise’ (cf. 5.2).

(15) Johnₙᵢ Maryₖᵢ eykey *proₗ ttena-Ø-tolok* seltukhay-ss-ta.
J.-Nm M.-Dat leave-in order to persuade-Past-Dec
‘John persuaded Mary to leave.’

(16) Johnₙᵢ Maryₖᵢ eykey *proₗ ttena-Ø-n-ta*-ko yaksohay-ss-ta.
J.-Nm M.-Dat leave-Ø-Ind-Dec-Quot promise-Past-Dec
‘John promised Mary that he will/would leave.’

In short, like all pronominals, -Ø can receive its interpretation from an antecedent, or it can refer freely. However, since there are only two values for tense, past and nonpast, -Ø can have only two values, thus it is much more restricted in its reference possibilities than regular pronominals. I propose that while the null tense in a matrix clause is always deictic, the null tense in an embedded clause can be deictic or anaphoric.³ By “anaphoric” tense, I mean that -Ø receives its interpretation from an antecedent which is structurally determined. (This notion will be further discussed in Section 3.2 in connection with tense indexing.) By “deictic” tense, I mean that -Ø receives its interpretation contextually. Thus, anaphoric tense is a structural notion, whereas deictic tense is contextual. The anaphoric interpretation occurs where -Ø names the same past relation as designated by the matrix tense. The deictic interpretation occurs where -Ø names a different relation. The dual function of -Ø is stated in (17) and the interpretive rule for deictic -Ø is stated in (18).
(17) -Ø as a pronominal
   a. The null form tense is a pronominal taken to be anaphoric or deictic.
   b. Anaphoric tense is structurally determined.
   c. Deictic tense is contextually determined.

(18) Interpretive rule for the deictic use of -Ø
   The deictic interpretation of the null form is nonpast, unless otherwise specified.⁴

3.2 Coindexing tenses
As just noted, tense in the present study is treated as a referring expression, much like a noun phrase. Thus, tense can bear an index to indicate coreference or disjoint reference with respect to another tense category. In the case of nominals, two NPs are coreferential if they have the same index. They are not coreferential if they do not have the same index (cf. Riemsdijk & Williams 1986: 199). An example is given in (19).

   J.-Top he-Nm prize-Ac win-Nml-Ac hope-Past-Dec
   ‘John₁ hoped that he₁ would get the prize.’

(20) [John₁-i tochakha-Ø-ki ceney] ku₁₁i₁₁-ka tena-ss-ta.
   J.-Nm arrive-Nml before he-Nm leave-Past-Dec
   ‘He₁₁ left before John₁ arrived.’

In (19), John and he can be interpreted as referring to the same person, whereas in (20) John and he cannot be so interpreted (only disjoint reference is possible). To indicate that certain pairs of NPs cannot corefer and that certain NPs do corefer, the Binding Theory employs a rule to assign indices freely (cf. Riemsdijk & Williams 1986, “Index NPs freely”) and subsequently filters out the unwanted cases of indexing (by the Binding Conditions, cf. 3.3).

Turning to tense, I assume that two tense categories name the same temporal relation (past or nonpast) if they are coindexed. This contrasts with the more common or traditional view that tenses refer to event times. In other words, the traditional view might assume that when two tense categories are coindexed, the two events must cooccur. However, the present study assumes simply that coindexed tenses have the same value for the past or nonpast relation. This proposal is based on the distinction between tense and event times, as discussed in Chapter 1. Tense does not refer to event times.
Following the assumption that coindexed tenses have the same value for the [±past] feature, two tense categories can be coindexed even when their event times are different, as in (21).

(21) John-un cip-ey ka-Ø₁-se Mary-lul manna-ss₁-ta.  
J.-Top home-Loc go-Past-and M.-Ac meet-Past-Dec  
‘John went home and then met Mary.’

The two events in (21) are sequential, not simultaneous or overlapping, because the first-clause event (E1) must precede the second-clause event (E2). Nevertheless, the null tense is coindexed with the matrix-clause tense since it names the same temporal relation as the matrix clause (namely, the past relation). Thus, the null tense in (21) is taken to be anaphoric. The temporal ordering between the two events is represented in (22).

(22) E₁ E₂ (=R) S  
    going home meeting Mary

Next consider (23), in which two events have a ‘before’ time-relation. The temporal connective -ceney ‘before’ requires the first clause event to follow the second clause event, as shown in (24). However, E₁ can occur before or after speech time, since sentence (23) does not entail (25).

    J.-Nm come-Nml before M.-Nm depart-Past-Dec  
    ‘Mary left before John came.’

(24) E₂ E₁  
    Mary’s departure John’s coming

    ‘John came.’

Diagram (26) shows two possible interpretations of the embedded-clause tense.

(26) E₂ E₁ S E₁  
    -ess Ø Ø  
    | | |  
    PAST PAST NONPAST
Note that the null tense above is interpreted as past if it occurs before S, and is interpreted as nonpast after S. These two readings are schematically represented in (27), where the reference of -Ø varies between past and nonpast. In (27a) -Ø is taken to be anaphoric (that is, past), whereas in (27b) -Ø is deictic (that is, nonpast). As stated earlier, the deictic tense of -Ø in embedded clauses is interpreted as nonpast. Thus (27) can be schematized as in (28).


(28) \begin{tabular}{ll}
\textsc{first clause} & \textsc{second clause} \\
\hline
a. & ess_i \\
& (PAST) \\
& (PAST) \\
b. & ess_j \\
& (NONPAST) \\
& (PAST) \\
\end{tabular}

When the null form is coindexed with the matrix past tense, it encodes the past relation. In contrast, when it is not coindexed, it encodes the nonpast relation. In both cases, the precise event times are determined through the interaction of tense and a variety of lexical (e.g., conjunctive suffixes, temporal connectives, or time adverbials) and pragmatic factors.

Thus, unlike in English, the first-clause tense in Korean can name a nonpast relation even though the matrix clause encodes past tense. Thus, (29) is perfectly acceptable in Korean, while the corresponding English sounds awkward.

    tomorrow before yesterday Past-Dec
    'Mary left yesterday before John comes tomorrow.'

On the basis of these observations, I propose the mechanism for tense indexing stated in (30), which indicates that the coindexed null tense and the matrix tense always name the same temporal relation. My arguments for indexing tense are based on the assumption that tense is a referring expression like an NP. In the case of NPs, after assigning indices freely, the unwanted cases of indexing are filtered out by the Binding Condition (cf. 3.3), as in (31). To rule out (31b), well-formedness conditions on Logical Form (LF) are required in the Binding Theory. In the case of tense, the unwanted indexing is filtered out by the semantic features of the conjunctive suffix involved, a temporal adverbial, or by other information about the event that may be supplied pragmatically,
as in (32), in which the null tense must be anaphoric with the matrix *-ess. The deictic interpretation is not allowed. This is due to the semantics of *-umyense ‘while’ since it requires the two events to occur simultaneously, and thus only the anaphoric tense is allowed.

(30) a. Index tense freely.
    b. When two tenses are coindexed,
       they have the same value for the [±past] feature.

(31) a. Mary$_i$ saw her$_j$.
    b. *Mary$_i$ saw her$_i$.

(32) [John-i chwum-ul chwu-Ø$_{i}^{r}$_{i}-myense] nolayhay-ss$_i$-ta.
    J.-Nm dance-Ac dance-while sing-Past-Dec
    ‘While dancing, John sang a song.’

If a matrix clause has a nonpast tense, then the coindexed null tense is interpreted as nonpast, as shown in (33), where both embedded and matrix clauses have a null form that names the nonpast relation. Since the nonpast relation includes present and future time reference, there are four possible temporal interpretations, as shown in (34).

(33) [John-un cip-ey ka-Ø$_i$-se] Mary-lul manna-Ø$_i$-n-ta.
    ‘John goes (or will go) home and then meets (or will meet) Mary.’

(34) a. John goes home and meets Mary.
    b. *John goes home and will meet Mary.
    c. John will go home and will meet Mary.
    d. *John will go home and meets Mary.

Note that the temporal interpretation on (34b) and (34d) is not allowed in either Korean or English. The temporal conjunctive suffix *-ese ‘and then’ requires the first-clause event to precede the second-clause event, and thus the reverse temporal ordering is not allowed.

When multiple embedding is involved, anaphoric null tense is coindexed from right to left, as in (35), which contains five null-tense forms, all of which are coindexed with the matrix tense.

(35) John-un ilccik ilena-Ø$_i$-se,pap-ul mek-Ø$_i$-ko(se),
    J.-Top early get up-and meal-Ac eat-and
    ppesu-ka o-Ø$_i$-camaca, ttwi-Ø$_i$-e(se), naka-Ø$_i$-se, tha-ss$_i$-ta.
    bus-Nm come-as soon as jump-and run-and get on-Past-Dec
    ‘John got up early in the morning, ate breakfast and,
     as soon as a bus came, jumped up, ran, and got on it.’
The discussion so far indicates that an anaphoric tense is always coindexed with an antecedent, as stated in (36).

(36) Anaphoric tense is coindexed with its antecedent.

The treatment of tense as a referring expression allows us to account for some parallels between tense categories and other nominals within the framework of the Binding Theory. The parallel that I propose is neither entirely new nor surprising. Similar proposals have been made by McCawley (1971) and Partee (1973, 1984) in a transformational approach, and more recently within a GB framework by Enç (1987).

3.3 Syntactic explication (X-bar theory)

Since the previous section provided a mechanism for tense indexing, this section will discuss tense binding. Specifically, it will argue for the claims in (37).

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

Principles A, B, and C of the Binding Theory are stated in (38), and the definition of binding is given in (39) (Chomsky 1986: 166). The notion of c-command in this study is based on a maximal projection, as in (40).

(38) A. An anaphor is bound in a local domain.
    B. A pronominal is free in a local domain.
    C. An R-expression is free.

(39) X binds Y iff X c-commands Y, and Y and X are coindexed.

(40) X c-commands Y if the first maximal projection above X dominates Y.

Before discussing how these Binding Principles work with Korean nominals, let us consider the syntactic structure of Korean. Let us first consider the X-bar schema for English proposed by Chomsky (1986).

(41) [\[
\begin{array}{c}
CP \\
| \\
C' \\
| \\
Spec \\
C \\
| \\
IP \\
| \\
Adjuncts \\
| \\
NP \\
| \\
I' \\
| \\
I \\
| \\
V \\
| \\
VP \\
| \\
NP
\end{array}
\]
In (41), the largest category of any type is called the maximal projection of the head. Thus, CP is the maximal projection of C, and IP is the maximal projection of I. Chomsky (1986) takes C to be the head of what was traditionally called S′ and INFL to be the head of what was traditionally called S. Note in (41) that Specifiers and Adjuncts are sisters of X′ (i.e., C′). The categories that are sisters to a head are called internal arguments. Arguments come under X′, being constituents that a head subcategorizes for.

Structure (41), which is for English, must be slightly modified for Korean since it is a head-final language (a Subject–Object–Verb language). At present, it is unclear in Korean what elements, if any, come under the Specifier of CP. (According to Moon [1987], topic may come under CP.) Since it is irrelevant for the discussion here, I will not go into details. As for the properties of INFL, Chomsky (1981) says that INFL is a bundle of features that includes [[±tense] (AGR)]. I assume that in Korean the element INFL contains a tense category as well as inflectional markers such as aspect, honorifics, modals, and so forth. Sentence enders are assumed to come under COMP in that they can change the type of a sentence.

(42) a. [Nay-kə ku il-ul ha-Ø-ki-ka] elyp-Ø-ta.
     I-Nm that work-Ac do-Nml-Nm difficult
     ‘It is difficult for me to do that work.’

   b. *[Nay-kə ku il-ul ha-ss-ki-ka] elyp-Ø-ta.

     J.-Nm arrive-as soon as M.-Nm meet
     ‘As soon as John arrived, Mary met him.’


My assumption that INFL contains a null tense category in Korean is supported by examples (42) and (43). The embedded clauses have been treated as tenseless (cf. D. Yang 1982, Yim 1985) since they do not allow the overt tense form. Within a GB framework, INFL assigns nominative case to the subject of a tensed clause. In an untensed clause, such as the infinitive clause in English, nominative case is not assigned, as exemplified in (44) (cf. Riemsdijk and Williams 1986: 231).

(44) *[The boy] to win] would [upset me].
If we assume that Infl in Korean contains tense, realized as either an overt or null form, we can account for why nominative case is assigned to the subject NP above. (However, not all nominative cases are assigned in this manner.)

On the other hand, Yim (1984: 106) argues that Infl, which is the head of a clause, is the collection of features [[+tense] [+past] ...]. According to him, only finite clauses have the feature [+past], while infinitives are left unspecified for this feature. Furthermore, he makes a distinction between the [+tense] and [+past] features. The [+past] feature is morphologically realized only in finite clauses; infinitives lack this feature. He further claims that in Korean the [+tense] feature exists not only in finite clauses but also in nonfinite clauses. Thus, Yim accounts for the occurrence of nominative case on the subject of an infinitive by assuming that the [+tense] feature can assign nominative case. However, Yim’s arguments contradict the claim that a nonfinite clause by definition has no tense. The embedded clauses in (42) and (43) are analyzed as having a null-form tense in the present study. Thus, they are treated as tensed clauses. For instance, in (42) nay-ka is assigned nominative case by the null tense category.

In a simple clause, as shown in Chapter 2, past and nonpast are represented by -ess and -Ø, respectively. Now, using the X-bar schema, let us consider how the simple sentence can be represented.

   J.-Nm school-Loc go-Past-Dec
   ‘John went to school.’

b. S-structure

```
CP
  \   /'   \  
C' IP NP VP I T
     \     \    Past
     PP V    
        \   /  
        John-i hakkyo-ey ka -ss -ta
```
In (45b), INFL is the head of IP, and COMP is the head of CP. I assume that the matrix COMP in Korean contains a sentence-ender such as the declarative marker -ta. I also assume that Korean is a configurational language in that the VP node exists (cf. Saito 1985). As for the tense category under consideration, INFL contains the tense category T, which in turn contains either the [+past] or [−past] feature. When a sentence has a nonpast tense, the null element -Ø occurs, as in (46).

     J.-Nm school-Loc go-Nonpast-Ind-Dec
     ‘John goes/is going to school.’

b. S-structure

Next let us observe how subordinate clauses can be analyzed in an X-bar schema. In (47b), INFL is the head of IP, and C(OMP) is the head of CP. A subject in Korean can be marked by either the topic suffix -nun/-un or the nominative case -il/-ka. In (47b), the noun phrase John-un occurs in the subject position of the matrix clause, while pro, being coreferential with John, occurs in the subject position of the embedded clause. The embedded clause in (47), being a subordinate clause (i.e., [pro hakkyo-ey ka-se]), is in the adjunct position. The subordinating suffix -ese ‘and then’ is in the COMP position. Of course, the embedded null tense is under T of the lower INFL, whereas the overt form -ess is under T of the higher INFL.

     J.-Top school-Loc go-Past-and M.-Ac meet-Past-Dec
     ‘John went to school and then met Mary.’
b. S-structure

Before arguing that -ess is an R-expression obeying Principle C, let us recall how Principle C works with regular names in Korean. As stated earlier, Binding Principle C says that R-expressions must be free in any domain. This is seen in (48), in which the R-expression John is c-commanded by and coindexed with the pronoun ku ‘he’. Thus, its ungrammaticality is correctly ruled out by Condition C. Consider the S-structure of (48a), shown in (49). If there is no c-commanding antecedent, there is no binding, although two NPs may be coindexed, as exemplified in (50).

   he-Top J.-Poss father-Ac like-Past-Dec
   ‘He₁ liked John’s father₂.’

   b. *Ku₁-nun [nay-ka John₂-ul coahaha-Ø-n-ta]-ko
      he-Top I-Nm J.-Ac like-Ø-Ind-Dec-Quot
      sayngkakhay-ss-ta.
      think-Past-Dec
      ‘He₁ thought that I like John₂.’
(49) S-structure of (48a)

\[
\begin{array}{c}
\text{CP} \\
\text{C'} \\
\text{IP} \\
\text{NP}_{i} \\
I' \\
\text{VP} \\
\text{NP} \\
\text{NP}_{i} \\
N' \\
V \\
T \\
\text{Past} \\
\end{array}
\]


*'He_i liked John_i’s father.'

    he-Poss father-Nm J.-Ac like-Past-Dec
    ‘His_i father liked John_i.’

b. S-structure

\[
\begin{array}{c}
\text{CP} \\
\text{C'} \\
\text{IP} \\
\text{NP}_{i} \\
I' \\
\text{VP} \\
\text{NP}_{i} \\
N' \\
V \\
T \\
\end{array}
\]

Ku-uy apeci-ka John-ul cohahay -ss -ta.

    J.-Nm school-to go-Past-and M.-Ac meet-Past-Dec
    ‘John went to school and met Mary.’
   as soon as
   ‘As soon as John went to school, he met Mary.’

   in order to
   ‘In order to go to school, John met Mary.’

   while
   ‘While going to school, John met Mary.’

We turn now to the claim that the overt tense form -ess is an R-expression subject to Principle C. Consider the biclausal sentences in (51), where the occurrence of the overt past tense suffix -ess in the embedded clause causes ungrammaticality. Recall that the overt form -ess has the status of a name or R-expression in that it has inherent reference, that is, the past relation. An immediate consequence of this claim is that it predicts that -ess may not occur in both an embedded clause and matrix clause within the same sentence, as illustrated in (51). Let us consider the S-structure of (51a) as a representative example.

(52) S-structure of (51a)

The ungrammaticality of (52) follows from Principle C of the Binding Theory together with our assumption that -ess names the past rela-
tion. Since both instances of -ess have the same referent (the past relation), they will bear the same index. Because R-expressions must be free, the ungrammaticality of (52) is correctly ruled out since the -ess in the embedded clause is in fact bound (i.e., coindexed and c-commanded) by the -ess in the matrix clause. More specifically, the INFL in the matrix clause in (52) c-commands the INFL in the lower clause. Following the definition of c-command in (39), the first maximal projection above -ess in the second clause is the entire sentence (the matrix IP). The embedded -ess is thus c-commanded by the matrix -ess. So, the -ess in the embedded clause is bound by the -ess in the matrix clause, thereby violating Principle C.

The ungrammaticality of (52) is ruled out for the same reason as in (53), in which two coreferential names occur. Principle C prohibits the two Johns from being coreferential. My claim that -ess is an R-expression entering into the same interpretive pattern as that of any other name is therefore supported by Binding Principle C.

   J.-Top J.-Nm sick-Past-Dec-Quot say-Past-Dec
   *'John said that John had been sick.'

We turn now to the null element -Ø. While the overt form -ess is an R-expression, the null form is a pronominal that enters into the same interpretive pattern as pro. Let us reconsider sentence (54). The null tense in (54) is taken to be anaphoric (coindexed with the matrix tense), as the English translation indicates. Note that the deictic interpretation (nonpast), is not allowed, as shown in (55). This is due to the semantic properties of the conjunctive suffix -ese ‘and then’. As discussed in Chapter 2, the temporal conjunctive suffix -ese requires the first-clause event (John’s going to school) to precede the second-clause event (John’s meeting Mary). Since the matrix clause already denotes pastness, the embedded tense has to be interpreted as past. Thus, only the anaphoric interpretation is allowed for the null tense in (55). This suggests that the semantic properties of the conjunctive suffix help determine whether the null tense is interpreted anaphorically or deictically.

   ‘John went to school and then met Mary.’
b. S-structure

\[ 
\begin{array}{c}
\text{CP} \\
\text{C} \\
\text{IP} \\
\text{NP} \\
\text{CP} \\
\text{C} \\
\text{IP} \\
\text{NP} \\
\text{VP} \\
\text{I} \\
\text{T} \\
\end{array} \\
\text{John-un [ pro hakkyo-ey ka -Ø -se ] Mary-lul manna-ss-ta.}
\]


Note further that the INFL in the matrix clause in (54) c-commands the INFL in the embedded clause. Under the definition of binding in (39), the null tense in the lower INFL is bound by the tense in the higher INFL. This phenomenon at first glance seems to be parallel to NP anaphora, in that it satisfies Binding Principle A, which requires an element to be bound. However, I argue that the null form is a pronominal, not an anaphor, on the ground that the null form -Ø does not necessarily have to be coreferential with the matrix tense. In other words, if the null form is indeed an anaphor, it always has to be coindexed with a c-commanding antecedent, but this does not hold true for the null tense. Recall that the reference of the null tense can vary when the complementizer and other temporal elements involved do not require a particular interpretation. It can refer either to the past or to the nonpast relation, unlike -ess, which refers only to the past relation. For instance, consider (56).

(56) John-i ka-Ø-nikka Mary-to ka-ss-ta.
 J-Nm go-because M.-also go-Past-Dec
i. ‘Mary went because John went/was going.’
ii. ‘Mary went because John goes.’
Sentence (56) has two readings. Like all pronominals, the null form \( -\emptyset \) can receive its interpretation from an antecedent (i.e., anaphorically), or it can refer freely (i.e., deictically). In (56), the former interpretation occurs where \(-\emptyset\) denotes the same past relation designated by the matrix \(-ess\). The latter interpretation occurs where \(-\emptyset\) denotes a nonpast relation. The two interpretations are represented in (57). The null tense need not be coindexed with the matrix tense because pronominals do not require coindexing, as shown in (57').

\[(57)\]  
\[i.\] John-i ka-\(\emptyset\)_i-nikka Mary-to ka-ss\(_i\)_i-ta.  
\[ii.\] John-i ka-\(\emptyset\)_j-nikka Mary-to ka-ss\(_i\)_i-ta.

\[(57')\] John\(_i\)-i [ku\(_i\)-ka ttena-\(\emptyset\)-keyss-ta]-ko malhay-ss-ta.  
J.-Nm he-Nm leave-\(\emptyset\)-Modal-Dec-Quot say-Past-Dec  
‘John\(_i\) said that he\(_{ij}\) would leave.’

In (57'), \(ku\) ‘he’ can be bound or free. My theory predicts that the potential event times of ‘John’s going’ in (57) can bear either the past or nonpast relation to speech time. The former interpretation arises if \(-\emptyset\) receives the anaphoric treatment and is coindexed with the matrix \(-ess\). The latter interpretation arises if \(-\emptyset\) is taken to be deictic, in which case it must denote the nonpast relation.

### 3.4 Null tense in embedded clauses

This section will discuss ways to introduce the null-form tense in embedded clauses. I will compare two possible approaches: the deletion analysis and the base-generation analysis. It will be shown that base-generation is preferable to deletion in several respects.

#### 3.4.1 Deletion analysis

The deletion analysis of various embedded elements that are coreferential with matrix elements has been adopted by many early generative grammarians of Korean. This analysis assumes that there is a full tense form at deep structure, which is then deleted on the surface by means of a transformational rule that applies when there is a coreferential tense form in the matrix clause. Thus, for instance, I. Yang (1972: 116–119), in discussing verbal complement constructions in Korean, proposes (58b) as the underlying deep structure of (58a). His case-marking rules introduce appropriate case particles; and his so-called obligatory modality-deletion rule deletes \(-ess-ta\) because of its coreference with the matrix modality elements \(-ess-ta\), so that the surface form (58a) may be derived. We can apply the same rule for the conjunctive sentence in (59).
(58) **Surface structure**
      J.-Nm pickle-Ac eat-Comp-Ac try-Past-Dec
      ‘John tried eating kimchi.’

   **Deep structure**

(59) **Surface structure**
      J.-Nm school-Loc go-and study-Past-Dec
      ‘John went to school and studied.’

   **Deep structure**

Although Yang does not discuss this issue, we may also be able to postulate an optional deletion rule, in handling the coordinative -ko ‘and’ construction. This rule would hold that the past tense suffix -ess may be viewed as deleted optionally without a change in meaning. Observe the examples in (60).

(60) **Surface structure**
      J.-Nm sing-and M.-Nm dance-Past-Dec
      ‘John sang, and Mary danced.’

   **Surface structure**
      ‘John sang, and Mary danced.’

   **Deep structure**
   c. [[John nolayhay-ss-ta]-ko] [Mary chwumchwu-ess-ta]

Thus, we may say that (60c) underlies (60a) and (60b), and that a modality-deletion rule deletes the embedded sentence ender -ta obligatorily and -ess optionally, allowing the derivation of both (60a) and (60b).

Insightful as it may be, Yang’s obligatory modality deletion leads to some unsatisfactory consequences. For one thing, postulation of elements that never surface tends to make the grammar needlessly complicated as well as redundant. This is particularly true with Korean, because, as shown in Chapter 2, there are seven inflectional category slots. If the matrix clause has all the slots filled in, we are compelled to set up all seven suffixes, including tense and aspect, in the embedded clause and then obligatorily delete them.
Second, introduction of deletion rules adds extra devices to the grammar. One might think that the deletion analysis has the advantage of dispensing with coindexing of the \(i\) and \(j\) type. However, deletion rules, whether obligatory or optional, need coindexing anyway, because only coreferential elements are to be deleted. Furthermore, deletion of many lexical items that never surface makes the grammar extremely inelegant.

Third, there is a problem of semantic interpretation in the deletion analysis. It is true that the sentences in (58–60) entail (61a–c), respectively and thus that, with regard to truth conditions, there appears to be no problem with establishing -ess underlyingly, so far as these examples are concerned. However, examine (62).

   ‘John ate kimchi.’

   ‘John went to school.’

   ‘John sang.’

(62) \textit{Surface structure}
   ‘John came back on his way to school.’

\textit{Deep structure}

(63) \textit{Surface structure}
   ‘John met Mary in order to go to school.’

\textit{Deep structure}

(64) John-i hakkyo-ey ka-ss-ta.
   ‘John went to school.’

 Needless to say, (62a) and (63a) do not entail (64), because the embedded clause event in (62a) and (63a) is not completed, whereas sentence (64) presupposes that the event is completed in the past.

D. Yang (1981) also points out the semantic problem in the deletion analysis, proposing that a missing tense in embedded clauses should be treated as a base-generated zero anaphora. Consider (65), taken from Yang.
Sentences (65a) and (65b) have the same D-structure and their cognitive meanings are considered to be the same according to the deletion analysis. However, there is a difference in meaning between the two, as D. Yang (1981) points out. In (65a), the actions of singing songs and dancing are considered independent and separate, while in (65b), the two actions have temporal dependency. In other words, (65b) is ambiguous between two meanings: one is a simultaneous time-relation, and the other is a sequential time-relation. Thus, the two events in (65b) have a cause–effect relation (or the first-clause event provides a precondition for the other event). In (65a), on the other hand, the first-clause event has nothing to do with the second-clause event, hence there is no cause–result relationship (cf. Section 4.6).

In addition, it is difficult to implement the deletion rule in the inverted Y-model that is represented below.\textsuperscript{11}

\begin{figure}[h]
\centering
\begin{tikzcd}
\text{S-Structure} \arrow[swap]{r}{\text{Logical Forms}} \arrow{r}{\text{Phonetic Forms}} & \text{D-Structure}
\end{tikzcd}
\end{figure}

S-structure is derived from D-structure (by NP- and Wh-Movement), LF is derived from S-structure (by Quantifier Raising and other construal rules), and PF is also derived from S-structure (by deletion, stylistics, and phonological rules). Within this system, the deletion phenomenon should not affect an interpretation. The tense-deletion analysis follows grammatical principles rather than construal or stylistics rules. In the following section, I will argue that (65a) and (65b) have different D-structures, S-structures, and LFs.
3.4.2 Base-generation

The problems raised with the deletion analysis can be solved by hypothesizing that null tense is base-generated under T(ense), which is in turn a member of INFL (at D-structure, S-structure, and PF). Coindexing at LF shows the coreferential relationship between the null tense category and its antecedent. Thus, semantic interpretive rules instead of deletion take place at LF. For instance, in the base-generated null-tense analysis, (65a) and (65b) would have different D-structures: (65b) has a null tense in the embedded clause, while (65a) has an overt -ess in the embedded clause. The base-generated null tense is coindexed with the matrix tense, as represented in (65b).

(65)  b. [Chelswu-ka nolay-lul pwulu-Ø_i-ko] chwum-ul chwu-ess_i-ta.
     i. 'Chelswu sang a song and then danced.'
     ii. 'Chelswu sang and danced (at the same time).'

The null-form tense in (65b) denotes the same past relation as the matrix tense. Because of the coindexing, which is required by the suffix -ko, the disjoint reference for the null tense is not allowed. That is, the null tense cannot be taken as deictic (i.e., nonpast). The ambiguity between (65bi) and (65bii) is due to the ambiguity in the -ko clause, which can mark either coordination or subordination. As we will show in great detail in Chapter 4, the subordinate -ko does not allow -ess in an embedded clause. Thus, by employing an indexing mechanism, the base-generation analysis can explain the anaphoric or deictic interpretation of the null tense.

As for the problem of semantic interpretation that has been raised with regard to the deletion hypothesis in (62) and (63), it is assumed under the base-generation hypothesis that coreference in tense does not entail identical event times but only the same relation to speech time, past or nonpast.

At this point, one may ask how we can determine whether the index of a given embedded tense is i or j, or both. Section 3.2 proposed an indexing principle for the present study, restated in (30), which indicates that any embedded tense may be indexed as either i or j.

(30)  a. Index tense freely.
     b. When two tenses are coindexed, they have the same value for the [±past] feature.

Here, i indicates anaphoric tense, whose interpretation depends on the matrix tense, while j indicates deictic tense, whose interpretation is con-
textually determined. If there is no constraining element, such as a temporal conjunctive suffix, a time adverbial, or other indexical or discursal or pragmatic information, the tense of the embedded clause is taken to be deictic or anaphoric. Observe (68), for example.

    J.-Nm go-Ø-because M.-also go-Past-Dec
    i. ‘John went, so Mary did too.’
    ii. ‘John goes (there), so Mary went, too.’

   ‘John had gone, so Mary went.’

(69) a. i. John-i ka-Ø₁-nikka Mary-to ka-ss₁-ta. (Anaphoric)
     ii. John-i ka-Ø₁-nikka Mary-to ka-ss₁-ta. (Deictic)

b. John-i ka-ss-Ø₁-unikka Mary-to ka-ss₁-ta. (Anaphoric)

The two interpretations of (68a) and the single reading of (68b) are represented in (69). Notice in (69b) that the embedded -ess functions as perfective aspect, and that the null-form tense is coindexed with the matrix tense because the first-clause event is completed before the second-clause event. Thus, the representation of (69b) correctly predicts the given past perfective reading. That is, the first-clause -ess has a perfective meaning, insofar as John’s going has to be completed prior to Mary’s going.

To summarize this chapter, I have proposed the following. First of all, the overt past-tense suffix -ess is an R-expression in the same way that names such as John are. Second, the null-tense form is a pronominal in the same way that he, she, and it are pronominals. Third, coindexing and Binding Principle C are essential in explicating the interpretation of the null tense in a principled way. Fourth, the distinction between deictic and anaphoric tenses is of paramount significance. Thus, for example, matrix tenses (except for the -Ø tense before the retrospective mood) are always deictic; and the embedded null tense can be both anaphoric and deictic. The choice between anaphoric and deictic interpretations is sometimes due to the semantic properties of the complementizers. Finally, base-generation of the null tense is preferred to the deletion analysis.
Chapter 4
Temporality in Conjunctive Sentences

4.1 Overview
This chapter will discuss some salient syntactic phenomena existing in conjunctive sentences, with particular reference to the behavior of the overt form -ess and the null tense form -Ø. As has been observed, typical conjunctive sentences in Korean are formed from two or more clauses by means of various conjunctive suffixes that fill the last inflectional slot (i.e., the complementizer position) of the predicate of each embedded (or conjunctive) clause. The last clause in a conjunctive construction is always the main (or matrix) clause, whose complementizer position is filled with a sentence-type ender such as the declarative, interrogative, imperative, or propositive. Each sentence-type ender consists of one of the six speech-levels that are conflated with the sentence-type in question. These sentence-enders do not occur in embedded clauses, except in clauses ending in the conjunctive particle -man(un) ‘but’. Thus, compare (1a) and (1b).

(1)  a. [Ce-nun ca-ss-una] phikonha-p-ni-ta.
    I-Top sleep-Past-but tired-AH-Ind-Dec
    ‘Although I slept, I feel tired.’

    b. [Ce-nun ca-ss-up-ni-ta-manun] phikonha-p-ni-ta.
    I-Top sleep-Past-AH-Ind-Dec-but tired-AH-Ind-Dec
    ‘Although I slept, I feel tired.’

Notice in (1a) that the embedded clause does not have the sentence-
type ender, -(u)p-ni-ta in this case, whereas (1b) must have one, be-
cause the conjunctive particle -man(un) occurs. Since the -man(un)
clauses behave the same way as other nontemporal clauses, such as
those with -una ‘but’, the rest of this chapter will be concerned mainly
with the regular type where a conjunctive suffix (not the particle) oc-
curs, as illustrated in (1a).

There are various types and subtypes of conjunctive constructions
that are sensitive to different temporal interpretations. In 4.2, I will pro-
pose four sets of syntactic features to differentiate various types and
subtypes of temporal conjunctive constructions. These distinguishing
features, some of them hierarchical (see [11]), are: temporal vs.
nontemporal, anaphoric vs. deictic, and perfective vs. nonperfective. The temporal category is divided into three subtypes: anterior, posterior, and overlapping. While the anterior type is divided into perfective vs. nonperfective, the other two types are nonperfective. Based on this typological classification, I will next discuss the constructions where the first-clause event precedes the second-clause event (4.3), where the two events occur simultaneously or in overlapping times (4.4), and where the first-clause event follows the second-clause event (4.5). In 4.6, I will deal with conjunctive clauses that are nontemporal. The discussion will include those suffixes that are ambivalent (thus homophonic) between temporal and nontemporal. Throughout this chapter, I will examine different constructions in the light of the proposals presented in Chapter 3. The following two claims discussed in Chapter 3 will be further applied to other conjunctive constructions.

(i) The null form tense is a pronominal.
(ii) The overt tense -ess is an R-expression subject to Principle C.

4.2 Syntactic subcategorization
Conjunctive suffixes may be subcategorized in terms of temporality, anaphoricity, and perfectivity. Let us first consider the temporality classification. (See Longacre 1985: 243–244 for further discussion of temporality.)

4.2.1 Temporal vs. nontemporal
In 2.4, I proposed to distinguish between [+temporal] and [−temporal] conjunctive suffixes, depending upon whether a suffix has a relational value of temporal ordering (sequential or overlapping) or not. Compare (2a), which is temporal, with (2b), which is not.

(2)  

   school-Loc go-Past-and J.-Nm M.-Ac meet-Past-Dec  
   ‘John went to school and then met Mary.’

   J.-Top school-Loc go-Past-but M.-Nm absent-Past-Dec  
   ‘John went to school, but Mary was not there.’

First of all, semantically, the two events denoted by the two clauses in (2a) must occur in the order presented, whereas there is no inherent temporal ordering (sequential or overlapping) between the two events denoted by the clauses in (2b). Second, syntactically, the first clause in
(2a) does not allow the occurrence of the overt tense suffix -ess, as has been stated earlier, while this is not the case in (2b). In nontemporal conjunctives, choice of -ess and -∅ is free, depending on the speaker’s temporal perception of the event with regard to the speech time. Thus, (3a) is ungrammatical, while (3b) is grammatical.

(3)  
       ‘John went to school and then met Mary.’

   b. John-un hakkyo-ey ka-∅₁-na,
       J.-Top school-Loc go-Nonpast-but
       Mary-nun cip-ey iss-∅₁-ta.
       M.-Top home-Loc stay-Nonpast-Dec
       ‘John is going to school, but Mary is staying home.’

The ungrammaticality of (3a) follows from Condition C of the Binding Theory, which is repeated in (iii).

(iii) R-expressions must be free.

As for the S-structure of (3a), I am assuming that Infl is the head of IP, and Tense the head of Infl. The two instances of -ess in (3a) are coindexed since both name the past relation. Because the embedded -ess is c-commanded and coindexed with the matrix -ess, (3a) is correctly ruled out (violation of Condition C). Only a null-form tense is allowed in the embedded clause in (4).

(4)  S-structure of (3a)
In contrast, the occurrence of the overt form -ess in (2b) does not violate Condition C since there is no c-command relation between two tenses, as shown in (5). The combination of clauses in (2b) is analyzed as a coordinate construction. (The justification for this analysis will be discussed in 4.6.) The second-clause -ess does not c-command the first-clause -ess since the maximal projection is the IP node and this blocks the c-command. Thus, although both instances of -ess above have the same referent (that is, the past relation), there is no violation of Condition C.

(5) S-structure of (2b)

A [+temporal] conjunctive suffix shows either an anterior relation (e.g., -ese ‘and then, and so’, -taka ‘and then, while doing’, -kose ‘and then’), a posterior relation (e.g., -ulyeko ‘in order to’, -key ‘so that’, -tolok ‘so that’, -koca ‘intending to’), or an overlapping relation (e.g., -umyense ‘while’, -nulako ‘while doing’) between the first-clause event and the second-clause event. These are illustrated in (2a), repeated here for convenience, and (6) and (7).

Anterior

(2a) Hakkyo-ey ka-Ø₁-se, John-i Mary-lul manna-ss₁-ta.
    school-Loc go-Past-and J.-Nm M.-Ac meet-Past-Dec
    ‘John went to school and then met Mary.’

Posterior

(6) Hakkyo-ey ka-Ø₁-lyeko, John-i Mary-lul manna-ss₁-ta.
    school-Loc go-in order to J.-Nm M.-Ac meet-Past-Dec
    ‘In order to go to school, John met Mary.’
Overlapping

(7) Hakkyo-ey ka-Ø₁-myense, John-i Mary-lul manna-ss₁-ta.
    while
    ‘While John was going to school, he met Mary.’

In each of the sentences, there are two actions involved: John’s going to school and his meeting Mary. In (2a), the event of John’s going to school must precede the event of meeting Mary, whereas in (6) the opposite is true. In both (2a) and (6), the two events have a sequential time relationship, while in (7), the two events are overlapping. The interpretations of the temporal relationship between two events as either sequential or overlapping follows from the semantic properties of the conjunctive suffixes. In other words, the conjunctive suffix -ulyeko ‘in order to’ requires that the embedded-clause event take place after the matrix-clause event. In the case of -ese ‘and then’, the opposite relationship holds. The suffix -umyense ‘while doing’ requires the embedded-clause event to overlap with the matrix-clause event.

As shown in (3a), all the [+temporal] conjunctive suffixes require that the overt past-tense form -ess never occur in the embedded clause (following from Condition C) when both the embedded and matrix clauses refer to events taking place sequentially or simultaneously in the past. This is further illustrated by the ungrammaticality of (6’) and (7’), in which the past-tense form -ess occurs in the embedded clauses.

(6’) *Hakkyo-ey ka-ss₁-ulyeko, John-i Mary-lul manna-ss₁-ta.
    ‘In order to go to school, John met Mary.’

(7’) *Hakkyo-ey ka-ss₁-umyense, John-i Mary-lul manna-ss₁-ta.
    ‘While John was going to school, he met Mary.’

4.2.2 Anaphoric vs. deictic

Another important set of syntactic features that functions to distinguish different conjunctive constructions in terms of temporality is the opposition between anaphoric and deictic, a concept crucial throughout this study. The two notions are repeated in (8).

(8) a. Anaphoric tense is structurally determined.
    b. Deictic tense is contextually determined.

This distinction cuts across the temporal and nontemporal suffixes, although temporal suffixes are predominantly associated with the anaphoric interpretation and nontemporal suffixes are typically associated with the deictic one. To this extent, nontemporal conjunctive con-
structions are also relevant in discussing temporal interpretations in Korean. We will see in 4.5 that clauses with posterior temporal suffixes like -ulyeko ‘in order to’ are associated with both anaphoric and deictic interpretations of the null-form tense.

As for the anaphoricity of nontemporal constructions, compare the sentences in (9). Notice that both sentences mean exactly the same thing, and also that both are nontemporal, in that no temporal ordering is presupposed between the first-clause event and the second-clause event in both sentences. Yet, the null-form tense in the first clause in (9a) is to be interpreted anaphorically as past in coreference with the matrix past-tense -ess, whereas -ess in the first clause in (9b) is not anaphoric. Only null-form tense is considered anaphoric. Although both instances of -ess in (9b) name the past relation, the interpretation of the two tenses is independent and not structurally determined, as I will show in Section 4.6.2. Parallel phenomena will be observed with some other nontemporal constructions in 4.6.

(9)  
       J.-Top dance-Past-and M.-Top sing-Past-Dec
       ‘John danced, and Mary sang.’
       J.-Top dance-Past-and M.-Top sing-Past-Dec
       ‘John danced, and Mary sang.’

4.2.3 Perfective vs. nonperfective

A final relevant feature associated with temporal conjunctive clauses is perfectivity. That is, conjunctive suffixes may be divided into those that allow a perfective suffix and those that do not. All the nontemporal suffixes allow it, as well as the overt tense suffix, but most of the temporal suffixes do not allow an aspect suffix. The only exception among the temporal suffixes is the transferentive suffix -taka ‘while’, which will be elaborated upon in 4.3.2. The optional occurrence of the perfective suffix in the transferentive construction causes us to regard the perfectivity feature as distinctive. Otherwise, it would be implausibly predictable from the temporal/nontemporal distinction.

A close examination of the temporal suffixes reveals that the other suffixes with the anterior feature incorporate perfectivity as one of their inherent features, while the transferentive suffix -taka does not. Thus, I propose that anterior suffixes like -ese ‘and then’, -kose ‘and then’, and
-camaca ‘as soon as’ do not allow the perfective suffix to occur before them because their inherent perfectivity makes the perfective suffix totally redundant. The inadmissibility of the past suffix -ess in these patterns is ruled out by Principle C of the Binding Theory, as we have already seen. Consider (10).

(10) a. [John-i hakkyo-ey ka-Ø_i-taka] wa-ss_i-ta.
   J.-Nm school-Loc go-Past-and come-Past-Dec
   ‘On the way to school, John came back.’

b. [John-i hakkyo-ey ka-Ø_i-se] nol-ass_i-ta.
   and play-Past-Dec
   ‘John went to school and played.’

   as soon as play-Past-Dec
   ‘As soon as John went to school, he played.’

None of the three sentences in (10) has a perfective suffix, but only the embedded clause of (10a) is interpreted as nonperfective, whereas those in (10b) and (10c) denote perfectivity. In order to make the embedded-clause event in (10a) perfective, we must use the perfective suffix -ess. Then, all the three sentences become parallel in terms of perfectivity.

In short, anterior suffixes have a [+perfective] feature, except -taka which has a [−perfective] feature. One might naturally ask what happens with the simultaneous and posterior suffixes, which should also denote [−perfective] in view of the nature of their temporal ordering. My answer is that, although these suffixes have a [−perfective] feature, they cannot have an overt aspect marker -ess, because they require the embedded-clause event to occur at the same time as or after the matrix-clause event. That is, the occurrence of the perfective suffix is semantically and pragmatically prohibited.

Needless to say, there are other syntactic features, such as the equi-subject constraint, that are needed for an overall description of conjunctive sentences. However, I have limited myself only to those that have direct bearing on temporal expressions.

Let me conclude what I have proposed in this and the two previous subsections by offering a classification of conjunctive suffixes in (11), with relevant examples.
(11) Conjunctive Suffixes

<table>
<thead>
<tr>
<th>[+temporal]</th>
<th>[−temporal]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anterior</strong></td>
<td><strong>Overlapping</strong></td>
</tr>
<tr>
<td>+perf</td>
<td>−perf</td>
</tr>
<tr>
<td>+anaph</td>
<td>+anaph</td>
</tr>
<tr>
<td>−ese</td>
<td>−taka</td>
</tr>
<tr>
<td>−kose</td>
<td>−umyense₁</td>
</tr>
<tr>
<td>−nulako</td>
<td>−ulyeko</td>
</tr>
<tr>
<td>−key</td>
<td>−ko</td>
</tr>
<tr>
<td>−nikka</td>
<td></td>
</tr>
</tbody>
</table>

### 4.3 Anterior constructions

Temporal conjunctive sentences in which the first-clause event must precede the second-clause event are called anterior constructions in this study, for the sake of convenience. As discussed in the previous section, these are divided into two sets: those whose first clause allows neither the overt past-tense suffix nor the perfective suffix, and those whose first clause allows the perfective suffix. The latter set has a single member, namely, the transferentive construction. The former set may, for convenience, be termed unmarked anterior clauses.

#### 4.3.1 Unmarked anterior clauses

There are, in general, two subtypes involved in this type of construction. In one type, such as with −ese ‘and then’, −kose ‘and then’, and −teni ‘after’ the two events may be temporally gapped, whereas in the other type, such as with −camaca ‘as soon as’ and the temporal connective −n cuksi ‘at the moment when’, the two events must be consecutive without temporal gapping. Thus, in the former, two temporally sequential adverbials may be allowed, but in the latter only a single adverbial is accepted. Observe (12).

    J.-Nm yesterday come-Past-and today leave-Past-Dec
    ‘John came yesterday, and left today.’

    J.-Nm yesterday come-Past-upon today leave-Past-Dec
    ‘As soon as John came yesterday, he left (*today).’
When occurring with a verb that denotes both an action and its changed result, the suffix -\textit{kose} (and its abbreviated form -\textit{ko}) ‘and then’ becomes semantically ambiguous between the regular meaning of a single anterior event and the resultativeness of an anterior event. Observe the examples from Lukoff (1982: 366) in (13).

    overcoat-Ac wear-Past-and home-Ac go out-Past-Dec
    i. ‘(He) put on his overcoat and left the house.’
    ii. ‘(He) left the house wearing his overcoat.’

b. [Cim-ul tul-Ø_i-kose] ku salam-ul ttalaka-ss_i-ta.
    bag-Ac hold-Ø-and the person-Ac follow-Past-Dec
    i. ‘(I) picked up my baggage and followed him.’
    ii. ‘(I) followed him, carrying my baggage.’

The semantic ambiguity observed in (13) may be attributed to the nature of the verbs involved. In any case, the ambiguity does not affect my proposal that the nonoccurrence of the overt past-tense form in all the unmarked anterior clauses is accounted for in terms of Binding Principle C. If the embedded clause has the overt tense suffix -\textit{ess}, which refers to the same time relation as the matrix tense (that is, past), they will bear the same index. However, because R-expressions must be free, such a sentence is rendered ungrammatical. Such a sentence is unacceptable in the same manner as English sentences such as ‘John\textsubscript{i} said that John\textsubscript{j} was tired’ and ‘My father\textsubscript{i} said that my father\textsubscript{j} was sick.’ If the embedded clause has a null-tense form, as has been seen in (13), the sentences become acceptable in the same way that the English sentences ‘John\textsubscript{i} said that he\textsubscript{j} was tired’ or ‘My father\textsubscript{i} said that he\textsubscript{j} was sick’ are acceptable.

As has been repeatedly stated, the null-tense form -Ø has two values, past and nonpast. (Because -Ø is a pronominal, its reference can vary.) However, the interpretation of -Ø can be constrained by the lexical meaning of the conjunctive suffix used. With all temporal suffixes, including the anterior ones, -Ø names a past or nonpast relation coreferential with the matrix tense. Thus, anterior constructions can be represented as in (14). In short, in anterior relations, a null-form tense is always taken as anaphoric.
(14) E1 E2 S
    \[ \emptyset_i \text{ ess}_i \]

E1: first-clause event
E2: second-clause event

4.3.2 Transerentive clauses
Although the term “transerentive” (à la Martin and Lee 1969) is used in this study simply for the sake of convenience, the suffix -taka (or its free variant -ta) has also been called “interruptive,” “durative,” or “contiguous.” As these terms indicate, there are at least four different definitions regarding the semantic properties of -taka.

First, according to Choi (1965) and Lukoff (1945, 1982), -taka is called an “interruptive form,” indicating the interruption of one action its replacement by another. Observe (15).

(15) [Akka-nun nwun-i o-\(\emptyset\)-i taka] icey-nun pi-ka o-\(\emptyset\)-n ta.
    while ago-Top snow-Nm come now-Top rain-Nm come
    'It was snowing a while ago and it is raining now.'

The interruptive sense appears rather clearly when a transerentive clause is contrasted with a nontranserentive anterior clause. For instance, let us compare the -taka clause and -ko clause.

(16) a. Kongpwu-lul ha-\(\emptyset\)-ko ca-ss_i ta.
    study-Ac do-and sleep
    '(I) went to bed after (finishing) my study.'

b. Pap-ul mek-\(\emptyset\)-ko ttena-ss_i ta.
    meal-Ac eat-and leave
    '(He) left after (finishing) the meal.'

Thus, it is claimed that the -ko clause marks a sequential time-relation between the two events, whereas the -taka clause signals an interruption of the first-clause event.

Second, Martin and Lee (1969) call -taka a transerentive form that indicates a shift in action, either of the verb action itself, of its direction, or of the recipient of the action. Martin and Lee state that the form
-taka means 'when so-and-so happens ...' ; this is followed by another action that interrupts or shifts the trend of the first, so that it is discontinued in favor of the second. On the other hand, when -taka is attached to -ess, the ending conveys the meaning 'when so-and-so has happened ...', and the following verb tells of something contradictory or unanticipated that happened right after the action of the first clause.

Third, although Lukoff (1945, 1982) accepts the term ‘interruptive,’ he maintains that -taka clauses focus attention on the durative aspect of an event. He further points out that -ess-taka indicates an event that has been completed or finished.

Fourth, although most previous descriptions of -taka focus on the interruptive or transferentive function, Song (1983) claims “contiguity” as the core meaning of -taka, as in (17).

(17) Mangseli-taka kapaki ttena-ss-ta.
    hesitate suddenly leave-Past-Dec
    '(He) suddenly left after hesitating a while.'

Song argues that a natural interpretation of (17) is ‘after a moment of hesitation, he left suddenly’ rather than ‘hesitation has been interrupted by a sudden departure’. Hence the notion of interruption for -taka is not appropriate. Instead, he proposes “contiguity” as the core meaning of -taka, claiming that other labels such as conditional, concurrence, and interruptive derive from this basic sense. By contiguity, Song means the perceptions of speakers who view two events to be contiguous, but not continuous in a physical and temporal sense.¹

At any rate, the conjunctive suffix -taka is unique in many respects, and well differentiated from other conjunctive suffixes. First of all, as Song insightfully observes, the suffix -taka has three senses: interruption, concurrence, and condition, as illustrated in (18a), (18b), and (18c), respectively.²

    study-Ac do T.V.-Ac watch
    'I switched to watching TV in the middle of studying.'

    gambling do money-Ac lose
    'He lost money while he was gambling.'

c. Khal-ul kaciko cangnan ha-Ø₁-taka-nun tachi-Ø₁-n-ta.
    knife with play do -Top get hurt
    'If you play with a knife, you will get hurt.'
Second, while the other anterior suffixes do not have an equi-subject constraint, \textit{-taka} clauses generally do. This is illustrated in (19).

(19) a. John-i ka-Ø\textsubscript{i}-taka Mary-lul manna-ss\textsubscript{i}-ta.  
\hspace{1em}J.-Nm go-Past M.-Ac meet-Past-Dec  
\hspace{1em}On the way, John met Mary.'

b. *John-i ka-Ø\textsubscript{i}-taka Mary-ka ku-lul manna-ss\textsubscript{i}-ta.  
\hspace{1em}J.-Nm go-Past M.-Nm him-Ac meet-Past-Dec  
\hspace{1em}While John was going, Mary met him.'

Third, as already indicated, the most important characteristic of \textit{-taka} clauses in the present study is that they show a very distinct feature with regard to temporality. While all other conjunctive suffixes belonging to the [+temporal] type allow only the null tense in the embedded clause, the \textit{-taka} clause allows the occurrence of the overt form \textit{-ess} in the embedded clause. Let us consider what the significance of this is. Observe (20).

(20) a. John-un cip-ey ka-Ø\textsubscript{i}-taka o-Ø\textsubscript{i}-n-ta.  
\hspace{1em}J.-Top home-Loc go come  
\hspace{1em}John is on his way back home.'

b. John-un cip-ey ka-ss-Ø\textsubscript{i}-taka o-Ø\textsubscript{i}-n-ta.  
\hspace{1em}John is coming back after having been home.'

c. John-un cip-ey ka-Ø\textsubscript{i}-taka wa-ss\textsubscript{i}-ta.  
\hspace{1em}John was going home, but (on his way) he came back.'  
\hspace{1em}(i.e., John did not go home.)

d. John-un cip-ey ka-ss-Ø\textsubscript{i}-taka wa-ss\textsubscript{i}-ta.  
\hspace{1em}John came back after he had been home.'

The presence of \textit{-ess} in the embedded clause in (20b) and (20d) plays a key role in the interpretation of a completed action. That is, where embedded clauses lack the overt form \textit{-ess}, the action is interpreted as being not completed, as shown in (20a) and (20c). Thus, the occurrence of the embedded clause \textit{-ess} specifies perfectivity. This is confirmed by the fact that the embedded \textit{-ess} is incompatible with a matrix clause whose meaning does not semantically allow a completed embedded-clause event. However, it is compatible with a matrix clause that allows a completed embedded-clause event, as illustrated in (21).\textsuperscript{3}

(21) a. Kongpwu-lul ha-Ø\textsubscript{i}-taka kohyang sayngkak-i na-ss\textsubscript{i}-ta.  
\hspace{1em}study-Ac do hometown thought-Nm arise  
\hspace{1em}"While I was studying, thoughts of my hometown arose.'
b. *Kongpwu-lul hay-ss₁-taka kohyang sayngkak-i na-ss₁-ta.

c. Kongpwu-lul hay-ss₀₁-taka manghay-ss₁-ta.
   ruin
   ‘Because he had studied, he destroyed himself.’

In the following, I will argue that, while the matrix -ess denotes the past relation, the embedded -ess denotes perfective aspect. An initial piece of evidence for this claim is observed in the fact that -ess in -taka clauses can occur with a future-time adverb. Consider (22). If -ess in the embedded clause refers to the past relation, rather than perfective, we will not have a simple way to account for the occurrence of -ess with the future-time adverb nayil ‘tomorrow’.

(22) John-i nayil cip-ey ka-ss-taka molay o-n-ta.
   ‘John will have been home tomorrow, and
   will come back the day after tomorrow.’

Second, as I discussed in 2.2.1, -ess can function as a pure perfective aspect marker, as the examples in (23) indicate.

(23) a. Icey cip-ey ta wa-ss-ta.
    ‘We are almost at home now.’

b. Ne-nun nayil honna-ss-ta.
   ‘You will be in trouble tomorrow.’

   ‘Next year, when I go to Seoul, I will meet Kim.’

Third, as I indicated in 4.2.3, -taka is the only anterior temporal suffix that has the [-perfective] feature. This lack of inherent perfectiveness triggers the suffix -ess when the perfective sense is called for. The interpretation of -ess as past tense would fail to capture this fact.

Fourth, as I also briefly touched on in 2.2.1, -taka occurs only with those verbs that denote a completable action. If -ess were a past marker, there would be no reason why such a cooccurrence restriction should hold. Examine (24).

   J.-Nm school-Loc go-Perf-Past-and come-Past-Dec
   ‘John went to school and then came back.’

   J.-Nm T.V.-Ac see-Perf-Past-and laugh-Past-Dec
   ‘While watching TV, John laughed.’
Now, let us turn to my proposed syntactic explication of the phenomena. Consider again the sentences in (25).

    J.-Nm home-Loc go-Past-and come-Past-Dec
    ‘John was going home, but (on his way) he came back.’

    b. John-i cip-ey ka-ss-Ø_i-taka wa-ss_i-ta.
    J.-Nm home-Loc go-Perf-Past-and come-Past-Dec
    ‘John went home and then came back.’

I have proposed that the null-tense form (i.e., -Ø) in (25) bears the same index as the matrix tense, namely, past tense. More specifically, in (25a), the embedded verb is not followed by the overt past-tense suffix -ess despite the pastness of the event, while in (25b), the embedded verb is followed by the perfective suffix -ess but not by the tense suffix -ess, again despite the pastness of the event. This omissibility indicates that the matrix tense functions as the antecedent of the omitted tense of the embedded clause. Since the embedded-clause event must precede the matrix-clause event in the [+anaphoric] -taka, the null tense in the embedded clause has the same value as the matrix tense (in other words, its tense is anaphoric). As I have emphasized repeatedly, the nonoccurrence of the overt past form -ess can be accounted for in light of Binding Principle C.

Furthermore, notice that in sentence (25a) the time of John’s going home and the time of his coming back occur sequentially in the past, without any temporal gap between the two events. In sentence (25b), on the other hand, the time of John’s going home not only precedes the time of his coming back but also the first event is definitely completed before the second event takes place. Thus, we can say (26a), but not (26b).

    morning home-Loc go afternoon return
    ‘I had gone home in the morning and returned in the afternoon.’

    b. *Achim-ey cip-ey ka-Ø_i-taka, ohwu-ey tolawa-ss_i-ta.

Examples (26a) and (26b) clearly indicate that the overt form -ess in the embedded clause is not the same -ess that appears in the matrix clause and cannot be coindexed with it. As I stated just above, the embedded -ess is a perfective aspect marker. There is a null-tense form
following the perfective, and this null tense is coindexed with the matrix past -ess, as shown in (26').

(26') Achim-ey cip-ey ka-ss-Ø-taka, ohwu-ey tolawa-ss-ta. [= (26a)]

Therefore, the claim that -Ø in anterior constructions is always taken to be anaphoric still holds. Because the null form -Ø in (26') receives its interpretation from the antecedent, which is the matrix tense, the two tenses are coindexed.

Four types of [+anaphoric] transferentive construction may be recognized depending on whether the aspect or tense suffix -ess occurs in embedded or matrix clauses.

(27) | Embedded clause | Matrix clause |
     | Aspect  | Tense  | Aspect | Tense |
     | -Ø   | -Ø    | (-ess) | -ess |
     | -Ø   | -Ø    | (-ess) | -Ø   |
     | -ess | -Ø    | (-ess) | -Ø   |
     | -ess | -Ø    | (-ess) | -ess |

The tree structures associated with the temporal pattern of these four types are illustrated below. Let us first observe Type I, where the embedded clause does not have -ess, while the matrix clause does.

       J.-Nm home-Loc go-and come-Past-Dec
       ‘John was going home, (but on his way) he came back.’

b. 

```
CP
  |
  C’
  |
  IP
    |
    CP
      |
      I’
      |
      C
        |
        NP
          |
          CP
            |
            C’
            |
            IP
              |
              CP
                |
                I’
                |
                C
                  |
                  VP
                    |
                    I
                      |
                      V
                        |
                        Ti
                          |
                          PP
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                            V
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```

John-i [ pro cip-ey ka-Ø-taka] wa-ss-ta
As discussed in Chapter 3, INFL contains various inflectional categories such as aspect and tense. Tense is the head of INFL and can bear an index. When there is a null-tense form under the INFL of the embedded clause, as in (28b), the null-form tense receives its interpretation from the matrix tense. Since the two tenses name the same temporal relation (namely, past), they bear the same index.

Next, consider Type II, where -ess does not show up in the embedded clause, while the perfective -ess may occur in the matrix clause. Although (29a) has the same form as (28a) in Phonological Form (PF), notice that their S-structures and their meanings are not the same. The intended sense of (29a) is present perfective. In Type I, -ess functions as tense, while in Type II it is aspect.

   J.-Nm home-Loc go-Nonpast-and come-Perf-Nonpast-Dec
   ‘John has just come back from his way home.’

b.

\[ \text{Diagram of NP and VP structures} \]

Notice that the embedded tense is interpreted as nonpast. We must ascribe the pragmatic pastness to the nature of the suffix -taka, which requires an embedded-clause event to precede the matrix-clause event. Therefore, if the latter event takes place or is completed at the speech time, -taka forces us to interpret the former event as taking place pragmatically in the past. The interpretation of the pastness associated with the null-form tense in the -taka clause is somewhat similar to that of the null-form before the retrospective suffix -te.
My analysis states that the higher -ess cannot be coindexed with the lower-clause tense -Ø, because tense is the head of INFL and hence only tense can bear an index.

Next, consider Type III, in which the perfective -ess appears in the embedded clause, but the past -ess does not occur in the matrix clause, as in (30). The matrix tense indicates nonpast and is coindexed with the lower-clause tense. What this entails is that the lower tense is understood as referring to the same temporal relation as the matrix one, namely, nonpast. But the lower aspect cannot be understood as being identical to the matrix aspect, which is empty.

    J.-Nm home-Loc go-Perf-Nonpast-and come
    ‘John has gone home and is coming back.’

b. S-structure

Next, consider Type IV where the embedded clause has the perfective -ess and the matrix clause has the past-tense -ess. In (31b), the matrix -ess c-commands the lower clause -ess, but a binding relationship is not possible between the tense and aspectral categories. Only tense categories bear an index. At the same time, the lower null tense is coindexed with the higher -ess. The lower clause -ess cannot occur under Tense. Suppose that in (31b) the embedded clause has an overt form -ess under Tense, not under Aspect. Then the lower tense -ess would be bound by the higher INFL. This is a violation of Principle C. Besides, the meaning of (31b) indicates that the embedded-clause event is com-
pleted before the matrix-clause event (in other words, it signals perfective aspect), and hence it is interpreted as past perfective. A violation of Condition C would give rise to ungrammaticality, as in (32).

   J.-Nm home-Loc go-Perf-Past-and come-Past-Dec
   ‘John went home and came back.’

b.


Example (32a) has the sequence -ss-ess in the embedded clause: the first -ss is an aspect marker, and the second one is the past-tense marker. The second -ess in the embedded clause is bound by the higher INFL. Because the embedded -ess is an R-expression, it must be free (i.e., following Condition C). In (32b), when the matrix clause -ss is under Tense, and therefore past, the embedded clause -ess is bound by the higher INFL. So the ungrammatical sentence (32b) is correctly blocked, since it violates Condition C. Note that there is another possibility for the position of the matrix clause -ss in (32b). Namely, if the matrix clause -ess is perfective, there is no binding relationship between the embedded and the higher-clause -ess, since the matrix tense is not coindexed with the embedded-clause -ess. Thus, (32b) would be predicted to be acceptable. In fact, there is disagreement among people about the acceptability of (32b). To some people, (32b) is marginal or
judged to be more acceptable than (32a). In contrast to the sentences in (32), those in (33) are acceptable.

(33) a. John-i cip-ey ka-ss-Ø_i-taka wa-ss-ess_i-ta.
   ‘John had gone home and had come back.’

b. John-i cip-ey ka-Ø_i-taka wa-ss-ess_i-ta.
   ‘John was going home, but on the way he had just come back.’

In (33), the matrix verb has the meaning of past perfective. In (33a), the embedded -ss is not bound by the higher INFL because the former is aspect but not tense. In (33b), on the other hand, the lower -Ø is bound by the higher INFL. Note that in (33b) the embedded null tense is coindexed with the second -ess of the matrix verb, and is thus past tense. This explains why (33b) lacks a perfective sense, in other words, it has the meaning that John has not gone home. Since the lower aspect does not bear coindexing with the first -ss of the matrix verb, it cannot be interpreted as the same perfective aspect as the matrix one.

The trees in (33a’) and (33b’), which are the respective S-structures of (33a) and (33b), illustrate these facts. The reason why the matrix verbs allow the cluster -ess-ess, as in (33a, b), while the subordinate verbs do not allow it, as in (32), is explained by the claim that -ess is an R-expression subject to Principle C.
4.4 Overlapping constructions

Compared with transferentive clauses, overlapping constructions are rather straightforward. They permit neither the perfective suffix nor the overt past-tense suffix in the first clause, and the suffixes involved are always anaphoric. In the overlapping time relation, the intersection of the intervals of the two events is specified by such suffixes as \(-umyense_1\) ‘while (doing), at the same time as’ and \(-nulako\) ‘while (doing)’. The suffix \(-umyense\) is a homophonous entity with two meanings, one ‘while’ and the other ‘although’. When used in the former meaning (i.e., \(-umyense_1\)), it is temporal and always anaphoric. When it is used in the latter meaning (i.e., \(-umyense_2\)), it is nontemporal and deictic or anaphoric. I consider the suffix \(-nulako\) to be always temporal, despite the fact that in certain pragmatic situations it behaves as if it were nontemporal, as will be discussed shortly. First, observe the example with \(-umyense\) in (34).

    school-Loc go-Past-while J.-Nm M.-Ac meet-Past-Dec
    ‘While going to school, John met Mary.’


In (34a), the null form \(-Ø\) in the embedded clause marks the same past tense as the matrix-clause tense, and thus functions as an anaphoric tense. Due to the sense of overlapping or simultaneity that \(-umyense\) conveys, two different time adverbs are not allowed, as shown in (35).
(35) *Ecey hakkyo-ey ka-Ø-myense,
yesterday school-Loc go-Past-while
onul John-i Mary-lul manna-ss-ta.
today J.-Nm M.-Ac meet-Past-Dec

‘While John went to school yesterday, he met Mary today.’
(John did not meet Mary until today.)

Thus, (34a) may be schematically represented as in (36), and its tree structure may be drawn as in (37). The null tense in (37) is coindexed with the matrix tense. If there were an overt tense form -ess instead of -Ø, it would violate Condition C, and hence would be ruled out as in (34b).

(36) going to school

(37) S-structure of (34a)

In general, -umyense constructions are subject to the equi-subject constraint between the embedded and matrix clauses. Rarely, however, are there cases where the two subjects are not identical, as shown in (38). As for -nulako constructions, they show a similar pattern to [+temporal] -umyense ‘while’ clauses. First of all, overt tense -ess is not allowed in an embedded clause, as in (39). Moreover, due to the overlap-
ping or simultaneity sense, two different time adverbials are not per-
mitted, as shown in (40).4

(38) a. Nal-i palkaci-Øi-myense, say-ka wul-essi-ta.
    day-Nm brighten-Past-while bird-Nm cry-Past-Dec
    ‘As it dawned, birds chirped.’

      J.-Nm song do-Past-while kids-Top run-Past-Dec
      ‘While John was singing, the children ran.’

(39) a. Ecey kongpuwa-Øi/*ess-nulako, cam-ul mos ca-ssi-ta.
    yesterday study-Past-while sleep-Ac not sleep
    ‘I couldn’t sleep yesterday on account of studying.’

      snow road-Ac clean-Past-while troubled-Past-Dec
      ‘I had a hard time clearing the snow on the road.’

(40) a. *Onul kongpuwa-Øi-nulako, ecey cam-ul mos ca-ss-i-ta.
    today yesterday
    *‘While studying today, I couldn’t sleep yesterday.’

    b. Ecey nwun-kil-ul chiwu-Øi-nulako, onul kosaynghay-ss-i-ta.
    *‘While cleaning the snow road yesterday,
      I had a hard time today.’

Some previous analyses in a GB framework are confronted with dif-
ficulties in dealing with overlapping or simultaneity constructions, be-
cause the embedded clause in these sentences is considered tenseless. In
my analysis, however, this does not pose any problem, because I
assume that a null-tense category is present. By virtue of the null-tense
category, INFL can assign the nominative case in embedded clauses, as
the example in (38) showed.

4.5 Posterior constructions
Posterior temporal constructions are those whose embedded clause ends
in such complementizer (conjunctive) suffixes such as -ulyeko ‘in order
to’, -ule ‘to’, -koca ‘intending to’, -key ‘so that’, and -tolok ‘so that, in
order that’, as well as such temporal connectives as -ki wihaye ‘for the
purpose of’. By virtue of their inherent futurity or prospectiveness, all
of these embedded clauses are subject to anaphoric or deictic tense in-
terpretations. Notice in (41) that the embedded-clause tense may be
interpreted as either past or nonpast.
(41) Hakkyo-ey ka-Ø/j-lyeko, John-i Mary-lul manna-ss/-ta.
school-Loc go-(Non)Past-to J.-Nm M.-Ac meet-Past-Dec
‘In order to go to school, John met Mary.’

One potential controversy may arise from the treatment of such a set of suffixes that are assumed to allow both interpretations. That is, one may question whether the two interpretations (deictic and anaphoric) are indeed grammatically ambiguous instead of being simply pragmatically vague. I maintain that the former is the case on the following grounds. In sentence (41), the embedded-clause event (i.e., John’s going to school) must necessarily take place after the matrix-clause event (i.e., John’s meeting Mary), as in (42). However, the event of John’s going to school can also occur after the speech time, as shown in (43).

(42)

\[
\begin{array}{ccc}
E2 & E1 & S \\
\hline
\text{meeting Mary} & \text{going to school} & \\
\end{array}
\]

(43)

\[
\begin{array}{ccc}
\text{going to school} & \\
E1 & E1 & S \\
\hline
\end{array}
\]

meeting Mary

Thus, the event of John’s going to school (denoted by E1) can occur before S or after S. The former interpretation occurs where -Ø refers to the same past relation denoted by the matrix tense -ess, with the temporal ordering between E2 and E1 being constrained by the semantic nature of the conjunctive suffix in question. The latter interpretation occurs where -Ø refers to a nonpast relation, either present or future time. The two interpretations are represented in (44).

      b. Hakkyo-ey ka-Ø_i-lyeko, John-i Mary-lul manna-ss/-ta.

Now one may claim that the two interpretations in (44) are vague, because the embedded-event time may refer to any time, including future, as long as it is after the matrix-event time. However, recall that the notion of tense in the present study is crucially distinguished from the notion of event time. That is, tense is a grammatical category that names a relation between the speech time and the event time, whereas event time is not a grammatical category. In this view, tense has only two
values, past and nonpast. Contrast this with the more common view that tense categories refer to event times that bear a particular relation to the speech time. In this latter view, tense can have infinitely many values since there are indefinitely many event times. From the perspective I subscribe to, the null tense in (41) can refer either to the past relation, as in the interpretation in (44a), or the nonpast relation, as in (44b). Therefore, they are not vague, but ambiguous.

(45) Nayil  hakkoyo-ey  ka-Øj-lyeko,
tomorrow  
kucey  John-i Mary-lul manna-ssj-ta.
day before yesterday  meet-Past-Dec
‘In order to go to school tomorrow,
John met Mary the day before yesterday.’

(46) Ecey  hakkoyo-ey  ka-Øj-lyeko,
kucey  John-i Mary-lul manna-ssj-ta.
‘In order to go to school yesterday,
John met Mary the day before yesterday.’

(47) S-structure of (41)

This claim is further born out by examples (45) and (46), where the ambiguity is resolved by means of temporal adverbials. These sentences clearly indicate that a deictic interpretation in (45) is justifiable in view
of its nonpast relationship with regard to the speech time. Coindexing of the zero form in (46) is justifiable in view of its coreference with the matrix tense and its past relationship with regard to the speech time.

The tree in (47) is proposed for the two interpretations of (41). As with pronominals, the null-form tense in (47) receives its interpretation from the antecedent (i.e., the matrix tense). In this case, the two tenses are coindexed. In addition, the null tense can be taken to be deictic, in which case it names a nonpast relation.

### 4.6 Nontemporal constructions

Nontemporal conjunctive suffixes include, among others, -ko ‘and’, -kena ‘or else’, -una ‘but’, -ciman ‘but’, -eto ‘but’, -umyense ‘even though’, -unikka ‘because’, and the temporal connective -nun tey ‘but, and’. Many of the nontemporal sentences (except -umyense ‘although’) are coordinative, and the first clause in them behaves like a matrix clause, so far as temporality is concerned. I propose tree (48a) for coordinate constructions, whereas (48b) is for subordinate constructions.

There are some suffixes that are [±anaphoric], such as -ko, -unikka, and -nun tey. Constructions where this type of suffix occurs show interesting syntactic and semantic characteristics by virtue of their ambivalent nature. The suffix -ko is different from the rest of the [±anaphoric] suffixes, in that it can be either temporal or nontemporal. Thus, -ko clauses involve not only the controversial syntactic contrast between subordination and coordination, but also anaphoric and deictic interpretations of the null tense.

I will proceed as follows. First, I will briefly examine the syntactic behavior of genuine nontemporal conjunctive constructions in 4.6.1. This will provide a basis for comparison with the behavior of the other types of conjunctions to be discussed in the subsequent sections. Second, I will devote much space to the tense pattern of -ko clauses in 4.6.2, and show that the two meanings of the suffix -ko are associated with their respectively different syntactic structures. Moreover, I will propose a syntactic mechanism in dealing with the unique phenomenon of alternation between -ess and -Ø in -ko clauses. Third, in 4.6.3, I will touch on some other nontemporal conjunctive suffixes that manifest both deictic and anaphoric characteristics.
4.6.1 Deictic clauses

So far as temporal interpretation is concerned, most nontemporal clauses, with the exception of -umyense ‘while’ and -nikka ‘because’ clauses, are all deictic. That is, nontemporal suffixes such as -kena ‘or else’, -ciman ‘but’, -una ‘but’, and -eto ‘even if’ behave as if they were simple sentences or matrix clauses, with the speech time as the only deictic center. Therefore, there is no restriction as to the occurrence of the overt past-tense form and the perfective suffix. Observe (49).

(49) a. John-i ka-Ø-kena, Mary-ka ka-Ø-n-ta.
   J.-Nm go-Nonpast-or M.-Nm go-Nonpast-Ind-Dec
   ‘Either John or Mary is going.’

   ‘Either John is going or Mary went.’

   ‘Either John or Mary went.’

   ‘Either John had gone, or Mary went.’

It is noteworthy in (49a) that the null-form tense in the first clause independently designates a nonpast relation. In other words, the null-
form tense in the second clause, which also names the nonpast relation, does not require an anaphoric interpretation of the first-clause tense. I suggest a reinterpretation of tense indexing along the lines of (50), which allows us the indexing shown in (49a~).

(50) A deictic tense has disjoint reference (or has no indexing).

(49) a.´John-i ka-Ø*uij'-kena, Mary-ka-Ø₁-n-ta.
    ‘Either John or Mary is going.’

Sentence (49a~) does not allow an anaphoric null tense. By reinterpreting the indexing of deictic tense, we can account for such sentences as John-un nalmata hakkyo-ey ka-Ø₁-ko, Mary-nun nayil ka-Ø₁-n-ta ‘John goes to school every day and Mary will go tomorrow’.

Notice that in (49b), the null-form tense is not coindexed with the other tense category. Notice further in the examples above that there is no temporal cooccurrence restriction between the two clauses in each sentence. The two clauses are totally independent of each other as far as these relative event tenses are concerned, as shown in (51).

    J.-Nm yesterday go-Past-or day before yesterday go
    ‘John went either yesterday or the day before yesterday.’

    go-Past-or
    ‘John went either yesterday or the day before yesterday.’

Notice that (51b) does not allow an anaphoric null tense, the occurrence of which renders the sentence ungrammatical. This indicates that genuine [-anaphoric] conjunctive clauses maintain maximal temporal independence, a characteristic that is not shared even by coordinatively used -ko clauses, as we will see in 4.6.2 below.

There are some homophonous suffixes that are both temporal and nontemporal. The suffix -ko, to be discussed in the following subsection, is one case, and -umyense is another. For example, the suffix -umyense is homophonous between a temporal -umyense₁ ‘while’, as we have already discussed in 4.4, and a nontemporal -umyense₂ ‘although, despite the fact that’. While the former does not allow the occurrence of -ess in an embedded clause, the latter does, as (52).
   J.-Nm rice-Ac eat although ricecake-also eat
   i. 'Although John had eaten rice, he also ate ricecake.'
   ii. *'While eating rice, John also ate rice cake.'

   i. 'While John was eating rice, he also ate ricecake.'
   ii. *'Although John ate rice, he also ate ricecake.'

Note that (52a) cannot be interpreted in the temporal meaning in the sense of (ii), whereas in (52b) only the temporal reading is allowed. Note further that the occurrence of -ess is not allowed with the temporal meaning of 'while' (i.e., simultaneous action).

4.6.2 -ko clauses
It is well known that conjunctive clauses with -ko have two different semantic properties. As Lukoff (1982: 104) points out, clauses with -ko are generally translatable into English as ‘... and’. However, there are two senses of ‘... and’: (1) coordinating ‘and’, as in enumerating a series of actions, conditions, qualities, and so on, and (2) sequential ‘and’, where the action, condition, or quality of the last clause is ordered in time after that of the clause with -ko. The two types of -ko in Lukoff’s classification correspond respectively to [-temporal] and [+temporal] in my analysis. In this section, I suggest that the [+temporal] -ko (-ko₁) is a subordinating suffix, whereas the [-temporal] one (-ko₂) is a coordinating suffix. To support this proposal, I will present the semantic, morphological, and syntactic properties that -ko clauses are assumed to have.

Incidentally, it is interesting to note that English ‘and’ shows a pattern similar to -ko. As Ross (1967: 93) points out, there are instances of the morpheme ‘and’ that must be derived from sources different from the coordinate ‘and’. For instance, there is a difference in relativizability between (53a) and (53b).

(53) a. I went to the store and bought some whisky.
   b. I went to the store and Mike bought some whisky.

(54) a. Here’s the whisky which I went to the store and bought.
   b. *Here’s the whisky which I went to the store and Mike bought.

Ross argues that there are clear syntactic indications that the relative clause in (54a) is not an instance of ordinary sentence conjunction.
Among some supporting pieces of evidence that Ross provides, the test in (55) is particularly noteworthy.

(55)  a. I went to the store and have bought some excellent whisky.
      b. *The excellent whisky which I went to the store and have bought was very costly.

There are restrictions on the tenses that may appear in such sentences as (53a). Example (55a) parallels (53a) in everything but tense, but the NP the whisky is not relativizable, as (55b) shows. Furthermore, sentences like (53a) are not subject to the Coordinate Structure Constraint, as Ross points out. Ross’s Coordinate Structure Constraint provides a crucial test for distinguishing the two types of -ko clauses in Korean.

Let us observe some semantic evidence first. The -ko clauses may be classed into two tense-related groups: (a) Group A, in which the optional -ess in the first conjunct neither causes ungrammaticality nor changes the time-relation of the two events, and (b) Group B, in which the occurrence of -ess in the first conjunct causes ungrammaticality or changes the temporal ordering between two events. Let us consider Group A first.

      J.-Top play-and M.-Top study-Past-Dec
         ‘John played and Mary studied.’

(57)  Mary-nun Sue-lul cilthwuhay-Ø/ss-ko miwehay-ss-ta.
      M.-Top S.-Ac jealous-and hate-Past-Dec
         ‘Mary was jealous of and hated Sue.’

      sky-Top high-and wind-Top cool-Past-Dec
         ‘The sky was high and the wind was cool.’

      C.-Top novelist-be-and artist-be-Past-Dec
         ‘Chelswu was a novelist and artist.’

Notice that in (56–59), -ess in the first conjunct can be omitted without changing the meaning. The two subjects in each sentence can be the same or different. The two events of each sentence have neither temporal ordering nor conceptual dependency on each other. For instance, in (56) the event of John’s playing and the event of Mary’s studying are conceptually independent, in that the two are symmetric and do not have any cause–effect relation. Nor does one event provide a precondi-
tion or specify the information about the other event. To be more precise, sentence (57’) can be analyzed as a simple combination of (57’a) and (57’b).

(57’) Mary-nun Sue-lul cilthwuha-Ø_i-ko, miwehay-ss_i-ta.
        M.-Top   S.-Ac    jealous-Past-and hate-Past-Dec
              ‘Mary was jealous of and hated Sue.’

a. Mary-nun Sue-lul cilthwuhay-ss-ta.
   ‘Mary was jealous of Sue.’

b. Mary-nun Sue-lul miwehay-ss-ta.
   ‘Mary hated Sue.’

Note that (57’) does not have the overt -ess in the first conjunct. Yet the null tense in the first conjunct is interpreted as past, because (57’) is understood as a combination of two past events (a) and (b). We can switch the order of the two conjuncts without affecting the meaning, as in (57’”). The meaning of (57’”) remains the same as that of (57) and (57’). Thus, a null-tense -Ø can appear as a free variant of -ess in the first conjunct of Group A. Furthermore, this type of -ko does not impose any particular time ordering between the two events, because, as we have observed above, there is no cause–effect relation between the two events. This stands in contrast to examples in Group B, where the first-conjunct event must precede the second-conjunct event, as observed in (60).

(57’”) Mary-nun Sue-lul miweha-Ø-ko, cilthwuhay-ss-ta.
   ‘Mary hated and was jealous of Sue.’

        J.-Top   brother-with fight-and home-Ac leave
              ‘John fought with his brother and left home.’

        J.-Top   lunch-Ac eat-and sleep-Past-Dec
              ‘John ate lunch and took a nap.’

        S.-Top   rain-Ac catch-and play around
              ‘Sue wandered around in the rain.’

(63) Sue-nun nongsalul cis-Ø/*ess-ko sal-ass-ta.
        S.-Top   farming-Ac make-and live
              ‘Sue lived by farming.’
In (60–63), the temporal relation between the two events denoted by each sentence is clear. For example, in (60) the event of fighting with the brother must take place before that of leaving home. Similarly, in (61), eating lunch happens before taking a nap. In other words, in Group B, the event of the first conjunct must precede that of the second conjunct. This is confirmed by the fact that switching the two conjuncts can produce opposite time relations, as illustrated in (61) and (61'). Switching the two conjuncts in a sentence in Group B can also produce ungrammaticality due to semantic incongruity, as shown in (62') and (63').

(61) John-un cemsim mek-$\emptyset$-ko, naccam ca-ss$_i$-ta.
   J.-Top lunch eat nap take-Past-Dec
   ‘John ate lunch and (then) took a nap.’

(61') John-un naccam ca-$\emptyset$-ko, cemsim mek-ess$_i$-ta.
   ‘John took a nap and (then) ate lunch.’

(62') *Sue-nun tolatani-$\emptyset$-ko pi-lul mac-ass$_i$-ta.
   S.-Top play around-and rain-Ac catch-Past-Dec

(63') *Sue-nun sal-$\emptyset$-ko nongsa-lul ci-ess$_i$-ta.
   S.-Top live-and farm-Ac make-Past-Dec

The differences in (61'), (62') and (63') show a contrast with examples in Group A, where switching the two conjuncts causes neither ungrammaticality nor differences in temporal relations. Furthermore, the distribution of the first conjunct -ess in Group B differs from that in Group A, in that Group B does not allow -ess in the first conjunct. Interestingly, the occurrence of -ess in the first conjunct of sentences (60), (61), and (62) changes the tense interpretation of the clause in such a way that the two events no longer show a precedence relationship. They are considered separate and independent, a phenomenon that we found in Group A. Hence such sentences belong to Group A.

The interpretation of the null tense in the embedded clause also shows different behavior. In Group A, the interpretation of the null tense is either deictic or anaphoric. In Group B, on the other hand, the interpretation of the null tense is anaphoric, because the null tense is dependent upon the tense of the second conjunct. It should be mentioned here that there is a class of ambiguous sentences (henceforth Group C) that is ambiguous between Group A and B. Consider (64) and (65).
(64) John-i nolayha-Ø-ko chwum-ul chwu-ess-ta.
   J.-Nm sing-Past-and dance-Ac dance-Past-Dec
   a. ‘John sang a song and he danced.’
   b. ‘John sang a song first and then he danced.’
   c. ‘John sang a song and danced at the same time.’

(65) Nwun-i nok-Ø-ko kkoch-i phi-ess-ta.
   snow-Nm melt-Past-and flower-Nm bloom-Past-Dec
   a. ‘Snow melted and flowers were in bloom.’
   b. ‘Snow melted and then flowers began to bloom.’
   c. ‘Snow melted and at the same time flowers began to bloom.’

Note that the sentences in (64) and (65) each have three possible interpretations. The interpretations in (a) show a pattern similar to those of Group A, that is, no temporal ordering between the two events. Yet the interpretations in (b) and (c) are similar to those of Group B, in that the two events are temporally related, namely, they have a precedence or simultaneity time-relation.

Sentences (64) and (65) also allow the occurrence of -ess in the first conjunct, as in (64’) and (65’). This is similar to the phenomenon observed in Group A. Interestingly, when -ess appears in the first conjunct, sentences (64’) and (65’) tend to be interpreted as (a), not as (b) or (c). In other words, with -ess in the first conjunct, the two events are considered to be unrelated and separate. This is exactly what we found in Group A.

(64’) John-i nolayhay-ss-k0, chwum-ul chwu-ess-ta.

Yet, sentences (64) and (65) are similar to Group B, in that the two events have temporal ordering under the (b) and (c) interpretations. Switching the two conjuncts changes the meaning in the (c) interpretation, as illustrated in (66) and (67). A test for disambiguating -ko in Group C is provided by morphological evidence, which is the next topic of discussion.

   ‘John danced (first) and then sang a song.’

   ‘Flowers bloomed and then snow melted.’

The suffix -ko in the Group A sentences cannot be replaced by the [+temporal] suffix -kose ‘and then’. This holds true regardless of whether
or not there is an overt -ess in the first conjunct. Thus, sentences (56)–
(59) become unacceptable with -kose, instead of -ko.

(56’) *John-un nol-Ø/ass-kose, Mary-nun kongpwuhay-ss-ta.

(57’) *Mary-nun Sue-lul cilthwuha-Ø/ass-kose miwehay-ss-ta.

(58’) *Hanul-un noph-Ø/ass-kose, palam-un siwenhay-ss-ta.

(59’) *Chelswu-nun soselka-i-Ø/ess-kose, hwaka-i-ess-ta.

The lexical property of -kose requires the event of the embedded clause
to take place before that of the matrix clause. Since the sentences in
Group A do not imply any temporal relation between two events, substi-
tuting -kose in Group A causes ungrammaticality.

In contrast, the sentences belonging to Group B can cooccur with
-kose naturally. As I mentioned earlier, -ko in Group B can be inter-
preted as simultaneous or sequential. Similarly, Group B sentences with
-kose have two interpretations, that is, a sequential relation, as in (60’)
and (61’), or a simultaneous relation, as in (62’) and (63’).

(60’) John-un hyeng-kwa ssawu-kose cip-ul naka-ss-ta.
    John fought with his brother and left home.

(61’) John-un cemsim-ul mek-kose ca-ss-ta.
    John ate lunch and took a nap.

(62’) Sue-nun pi-lul mac-kose tolatani-ess-ta.
    Sue was caught in the rain and played outside.

(63’) Sue-nun nongsa-lul cis-kose sal-ss-ta.
    Sue lived by farming.

Similarly, in the sentences where -ko is ambiguous between sequentiality
and simultaneity, -kose also shows the same ambiguity, as in (68).

(68) Oythwu-lul ip-Ø₁,ko(se) cip-ul naka-ss₃-ta.
    i. He put on his overcoat and then left the house. (Sequential)
    ii. He left the house wearing his overcoat. (Simultaneous)

It has been assumed by some Korean linguists (e.g., H. Kim 1977,
Song 1976) that -ko in Group B is a form contracted from -kose, while
-ko in Group A nothing to do with -kose. Thus, I suggest that the
ability to cooccur with -kose is a crucial test for disambiguating the
sentences in Group C. For instance, (64) and (65) can cooccur with
-kose. So they are considered to belong to Group B. In contrast, sen-
tences (64’–65’), where -ess appears in the first conjunct, cannot cooccur
with -kose, and hence belong to Group A. The morphological evidence here provides an independently motivated mechanism for distinguishing the two types of -ko. This will justify setting up different underlying syntactic structures for the two instances of -ko, as we will see later.

Now, let us move on to syntactic evidence. So far the semantic and morphological evidence clearly predicts whether -ess is omissible and what its interpretation is. In the following discussion, I will show that sentences in Group A in fact have a coordinate structure while those in Group B have a subordinate structure. I suggest that the different tense behaviors of -ko clauses are due to different syntactic structures. There are clear syntactic indications that Group A and Group B have different structures. For example, as we have already observed, the fact that switching the order between the two clauses changes the meaning only in Group B is partly a syntactic test. Another test is provided by Ross’s Coordinate Structure Constraint.

(69) Coordinate Structure Constraint
In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.
(Ross 1967: 88–114)

Consider some Korean examples. The sentences in Group A are generally subject to this constraint, although questioning an element in a conjunct is not bad.7 Note that in (70) the NP Mary-nun—an element of the second conjunct—may be questioned in Korean, as in (70a), partly weakening the universal applicability of Ross’s Constraint.8 However, the element chayk ‘book’ in the first conjunct cannot be relativized, as shown in the ungrammaticality of (70b).

(70) John-un chayk-ul ilk-Ø/ess-ko,
J.-Top book-Ac read-and
Mary-nun naccam-ul ca-ss-ta.
M.-Top nap-Ac sleep
‘John read a book and Mary took a nap.’

a. [Mwues-ul Mary-nun hay-ss-ko],
what-Ac M.-Top do-and
John-un chayk-ul ilk-ess-nun-ka?
J.-Top book-Ac read-Past-Ind-Q
*‘What did Mary do and John read a book?’
While the sentences in Group A are partly subject to the Coordinate Structure Constraint, the sentences in Group B do not show such a restriction at all.

John fought with his brother and left home.

‘With whom did John fight and leave home?’

b. [John-i hyeng-kwa ssawu-Ø-kose] naka-n] ku cip-i J-Nm brother-with fight-and leave-Rel the house-Nm
burn down
*‘The house in which John fought with his brother and then left
was burned down.’

There is a difference in relativizability between Group A and Group B, as exemplified in (70) and (71), respectively. Moreover, both English and Korean show the “across-the-board rule application”: Wh-movement can extract parallel wh-phrases out of conjuncts when all conjuncts of a coordinate structure are affected. For instance, compare the two sentences in (72) (cf. Riemsdijk & Williams 1986: 27). In short, semantic, morphological, and syntactic evidence shows that Group A has a coordinate structure and Group B has a subordinate structure.

(72) a. I wonder which books Mary hates and Sam likes.

b. [Mwusun chayk-ul Mary-ka silheha-Ø-ko, which book-Ac M-Nm dislike-and
S-Nm like-Ø-Ind-Comp I-Top wonder

In the following, I will dwell on the syntactic analysis of -ko clauses. The discussion so far has argued that there are two types of -ko clauses, [+temporal] -ko and [–temporal] -ko; that [+temporal] -ko occurs in a subordinate clause and [–temporal] in a coordinate clause; and that the different behavior of tense in the two clause types is as in (73).
The subordinate -ko allows only the null form -Ø, whereas the coordinate -ko allows -ess and -Ø as free variants in embedded clauses. Semantic and morphological arguments have shown whether -ess is omissible (depending on its syntactic structure). However, they do not provide an explanation for the unacceptability of -ess in a subordinate clause. In the following, I will show that the unacceptability of -ess in a subordinate clause is in fact predicted by Condition C of the Binding Theory. A GB analysis of the pattern in (73) is stated in (74).

(74)  a. A null tense is a pronominal.
     b. An overt past tense -ess is always free (i.e., not bound).
        (Principle C)

        S.-Top rain-Ac catch go around

b. S-structure

I will consider, first of all, the parallel between the overt past tense form -ess and an R-expression. As we have already observed, while a subordinate -ko clause does not permit -ess at all, a coordinate -ko clause
allows it in the embedded clause. Let us consider the former first, using the X-bar schema.

Note the ungrammatical sentence in (75a) with -ess in the embedded clause, and its tree structure. In (75b), the embedded clause -ess is bound by the tense in the matrix clause, because the latter c-commands and is coindexed with the lower -ess. This violates Condition C, and hence gives rise to the ungrammaticality of the sentence. As we have already observed, when there is a null tense instead of -ess in the embedded clause of (75), the sentence becomes grammatical. The ungrammaticality of (75) can be explained by Binding Principle C: R-expressions must be free. The question that arises here is why -ess is allowed in a coordinate -ko clause. Is this a violation of Principle C? My answer is no.

      sky-Top high-Past-and wind-Top cool-Past-Dec
      ‘The sky was clear and the breeze was refreshing.’
   
   b. S-structure

Observe (76). Compared with the structure for a subordinate clause, as postulated in (75b), (76b) shows some important differences. Above all, (76b) is a coordinate sentence in which two CPs are conjoined, while (75b) is a subordinate construction. The reasons for not representing (76b) in the same way as (75b) are manifold. For one thing, as discussed with regard to semantic evidence, a coordinate -ko clause is semantically different from a subordinate -ko clause, in that the former is conceptually independent of the matrix clause, while the latter is not. Morphologically also, we have seen that -ko is freely replaceable with the [+temporal] suffix -kose ‘and then’, when it marks a subordinate
clause, but not when it marks a coordinate clause. Also, syntactic evidence indicates the independence of the first conjunct from the second. All this contributes to the postulation of the coordinate -ko as an entity that signals two equal and independent clauses.

X-bar theory does not provide any clear structure that can be associated with conjunctions. For example, it is unclear what the head of a coordinate structure is. There are several possible positions for -ko in (76b) (e.g., Cho & Morgan 1987). For example, it might be connected to I’, or it might be connected to IP in the form of a complementizer. Here, I simply assume the latter alternative, as shown in (77).

(77)

Now returning to (76b), note that a c-command relation between the two tenses is not possible. The maximal projection of the second conjunct -ess is the first-clause IP. Thus it blocks c-command of the first conjunct tense, though coindexing is still allowed. In other words, -ess in the first conjunct is free, not bound. This pattern is parallel to R-expressions: R-expressions (such as lexical NPs) must be free in all domains. Observe the example in (78) (from Riemsdijk & Williams 1986: 200), where John can be coreferential with the epithet the bastard if John does not c-command the bastard. When the c-command relation does hold between an NP and an epithet, it yields an ungrammatical sentence, as in (79).

(78) [sJohn$_i$ arrived late]$_s$ and [s the bastard$_i$ had the nerve to criticize Mary]$_s$.

(79) *John$_i$ thinks that the bastard$_i$ will win.

Tense behavior in connection with -ess shows a parallel pattern. For instance, in (76b) the c-command relation does not hold between tense in the first conjunct and the second conjunct (although coindexing is permitted). When the c-command relation holds between the two tenses, the sentence will be rendered ungrammatical, as we already observed
in the case of the subordinate -ko. This observation further confirms the claim in (80).

(80) The overt past -ess must be free. (Principle C)

The advantage of (80) is that it explains the parallel between the two phenomena, which at first glance look totally unrelated. Furthermore, (80) explains the contrast between the unacceptability of -ess in a subordinate clause and the acceptability of -ess in a coordinate clause. That is, the unacceptability is due to the fact that -ess fails to be free, since it is c-commanded and coindexed with the tense in the matrix clause. In contrast, -ess in a coordinate clause does not violate condition (80) and is grammatical, as in (76b).

(81) a. Sue-nun pi-lul mac-Ø₁-ko/*ass-ko tolatani-ess₁-ta.
    ‘Sue wandered around in the rain.’

b. S-structure

Thus far, I have argued that the overt form -ess is an R-expression, following from Principle C. Next, let us consider the null form -Ø. The S-structure for sentences in Group B would be along the lines of (81). The INFL in the matrix clause in (81b) c-commands the INFL in the
lower clause and is coindexed. Notice here that the disjoint reference is not allowed.

(81') Sue-nun [pro pi-lul mac-∅_{1}'_{j}-ko ] tolatani-ess₂-ta.

Since the [+temporal] conjunctive suffix -ko (and its putative variant -kose) requires the embedded-clause event to take place before or sometimes at the same time as the matrix-clause event, only the anaphoric interpretation is allowed. In other words, the embedded null tense refers to the same past relation as the matrix tense. This prediction is confirmed by the ungrammaticality of (82). The time adverbs ecey ‘yesterday’ and onul ‘today’ cannot occur with [+temporal] -ko clauses within the same sentence.⁹

(82) *Sue-nun ecey pi-lul mac-∅-ko, onul tolatani-ess-ta.
    S.-Top yesterday rain-Ac catch today go around
    ‘Sue was caught in the rain yesterday and walked around today.’

We have seen so far two types of parallels: one between a pronominal and a null tense, and the other between an R-expression and -ess. Let us consider how the null tense in a subordinate clause and the null tense in a coordinate clause are related. Recall that a coordinate -ko clause also allows the null tense -∅ as a free variant of the overt -ess.

Consider (76a) once more, repeated here as (83a). In (83b), the c-command relation does not hold between -∅ and -ess. The first maximal projection of -ess in the second conjunct is the bracket [IP]. This blocks c-command of the null tense, and hence binding is not allowed. Nevertheless, the interpretation of the null tense in (83) is past, which is coreferential with the second-conjunct tense. Recall that sentences in Group A (i.e., coordinate clauses) do not have a temporal ordering or a cause–effect relationship between the two events. The two events are considered conceptually independent and separate. Yet, the interpretation of the null tense is dependent upon the matrix tense. That is, the coordinate -ko can be either deictic or anaphoric, hence, like all other pronominals, the null tense in such cases is interpreted as deictic or anaphoric, which are illustrated in (84).

    ‘The sky was clear and the breeze was refreshing.’
b. S-structure

Hanul-un noph-Ø-ko palam-un siwenhay-ss-ta

(84) a. Sue-nun eccey hakkyo-ey ka-Ø₁-ko,
    S.-Top yesterday school-Loc go-Past-and
    John-un onul ka-ss₁-ta.
    J.-Top today go-Past-Dec
    ‘Sue went to school yesterday, and John today.’

b. Sue-nun nayil hakkyo-ey ka-Ø₁-ko,
    S.-Top tomorrow school-Loc go-Nonpast-and,
    John-un eccey ka-ss₁-ta.
    J.-Top yesterday go-Past-Dec
    ‘Sue goes to school tomorrow and John went yesterday.’

In (84a), the null tense of the first conjunct is interpreted as past, hence anaphoric, coreferring to the second-conjunct tense. In (84b), on the other hand, the null tense of the first conjunct is nonpast, hence deictic, even though the second conjunct is past. This supports the claim that the null tense is a pronominal because the null tense can receive its interpretation from an antecedent (that is, the matrix tense) or it can refer freely (that is, deictically). Diagrams for (84a, b) follow.

(84a)

```
E1 E2 S
  ────┬───┐
    Ø₁ ess₁
```

(84b)

```
E2 S E1
  ────┬───┐
    ess₁ Ø_j
```
The overt tense form occurs in the last verb rather than in the preceding verbs when the tenses are coreferential in complex sentences. Compare the examples in (85). In (85a), a null form coindexed with the second-clause tense occurs in the first clause. However, sentence (85c), with a null form in the second clause and an overt form in the first clause, cannot have the same meaning as (85a). Note that Principle C of the Binding Theory would not block the ungrammaticality of (85c), since there is no c-command relation. I would thus like to propose the generalization in (86).

   J.-Nm dance dance and M.-Nm sing-Past-Dec 
   ‘John danced and Mary sang a song.’

   ‘John danced and Mary sang a song.’

   ‘John danced and Mary sang a song.’

   ‘John danced and Mary is singing a song.’

(86) In coordinate-clause structures, an overt tense form is allowed in both conjuncts or in the last conjunct.

There are some parallels between this tense phenomenon in coordinate-clause structures and NP coordinate structures in Korean.⁹ Namely, nominative or accusative case markers in NP coordinate structures appear in the last NP, as illustrated in (87).

(87) a. [John-kwa Mary]-ka ka-ss-ta. 
   J.-and M.-Nm go-Past-Dec 
   ‘John and Mary went.’


b. Sensayngnim-i [John-kwa Mary]-lul cohahay-ss-ta. 
   teacher-Nm J.-and M.-Ac like-Past-Dec 
   ‘The teacher liked John and Mary.’


In addition, plural markers in Korean show a pattern similar to the tense pattern in coordinate clauses. Specifically, when there are more than two plural NPs, the plural marker -tul tends to appear in both NPs or in the last NP, but not in the first NP, as shown in (88). Sentence (88c)
is unacceptable with the same meaning as (88b), but is acceptable with a different meaning, as in (ii).

    student-Pl-and professor-Pl-Nm come
    ‘Students and teachers came.’

b. Haksayng-kwa kyo swampu-tul-i wa-ss-ta.
    ‘Students and teachers came.’

c. Haksayng-tul-kwa kyo swampu-ka wa-ss-ta.
    i. *‘Students and teachers came.’
    ii. ‘Students and a teacher came.’

The discussion so far indicates that anaphoric tense is coindexed and does not require a c-command relation, as stated in (89). This notion of anaphoricity is a bit unusual since the c-command requirement is not necessary.

(89) Anaphoric tense is coindexed with its antecedent.

4.6.3 Other [±anaphoric] clauses
In addition to the suffix -ko, there are some other nontemporal suffixes or adverbials that have the [±anaphoric] feature. Two typical forms are the suffix -unikka ‘because, since, so’ and the clausal connective -n tey ‘in the circumstance that, and, but, although’. These two forms manifest slightly different syntactic patterns, as will be discussed briefly in what follows.

Observe (90) and the associated readings. Notice that -unikka does not impose any particular temporal ordering between the two events. Even in the reading (90i), John’s going may take place before, at the same time, or after Mary’s going, as shown in (91). Notice that the null tense -Ø in the embedded clause in the (90i) reading is anaphoric, in that its interpretation hinges upon the matrix-clause tense, while the (90ii) reading is clearly deictic, anchored to the time of speaking.

(90) John-i ka-Ø\textsubscript{ij}, nikka, Mary-to ka-ss\textsubscript{ij}-ta.
    J.-Nm go-Past-so M.-also go-Past-Dec
    i. ‘John went, so Mary did too.’
    ii. ‘John is going, so Mary went too.’

(91) a. John-i kucey ka-Ø\textsubscript{i}, nikka, Mary-to ecey ka-ss\textsubscript{i}-ta.
    ‘Since John went the day before yesterday, Mary also went yesterday.’
b. John-i ecey ka-Øi-nikka, Mary-to kucey ka-ss,-ta.
   ‘Since John went yesterday,
   Mary also went the day before yesterday.’

c. John-i akka ka-Øi-nikka, Mary-to akka ka-ss,-ta.
   ‘Since John went a while ago, Mary also went a while ago.’

In contrast, observe the sentences in (92), in which the suffix -ess occurs in the first clause. In (92a), John’s going must occur before Mary’s going, as if -unikka were an anterior temporal suffix, whereas John’s going in (92b) is interpreted uniquely in relation to the speech time. Because of the extreme distributional limitation of -unikka in terms of temporal anteriority (i.e., only after -ess), however, I propose that -ess is perfective in (92a) and that the null tense -Ø that follows the perfective is coreferential with the matrix tense, as shown in (92a’).

    ‘Since John had gone, Mary also went.’

    ‘Since John went, Mary is going too.’

(92) a. John-i ka-ss-Øi-unikka, Mary-to ka-ss,-ta.
    J.-Nm go-Perf-Past-so M.-also go-Past-Dec

Our second set of examples relates to the clausal nontemporal connective -n tey ‘and, but, although’, which consists of the adnominal suffix -n and the defective noun tey ‘circumstance, place, when’. Observe (93) and the two readings associated with it. The (93i) reading is anaphoric, whereas the (93ii) reading is deictic. Now, examine (94), where -ess occurs in the embedded clause.

(93) Nwun-i o-Øi-nu-n-tey, nalssi-ka ttattushay-ss,-ta.
    snow-Nm come-Ø-Ind-Adn-Comp weather-Nm warm-Past-Dec
    i. ‘It was warm, although it was snowing.’
    ii. ‘It was warm, although it is snowing.’

(94) a. Nwun-i wa-ss-nu-n tey, nalssi-ka ttattushay-ss,-ta.
    ‘It was warm, although it snowed.’

b. John-i ka-ss-nu-n tey, Mary-to ka-ss,-ta.
    ‘John went, but Mary did too.’

The sentences in (94) are analyzed as coordinate-clause constructions since the first clause allows the sentence-ender -yo.
(94’) a. Nwun-i wa-ss-nu-n-ney-yo,
snow-Nm come-Past-Ind-Adn-Comp-Dec
nalssi-ka ttattushay-ss-eyo.
weather-Nm warm-Past-Dec
‘It was warm, although it snowed.’

J.-Nm go-Past-Ind-Adn-Comp-Dec M.-also go-Past-Dec
‘John went, but did Mary too.’

Unlike the parallel -unikka clauses, (94) shows that the two events denoted by each sentence do not manifest any temporal ordering. Nor is there any evidence that the form -n tey requires an anaphoric tense interpretation. That is, the first clauses are always interpreted as deictic. In this respect, the -n tey clauses are similar to coordinate conjunctive -ko clauses. Since I have discussed indexing and other syntactic proposals with regard to -ko and other conjunctive suffixes, I will not repeat them here.
Chapter 5
Tense in Nonconjunctive Embedded Clauses

5.1 Overview
This chapter will discuss temporal phenomena in embedded constructions other than conjunctive sentences, with particular reference to the tense category. Nonconjunctive clauses of the embedded type are composed of adnominal clauses, consisting of relatives and noun complements (nominal complements or appositives), verbal complement clauses, quotative constructions, and nominalized clauses. These will be taken up in order in sections 5.2, 5.3, 5.4, and 5.5, respectively.

It will be shown that the various proposals delineating temporal patterns of Korean that have been made in the foregoing chapters are not only applicable, without any particular modification, to nonconjunctive embedding, but are also supported by the additional data provided. Specifically, the claim that the overt tense form -ess is an R-expression and that the null-tense form -Ø is a pronoun will be further supported. Other associated proposals, such as those on the aspect/tense distinction, the postulation of the null tense, the deictic/anaphoric distinction, and coindexing, are all applicable to nonconjunctive embedding constructions. It will also be observed that there are significant parallels between different types of conjunctive constructions and different types of nonconjunctive embedding. For one thing, just as temporal conjunctive suffixes allow neither the overt past tense nor the overt aspect (-taka allows perfective -ess), so verbal complementizers allow no overt -ess. Second, the null tense is interpreted only as anaphoric in both anterior and overlapping clauses and in verb complement clauses other than future-oriented ones (with a suffix like -key). Third, both temporal conjunctive clauses and verbal complements allow the null-form tense, which is taken to be anaphoric or deictic. Such conjunctive suffixes include -ulyeko ‘in order to’ and -koca ‘intending that’. Such verbal complementizers include -ko (as in -ko siphta ‘wish to do’) and -key ‘so that’ (as in causatives). Fourth, nominalized clauses with nominal suffixes like -ki and -um are ambiguous between an anaphoric and a deictic interpretation of tense. When the tense is anaphoric, they do not accept the occurrence of -ess; but when it is deictic, they accept it. This behavior is parallel to that of biclausal conjunctive constructions with such
suffixes as -_unyense ‘while, although’. Finally, adnominal and quotative constructions are parallel to -ko clauses, in that they are [±anaphoric] and allow occurrences of both overt past and perfective. Elaboration of these and other observations will occupy the rest of this chapter.

5.2 Adnominal constructions

5.2.1 Morphological notes
Before taking up the matter of temporal interpretations in adnominal (or adjectival) clauses in the subsequent subsections, let me briefly comment on the composition of adnominal complementizers.

While matrix, conjunctive, and other embedded clauses employ the suffixes -ess and -₀ to indicate tense contrasts (which appear before other elements such as the complementizer), adnominal clauses (i.e., relative and noun-complement clauses) manifest a different morphological system. There are three different sets of complementizers relating an adnominal clause to its matrix clause: (a) -(u)n (on action verbs), (b) -nun (on action verbs)/-(u)n (on stative verbs), and (c) -(u)l (on action verbs, but also occasionally on stative verbs). In addition to their complementizer function, the three sets of suffixes are usually associated respectively with past, present, and future time reference. They actually function to indicate these temporal contrasts, as observed in (1) (e.g., Choi 1965, Na 1971).

(1)  

a.  ka-n salam ‘a person who went/has gone’
    cwuk-un salam ‘a person who died/has died’
    (action)

b.  ka-nun salam ‘a person who goes/is going’
    cwuk-nun salam ‘a person who dies’
    khu-n chayk ‘a big book; a book that is big’
    coh-un chayk ‘a good book; a book that is good’
    (action)
    (stative)

c.  ka-l salam ‘a person who may go/will go’
    aphi-l salam ‘a person who may be sick/will be sick’
    ??pwluk-ul cip ‘a house that may be red/will be red’
    (action)
    (stative)

The classic practice of treating these three sets as complementizers that indicate past, present, and future time reference is not only an oversimplification, but a misinterpretation in several important respects. First, as explained below, the so-called past tense also involves perfective aspect, as the English translations indicate. Second, the so-called present tense may refer to the (definite) future, as well as the present, and also to the past if it is coreferential with a matrix past tense, as observed in
(2a, b). Third, the so-called future tense does not exist in Korean. The suffix \(-(u)l\) is not a future-tense marker, but a predictive or prospective modal, as attested in (2c–e).

(2)  
   a. nayil ka-nun salam ‘a person who will go tomorrow’
   
      yesterday cry  person-Ac  see-Past-Dec
      ‘(I) saw a person who was crying yesterday.’
   
   c. cikum ka-l salam ‘a person who may be going now’
   
   d. ecey ka-ss-ul salam ‘a person who may have gone yesterday’
   
   e. Mary-nun  ecey  ilk-ul chayk-ul onul  ilk-ess-ta.
      M.-Top  yesterday read  book-Ac  today  read-Past-Dec
      ‘Mary read the book today that she was supposed to read
      yesterday.’

   Thus, the examples in (2c–e) do not contain any future-tense marker, but only the nonpast-tense marker \(-\emptyset\) with a prospective modal suffix. I maintain that there are only two tenses in Korean, past and nonpast, in all matrix, conjunctive, and other embedded clauses.

   Now, let us briefly consider the morphological structure of each of the three adnominal complementizers. As for the relativizer suffix \-\((u)n\), it is assumed that the form has been restructured from \-ess-nun, with the deletion of \-ess-n (e.g., Nahm 1978). (William O’Grady has suggested an alternative analysis that assumes a zero tense in relative clauses. This null form can be taken to be anaphoric or deictic. Thus, there is no overt form \-ess in this analysis, while the suffix \-\((u)n\) has a perfectivelike feature.) I subscribe to the assumption of a composite origin, since there are at least two cases where the assumed original form is synchronically actualized. First, the Kyongsang dialect, which is presumed to retain historically earlier forms, allows the form \-ess to occur with \-nun in relative clauses, as shown in (3).

(3)  
   a. chayk-ul  ilk-ess-nun/ilk-un  haksayng
      book-Ac  read  student
      ‘the student who read a book’
   
   b. pap-ul  mek-ess-nun/mek-un  haksayng
      rice-Ac  eat  student
      ‘the student who ate rice’
c. koki-lul cap-ass-nun/cap-un haksayng fish-Ac catch student
   ‘the student who caught fish’

The second piece of evidence in support of the assumed -ess-nun form comes from such defective-noun constructions as in (4), where ci ‘whether’ and tey ‘circumstance, place’ are defective nouns.

(4)  a. John-i ka-ss-nu-n ci molu-Ø-n-ta. J.-Nm go whether unaware-Nonpast-Ind-Dec ‘(I) don’t know whether John went.’
    b. John-i ka-ss-nu-n tey ‘John went, but/so ....’

Furthermore, the overt form -ess occurs freely in an adnominal clause if followed by such inflectional suffixes as the retrospective, as in ka-ss-te-n salam ‘a person who had gone’, and the prospective, as in ka-ss-ul salam ‘a person who is supposed to have gone’.

For descriptive purposes, I propose to analyze -(u)n as -ESS-n, rather than as -ESS-nun or -ESS-un. The form -ESS-nun will not be used because -nun is not actualized in standard speech. The form -ESS-un is also problematic since -ess cannot occur with -un in the Kyengsang dialect, as the ungrammaticality of (5) in this dialect indicates. Thus, (6a) can be analyzed as (6b) simply for descriptive convenience.


    ‘the book that John read/has read’
    b. John-i ilk-ess-n chayk

Both the overt form -ess and the covert form -ESS in an adnominal clause have two interpretations, past and perfective, as the English translations in (6a) indicate. This dual function corresponds to the two functions of the matrix past/perfective form -ess. Thus, for instance, (6a) can be represented as in (7).

    ‘the book that John has read’
b. John-i ilk-ess-n chayk
   J.-Nm read-Past-Comp book
   ‘the book that John read’

As for the complementizer -nun, I consider it not to contain any tense category. (The same holds true for -n.) The fact that the form -ess can occur with -nun in the Kyungsang dialect and in some defective-noun constructions suggest that the form -nun does not have a temporal feature. Moreover, structures like the defective-noun clause in (8) indicate that -nun is in no way to be treated as a tense-related complementizer.

(8) John-i ka-ss-keyss-nun tey
    J.-Nm go-Past-Modal-Comp DN
    ‘John must have gone, but/so ...’

Therefore, -nun is to be considered a combination or conflation of an indicative suffix (-n, -nu, -nun) and the complementizer (-un, -n, or -n). I will not analyze it into the constituent morphemes in what follows.

Finally, -(u)l might be regarded as having been derived historically from -(u)l-nun in view of the existence of such free variations as -(u)l ci vs. -(u)l-nun ci ‘whether (it) may ...’. I will simply use the form -(u)l without further analysis.

5.2.2 Relative clauses

The fact that the tense in adnominal clauses, including both relatives and noun complements (or nominal complements), can be interpreted deictically as well as anaphorically has drawn the attention of many Korean linguists (e.g., Nahm 1978, D. Yang 1977, An 1980, N. Kim 1984, C. Lee 1985). For example, D. Yang (1977) points out that the tense in relative clauses is sometimes interpreted with respect to the speech time and sometimes with respect to a matrix-clause event time. However, both D. Yang (1977) and C. Lee (1985) suggest that tense in adnominal constructions is basically interpreted in relation to the tense of the main clause (that is, it receives an anaphoric interpretation), and that the deictic interpretation is rather marginal. It will be shown that tense in relative and noun-complement clauses is in fact ambiguous between the two interpretations, unless there is a particular deictic context that disambiguates one from the other.

As an initial approximation, observe the examples in (9), quoted from D. Yang (1977), where e stands for the gap replacing the head noun. The embedded clause of each sentence in (9) has two interpretations, deictic and anaphoric, as the English glosses indicate. The dual inter-
interpretations have led some authors to think that tense in Korean relative clauses is vague or arbitrary (cf. Nahm 1978). However, as pointed out by D. Yang (1977) and An (1980), the interpretation of relative-clause tense is neither vague nor arbitrary, but rather systematic.

   M.-Top J.-Nm read book-Ac read-Past-Dec
   ‘Mary read the book that John read/had read.’

   ‘Mary reads the book that John reads/read.’

   ‘Mary read the book that John will/would read.’

Now, I maintain throughout the present study that:

(10) a. Both (optional) aspect and (obligatory) tense categories occur in the stated order in matrix and embedded clauses.

b. Tense is either past or nonpast. Therefore, a null tense must occur when no overt past suffix appears.

c. Only tense can be indexed with another tense.

d. An anaphoric null tense is coindexed with the matrix tense.

e. The deictic interpretation of the null-form tense is nonpast (unless otherwise specified).

Thus, the sentences in (9) are represented as in (11) in my framework.

   ‘Mary read the book that John had read.’

   ‘Mary read the book that John reads/read.’

   ‘Mary read the book that John had planned to read.’

   ‘Mary read the book that John may/will read.’
Example (11a) shows that the embedded clause has the perfective aspect -ESS, while the tense is covert and coreferential with the matrix past tense. Hence, we obtain past perfective. In (11a'), on the other hand, the null tense is deictic and thus nonpast. Hence, we obtain nonpast perfective. The null-form tense -Ø in (11b) is coindexed with the matrix -ess, indicating that the embedded-clause event takes place in the same timeframe as that of the matrix-clause event. This is not the case with (11b'), where the embedded-clause event takes place either at present or generically. In (11c), John's reading may take place between the time of the matrix-clause event (i.e., the time of Mary's reading) and the time of speaking, whereas in (11c') John's reading may take place at or any time after the speech time.

In order to express these mentioned time relations more explicitly, let us add time adverbials such as ecey 'yesterday', kucey 'the day before yesterday', onul 'today', cikum 'now', and nayil 'tomorrow' to the sentences in (11). The results are shown in (12).

   'Mary read the book yesterday that John had read the day before yesterday.'

   'Mary read the book yesterday that John has just read.'

   'Mary read the book yesterday that John read/was reading (yesterday).'

   b.'Mary-nun [cikum John-i e ilk-Øi-nun] chayk-ul ecey ilk-essi-ta.
   'Mary read the book yesterday that John is reading now.'

   'Mary read the book the day before yesterday that John was going to read yesterday.'

   'Mary read the book yesterday that John may/will read now/tomorrow.'

As I noted in Chapter 3, I regard INFL as containing various inflectional grammatical categories including tense, which serves as the head of INFL. Based on this assumption, together with the other proposals that I have presented in (10), I propose that, for example, sentence (11a) has the S-structure shown in (13).
It has been argued in earlier chapters that the overt tense form -$ESS$ is an R-expression that obeys Condition C. The occurrence of the overt form -$ESS$ in embedded clauses does not violate Condition C, because the form -$ESS$ denotes either perfective aspect or a deictic past tense that has nothing to do with the matrix past tense. Hence it cannot be coindexed with the matrix tense.

What I have said so far about relative-clause constructions with the matrix clause in the past tense is also applicable to the sentences whose matrix clause is in the nonpast tense. I will briefly examine a few examples. In (14), based on an example from Nahm (1978), -$ESS-N$ in the relative clause cooccurs with a future-indicating time adverb like $nayil$ ‘tomorrow’ or $nacwungey$ ‘later’. Thus, there is no apparent way to interpret it as a past-tense marker. Rather, it denotes perfective aspect. Furthermore, it is assumed that there is a null-tense form following the aspect suffix that is coreferential with the matrix nonpast tense. This is
clearly supported by the meaning of the sentences, both of which denote a future perfective event. In other words, the embedded-clause event is supposed to be completed before the matrix clause event in both sentences.

(14) a. [Nayil  e mantu-ESS-Ø₁-N] mwalen-un nayil tomorrow make-Perf-Nonpast-Comp things-Top tomorrow phal-Ø₁-keyss-ta. sell-Nonpast-Modal-Dec ‘I will sell the things tomorrow that I will have made tomorrow.’

b. [Nacwunkey  e nam-ESS-Ø₁-N] mwalen-un later remain-Perf-Nonpast-Comp things-Top nay-ka chelih-Ø₁-keyss-ta. I-Nm handle-Nonpast-Modal-Dec ‘I will take care of the goods that may later be left over.’

In nonpast matrix constructions, too, when the embedded-clause tense is not coindexed with the matrix-clause tense, the two tenses denote different time relations. Specifically, the embedded tense is deictic and is interpreted with respect to the speech time, as shown in (15), where the embedded form -ESS denotes pastness, whereas the zero form in the matrix clause is nonpast in accordance with the usual convention (cf. Chapter 3). Since the two tenses are not coindexed in (15), there is no violation of Condition C.


As I indicated at the outset of this section, D. Yang (1977) argues that the basic tense system in Korean embedded clauses is endophoric (i.e., anaphoric) on the grounds that tense in embedded clauses is basically controlled by the matrix event time rather than by the speech time. Similarly, C. Lee (1985) claims that relative-clause tense in Korean is primarily interpreted in relation to the matrix-clause tense. As we have observed, however, this is not always true, although it may be the case that one interpretation is preferable to the other for pragmatic reasons. I propose that tense in all relative clauses can be either anaphoric or deictic, and can be disambiguated by various means, as stated in (16).
Relative-clause tense can be either anaphoric or deictic. One or the other interpretation can be suppressed by means of time adverbials, other indexicals, matrix verbs, discoursal contexts, or pragmatic situations.

I will not repeat all the examples given thus far in order to support the claim that relative-clause tense can be either anaphoric or deictic. I will limit myself to making a few comments on D. Yang’s observations. Yang proposes (1977: 217–218) that when the embedded-clause tense is the same as the matrix-clause tense, there seems to be a slight preference for the endophoric (i.e., anaphoric) interpretation. Example (17) is from Yang.

M.-Top J.-Nm read-Fut book-Ac read-Fut Nml-is-Dec
‘Mary will read the book that John will read.’

Yang observed that (17) without context is more likely to be interpreted to mean that John’s reading preceded Mary’s reading rather than that John’s reading followed Mary’s reading. However, it is extremely difficult to concur with Yang’s intuitive judgment, because hardly anyone whom I have consulted has agreed with it. Instead, many, including myself, feel that there is no particularly preferred ordering between the two events, and tend to think that the embedded -ul (prospective marker) refers, more preferably, to a future with respect to the speech time (and is thus deictic) rather than with respect to the matrix-clause time (in which case it would be anaphoric).

Yang presents some of his arguments based on the assumption that sentences like (18) are exclusively endophoric. (The example is only slightly modified from Yang.) However, the ambiguity of (18) is easily proven by the fact that it perfectly answers (19). This proves that (18) will only be used exophorically (i.e., deictically).

J.-Nm sweep-Comp be-Pres man-Ac hit-Past-Dec
‘John hit a/the man who was sweeping.’

(19) John-i ce salam-tul cwung nwukwu-lul ttayli-ess-ni?
J.-Nm that persons among who-Ac hit-Past-Q
‘Who did John hit among those people over there?’

A third comment on Yang relates to his analysis of sentences like (20). Yang (1977: 225) states, “Note that the adverb ecen ‘yesterday’
co-occurs with the future-tensed predicate *ilk-ul* ‘read’. This is a clear indication that the generic use of the future tense *-ul* is timeless.” A better account, according to my proposal that there is no future tense in Korean, would be to attribute timeless genericness to a deictically interpreted null-tense *-Ø* and consider *-ul* simply a complementizer syncretized with a “predictive” or “prospective” modal suffix, as in (20’).

(20) John-un ecey ilk-ul chayk ul acikto an ilk-ess-ta.  
J.-Top yesterday read-Fut book-Ac yet not read-Past-Dec  
‘John has not read yet the book that he should have read yesterday.’

‘John did not read the book that he should have read yesterday.’

One might say that the embedded *-Ø* in (20’) is anaphoric, and that the occurrence of *-Ø* with *ecey* ‘yesterday’ is because *-Ø* refers to past tense. This is not true, however, because *ecey* can occur with *-Ø*, even if the matrix tense is nonpast. Incidentally, the fact that the embedded tense in (20’) is exclusively deictic weakens Yang’s claim that embedded tense is basically anaphoric (or endophoric, to use his term).

The discussion thus far has already implied that there are strong parallels between conjunctive and relative clauses with respect to tense, among them, the binary distinction between past and nonpast, the function of the null tense, and the anaphoric/deictic distinction. In particular, the behavior of clauses marked by conjunctive suffixes (such as the coordinative *-ko* ‘and’) and that of relative clauses share the common features that both are [±anaphoric] and both allow the occurrence of the overt past-tense and perfective suffix. One characteristic difference between conjunctive and relative clauses is that, in the former, the lexical meanings of conjunctive suffixes (especially temporal ones) largely constrain the possible interpretations of the null-form tense. In relative clauses, by contrast, temporal adverbials or indexicals (that is, speech-time-based adverbs) and the semantic properties of matrix verbs, as well as discoursal and pragmatic contexts, constrain the interpretation of the null-form tense.

(21) a. [Ecey kangtocil-ul ha-ESS-N] salam-i  
yesterday robbery-Ac do-Past-Comp person-Nm  
sip-il-ceney-to kangtocil-ul hay-ss-ta.  
10-days-before-also robbery-Ac do-Past-Dec  
‘The person who did the robbery yesterday also committed robbery ten days ago.’
b. [YeKi moi-ESS-Ø-N] salam-un nay-ka motwu here gather-Perf-Nonpast-Comp people-Top I-Nm all cheliha-keyss-ta.
handle-Modal-Dec ‘I will deal with the people who are gathered here.’

ne-pota ku-ka mence pillieka-ss-ta.
you-than he-Nm first borrow-Past-Dec ‘He borrowed earlier from the library the book that you borrowed just a moment ago.’

d. John-i [pro cikum kongpwuhu-Ø-nun] ce haksayng-ul J.-Nm pro now study-Nonpast-Comp that student-Ac
ttayli-ess-ta.
beat-Past-Dec ‘John beat that student who is studying now.’

This brings us to the second half of the generalization made in (16). Note in (21) that relative-clause tenses have only one reading, the deictic one. Observing such constructions, Nahm (1978) states that it is unclear when the relative-clause tense is interpreted with respect to the speech time, and when with respect to the matrix tense. Notice that in (21), however, all the sentences contain deictic expressions (in italics) in their relative clauses. Deictic expressions, such as ku ttay ‘then’, cikum ‘now’, ittaka ‘later’, ecey ‘yesterday’, and akka ‘a while ago’ (see 2.5) are inherently speech-time oriented (cf. Comrie 1985). In cases where there are deictic expressions, the relative-clause tense can no longer receive its interpretation from the matrix-clause tense, and hence there is no anaphoric reading. These observations are captured in (22).

(22) When there is a speech-time-based indexical in an embedded clause, the indexical stipulates the event time.

Thus, the tense interpretation of the embedded clause has to be consistent with the semantic content of the indexical. In short, one or the other interpretation can be suppressed by means of time adverbials or indexicals in relative clauses. In addition, there are other means of disambiguating the two interpretations that need not concern us here, such as discoursal or situational contexts, as well as the semantic properties of matrix verbs, which will be touched on briefly below. Observe the so-called pseudo-relative construction in (23).
    train-Nm go-Past-Comp sound-Ac hear-Past-Dec
    ‘(I) heard the train running.’

This type of construction may be called pseudo-relative, in that it 
does not contain a gap. It is not a noun complement because the embed-
ded clause and the head noun are not in a noun-complement relation. In 
any case, such constructions have a matrix verb that is related to the 
five senses, such as tutta ‘hear’, pota ‘see’, and mathta ‘smell’. In view 
of the nature of the matrix verbs, which entail perception of a prior 
event, the embedded clauses are to be interpreted as anaphoric.

Finally, let us consider the case where the retrospective mood suffix 
-te occurs in relative clauses. As discussed extensively in 2.3, Korean 
can use this suffix both in matrix and embedded clauses. The mood 
form -te in a relative clause indicates that there is a reference time, 
represented by -te, that precedes the speech time. The event time is 
either simultaneous with (in the case of -Ø) or precedes (in the case of 
-ess) this reference time. Consider (24).

    wear-Past-Ret-Comp clothes-Ac take off-Past-Dec
    ‘(I) took off the clothes that I started putting on.’

    ‘(I) took off the clothes that I was already wearing.’

(25) a. [e cis-Ø-te-n] cip-ul he-Ø-n-ta.
    build-Ø-Ret-Comp house-Ac destroy-Nonpast-Ind-Dec
    ‘I am destroying the house that I was building.’

    ‘I destroyed the house that I had built.’

Note that the presence of -ess in the embedded clauses is associated 
with a perfective meaning, and hence is aspectual. Note also that the 
null-form tense is interpreted only as past, due to the inherent pastness 
of the retrospective suffix -te, which provides the reference time for the 
interpretation of the null tense. Moreover, whenever -te appears in a 
relative clause, only the deictic interpretation is valid, as shown in (26).

    ‘Mary read the book the day before yesterday that John read 
yesterday.’

'Mary is reading the book today that John was reading yesterday.'

Thus, -te functions as a temporal indexical that suppresses the anaphoric interpretation. Incidentally, this fact again weakens the claim for the predominant anaphoric interpretation of the zero form in relative clauses.

One question still not clearly answered is: How does the null-tense -Ø before a retrospective-mood suffix receive the past-tense interpretation? The answer is: From -te. But how? I have been assuming that only tense categories can be indexed. The suffix -te is not considered a tense suffix in the present study. Therefore, -Ø and -te cannot be coindexed because they are different types of categories. I propose therefore a feature-copying rule for tense, along the lines of (27). This rule should also be applicable to the null-tense form occurring before a retrospective suffix in a matrix clause.

(27) -Ø \rightarrow [+past] / ___ -te

(When an embedded null tense suffix occurs before a retrospective mood suffix, it copies the [+past] feature from the mood suffix.)


One final note with regard to the retrospective suffix: only rarely can the double form -ess-ess be used before -te in the embedded clause. One might argue that the occurrence of the double form violates Condition C, because probably one -ess denotes past tense and is coreferential with the matrix past tense. The double form in these constructions is purely emphatic. In other words, the aspectual form -ess is repeated for pragmatic emphasis. Furthermore, most Korean speakers do not recognize a meaning difference between a clause with -ess-te and the same clause with -ess-ess-te. Some speakers consider sentences like (28) unnatural. In a matrix clause, even a treble form -ess-ess-ess is often used for emphasis, although such a form may be regarded as a performance error.

To summarize, the tense pattern in relative clauses is essentially parallel to that of conjunctive sentences. The relative clause allows two interpretations for a null-tense form, anaphoric and deictic, and these may be disambiguated by lexico-structural as well as discourse-pragmatic means. The occurrence of the double form is allowed only when followed by the -te form and is a very restricted phenomenon. The claim
that -Ø is a pronominal and -ess is an R-expression is supported by the
tense interpretation of relative clauses.

5.2.3 Noun-complement clauses

The tense pattern of noun-complement clauses shows a phenomenon
similar to that of relative clauses, in that the same three sets of
complementizer (-un, -nun, and -ul) are used, that the tense interpreta-
tion is ambiguous between deictic and anaphoric, and that this ambigu-
ity may be disambiguated by means of time adverbials or other
indexicals, matrix verbs, discourse contexts, or speech situations. There
are differences too. One morphological difference, as already indicated
in 5.2.1, is that in some noun-complement clauses with a defective noun,
the past/perfective complementizer -un (i.e., my -ESS-N) is obligatorily
replaced by the more regular form -ess-nun, as in (29).

    J.-Nm go-Past-Ind DN unaware-Nonpast-Modal-Dec
    ‘I don’t know whether John went/has gone.’

Syntactically as well, noun-complement constructions are not only
much less frequent than relative-clause constructions, but also have more
strict internal cooccurrence restrictions between the embedded and ma-
trix clause. In tense interpretations, too, noun-complement clauses are
less free (thus less frequently ambiguous) in the choice between anaphoric
and deictic interpretations. Compare (30a), which contains a relative
clause, with (30b), which contains a noun-complement clause. Notice
that the relative clause in (30a) allows all three complementizers with a
variety of anaphoric and deictic interpretations. In contrast, the noun
complement clause in (30b) allows only -nun, whose interpretation is
constrained by the fact that the matrix verb pota ‘to see’ entails percep-
tion of a prior event. Furthermore, (30b) is exclusively anaphoric.

    ‘John saw a person who had gone, went/was going, goes,
    is going/may go, will go to school.’

    ‘John saw Mary coming.’

With these preliminary notes, observe the noun-complement con-
stuctions in (31), represented in their surface forms. The defective noun
kes ‘fact/thing’, which functions as the head noun of each noun com-
plement clause in (31), is preceded by the complementizer -(u)n or -nun.
Notice that the embedded event in (31a) is interpreted as past perfective, in (31b) as past or present perfective, and in (31c) as past or nonpast. Observe (31a), which is interpreted exclusively as anaphoric and has the past-tense suffix in the matrix clause. There is no violation of Condition C in (31a) because the only possible reading the noun-complement clause has is past perfective. That is, the time of the noun-complement-clause event precedes the time of the matrix-clause event, hence there is no violation of Condition C. (31b), on the other hand, is either deictic or anaphoric. Therefore, the sentences in (31) may be represented in my framework as in (32).

(31) a. Mary-nun [John-i hakkyo-ey ka-Ø₁-n] kes-ul
   M.-Top J.-Nm school-Loc go-Past-Comp fact-Ac
   al-ass₁-ta.
   know-Past-Dec
   ‘Mary knew that John had gone to school.’

   ‘Mary knows that John went to school.’

   ‘Mary knew that John goes/was going to school.’

   M.-Top J.-Nm school-Loc go-Perf-Past-Comp fact-Ac
   al-ass₁-ta.
   know-Past-Dec
   ‘Mary knew that John had gone to school.’

   ‘Mary knows that John has gone to school.’

   ‘Mary knew that John goes/was going to school.’

Notice in particular that the null form -Ø can be indexed with the matrix-clause tense to show the same or different temporal relation. Thus, coindexing is necessary in (32a), while both coindexing (i–i) and noncoreferential indexing (i–j) are needed in (32b) and (32c) to indicate both anaphoric and deictic interpretations. Consider one alternative S-structure of (32c) as an example.
The null-form tense in (33) refers to the same past relation designated by the matrix *-ess*. Or it can denote the nonpast relation with respect to the speech time (with i–j indexing). It was shown in the previous section that, when there is a speech time-based indexical, its tense excludes one interpretation. Similarly, in the noun-complement clause, the null-form tense is interpreted only deictically when there is a speech-time-based adverb. Observe (34), in which a future-time adverb *nayil* 'tomorrow' is in the embedded clause.

\[(34)\] Mary-nun [John-i *nayil* hakkyo-ey ka-Ø$_{i(j)}$-nun] kes-ul al-ass$_i$-ta.
\quad ‘Mary knew that John will go to school tomorrow.’

Therefore, the interpretation of the noun-complement clause tense in (34) is determined with respect to the speech time, not with respect to the matrix-clause tense. The matrix-clause tense no longer functions as an antecedent for the interpretation of the null tense in cases like (34).
Without any particular speech-time-based context, the null-form tense in the embedded clause has two interpretations, past and nonpast. This supports my claim that -Ø acts like a pronominal whose reference can vary depending on syntactic and semantic factors.

Earlier, it was briefly mentioned that there are some syntactic differences between relative and noun-complement clauses. Some elaboration is in order. It was indicated that while relative clauses have no restriction on the occurrence of different complementizers, noun-complement clauses show heavy restrictions. That is, the semantic properties of the matrix-clause verb and the head noun, as well as indexicals, constrain the occurrence of complementizers. Consider (35), in which the null-form tense can have only the past relation, coreferential with the matrix tense. It does not allow a nonpast (that is, deictic-tense) interpretation. This contrasts with constructions like (32c), where the verb alta ‘to know’ occurs. The difference between the two types of construction in terms of tense interpretation is due to the different semantic properties of the matrix verbs pota ‘to see’ and alta ‘to know’. The former requires the embedded-clause event to be observed at the time indicated by the matrix tense. This requirement does not exist with verbs like alta.

      school-Loc see

‘Mary saw John going to school.’

In addition to the main verb, semantic properties of the head noun involved also play a role in the occurrence of tense-related complementizers in the noun-complement clause. For instance, time-indicating head nouns, such as ttay ‘time’, cek ‘time’, and mwulyep ‘around the time’, allow only the prospective complementizer form -(u)l, as shown in (36).

      P.-Loc go-Perf-Past-Comp time he-Ac meet-Past-Dec

‘When I went to Pusan, I met him.’


‘When I was going to Pusan, I met him.’

c. *[Pusan-eiy ka-ESS-N] ttay ...

d. *[Pusan-eiy ka-Ø-nun] ttay ...
In contrast, head nouns like *twi/hwu* ‘after’ allow only the form -(u)n (i.e., -ESS-N), as illustrated in (37). I consider the ungrammatical forms in (37) to be due to the fact that the head noun *hwu* ‘after’ requires the embedded-clause event to take place before the matrix-clause event. Thus, only the form -(u)n (-ESS-N) is allowed, since it has the property of perfective or past by virtue of the form -ESS.

(37)  
   ‘After I went to Pusan, I met him.’

b. *[Pusan-ey ka-Ø-l] hwu ...

c. *[Pusan-ey ka-Ø-nun] hwu ...

### 5.3 Verbal complements

Verbal-complement clauses are expressed by means of such verbal complementizers as the so-called infinitive suffix -e (and its vowel harmonic variant -a), the gerundive -ko, the resultative -key, the suspective -ci, the desiderative -ko, and the conditional -umyen.

There are strong parallels between verbal complements and temporal biclausal sentences: (i) Neither type of construction allows the overt tense form -ess in embedded clauses. (ii) Except for the conjunctive suffix -taka and such verbal complementizers as -eya ‘if only’ and -umyen ‘if’, none of the sentences in the two types allow the perfective suffix -ess. (iii) All the sentences in the two types allow the anaphoric interpretation of zero tense. (iv) Only a limited number of complementizers (e.g., the posteriority conjunctive -ulyeko ‘in order to’ and the verbal complementizer -ko ‘to’) allow both anaphoric and deictic interpretations of zero tense. Let us consider some examples.

Notice that all the sentences in (38) allow only the null-form tense in the embedded clause. As Kwon (1985) also points out, the tense interpretation of verbal complement clauses is determined with respect to matrix-clause tense. Thus, all the sentences but (38b) and (38f) require their embedded clause to be interpreted as past, since the matrix-clause tense is past. If the matrix clause has nonpast tense, the embedded tense will also be interpreted as nonpast. This contrasts with the ambiguous interpretations of tense observed in adnominal clauses. However, as noticed in (38b) and (38f), complement clauses that end in such future-oriented complementizers as the adverbializer -key ‘so that’ and the desiderative -ko ‘to’ allow both an anaphoric and a deictic interpretation for the zero form, as the disambiguation of (38f) in (39) indicates.
    Comp try
    'John went to school (to find out ...).'

    Comp want
    'John wanted to go to school.'

    Comp complete
    'John took off (without saying a word) for school.'

    Comp be
    'John was (in the middle of) going to school.'

    Comp be
    'John was at school.'

    Comp cause
    'John caused Mary to go to school.'

    Comp not
    'John didn’t go to school.'

    'John made Mary go to school yesterday.'

    *'John made Mary go to school tomorrow.'

The reason why verbal-complement clauses exclude one tense interpretation seems to be due to their syntactic and semantic properties. The embedded and matrix verbs in verbal complement constructions in Korean manifest a strong cohesion, to the extent that syntactically they behave like a compound verb. (For the notion of cohesion, see Sohn 1986.) Indeed, no adverbial or modifier can intervene between the embedded and matrix verb in the sentences in (38). Thus, the sentences in (40) are unacceptable. 6

    school go-Comp yesterday try
    'John went to school yesterday.'
   school go-Comp yesterday want
   ‘John wanted to go to school yesterday.’

   school go-Comp soon complete
   ‘John soon went to school.’

The examples so far do not allow the overt form -ess, nor the double form in verbal-complement clauses. However, as mentioned earlier, there are complementizers that allow the occurrence of -ess. These complementizers also allow the ambiguous temporal interpretations between anaphoric and deictic readings. Observe first the examples in (41) and (42) of ambiguous interpretations. Next, examine the cases where -ess shows up. The sentences in (43) and (44) are identical to those in (41) and (42) but for the addition of the suffix -ess.

   J.-Top yesterday school-Loc go-Past-Comp do-Past-Dec
   ‘John had to go to school yesterday.’

   ‘John had to go to school today.’

(42) a. Na-nun [John-i ecey hakkyo-ey ka-Ø₁-myen]
   I-Top J.-Nm yesterday school-Loc go-Past-if
   hay-ss₁-ta.
   think-Past-Dec
   ‘I wished that John went to school yesterday.’

   ‘I was hoping that John would go to school tomorrow.’

   J.-Top yesterday school-Loc go-Perf-Past-Comp do-Past-Dec
   ‘John had to have gone to school yesterday.’

   ‘John should have gone to school tomorrow.’

(44) a. Na-nun [John-i ecey hakkyo-ey ka-ss-Ø₁-umyen]
   I-Top J.-Nm yesterday school-Loc go-Perf-Past-if
   hay-ss₁-ta.
   wish-Past-Dec
   ‘I wished that John had gone to school yesterday.’
    ‘I wished that John would have gone to school tomorrow.’

As the English translations help show, the overt -ess in (43) and (44) indicates perfective aspect, whether it is associated with the sense of obligation, as in (43), or the subjunctive sense, as in (44).

In short, all the foregoing observations support the following generalization regarding the tense pattern of verbal complement clauses.

(45) No overt tense form is allowed in verbal complement clauses.
    (Principle C)

5.4 Quotative constructions

Quotative sentences in Korean are expressed by means of quotative particles: the indirect particle ko ‘that’ and the direct particles hako ‘saying that’ and lako ‘saying that’. Direct quotations are not the concern of this study, because they are not different from normal unquoted sentences in syntactic structure. Two interesting aspects of indirect quotative clauses in contrast with the other embedded clauses are that, first, they allow both past and perfective -ess and, second, they have sentence-type enders (i.e., declarative, interrogative, propositive, and imperative). However, these sentence enders lack speech level, that is, they are neutral in terms of speech levels.

        J.-Nm me-Dat M.-Nm here come Comp say
    i. ‘John told me that Mary would come here.’
    ii. ‘John told me, “Mary is coming here.”’
    iii. ‘John told me that Mary is coming/will come here.’

Observe (46), taken from N. Kim (1984: 113) but modified to fit my framework. Although Kim maintains that (46) functions as both an indirect and a direct quotation, with the readings (46i) and (46ii), my intuitive judgment is that the (46ii) reading is marginal. (Others I queried felt the same way.) N. Kim further states that if (46) is interpreted as a direct quotation, the tense of the quotative sentence will be interpreted as “present.” If it is interpreted as an indirect quotation, the tense of the quotative sentence will be interpreted as past to agree with the tense of the matrix verb. However, this claim misses the important fact that, even in an unambiguous indirect quotative clause, the tense can be ambiguous. Thus, we have the (46iii) reading.
Consider further the sentence in (47), which is an unambiguous indirect construction in N. Kim’s sense, because the reflexive subject form caki ‘self’ (instead of na ‘I’), which is coreferential with John, indicates that the clause is only indirect. Notice that (47) has both anaphoric and deictic readings, despite its pure indirectness. Thus, indirect quotations behave like relative clauses. The S-structure for (46) is represented in (48).

(47) John-i [caki-ka cikcep ka-Oj_{ij}-n-ta-ko] malhay-ss_{i}-ta.
    J.-Nm self-Nm himself go say
       ‘John said that he himself will go/would go.’

(48) S-structure of (46)

The treatment of the quotative particle -ko as a complementizer has been accepted by many generative grammarians. The sentence-ender -ta in the embedded clause in (48) is considered to belong under C(OMP). Note that when the null tense is coindexed with the matrix past tense, it is interpreted as past. When it is not coindexed, it indicates nonpast. Thus, (49) is allowed.

(49) John-i na-eykey [Mary-ka cikum yeki o-Oj_{ij}-n-ta-ko] ecey malhay-ss_{i}-ta.
    ‘John said to me yesterday that Mary is coming here now.’
In cases where there is an overt form -ess in the embedded clause, it refers to a time prior to the event time of the matrix clause. In other words, it is perfective. In this case, there is a null tense that immediately follows the perfective suffix and that is coreferential with the matrix tense. This fact is observed in (50a). In contrast, the overt past tense suffix -ess is impossible when the matrix clause also contains this form, as the ungrammaticality of (50b) and the grammaticality of (50c) show. Thus, the S-structure of (50a) looks like (51), where the null tense is coindexed with the matrix tense. Thus, the interpretation of the overt form -ess followed by the past -Ø, is perfective in the past.

     J.-Nm M.-Nm leave-Perf-Past-Dec-Comp say-Past-Dec
     ‘John said that Mary had left.’

      *‘John said yesterday that Mary left a while ago.’

      ‘John is saying that Mary left a while ago.’

(51) S-structure of (50a)
The discussion so far suggests that quotative clauses exhibit the same general tense patterns as those of the other embedded clauses. However, there is a unique characteristic associated with quotative clauses, namely, the double form -ess-ess can occur freely in the quotative clause, while it is marginal or unacceptable in other embedded clauses.

(52) John-i [Mary-ka ttena-ss-ess-Ø₁-ta]-ko malhay-ss₂-ta.
    ‘John said that Mary had once left.’

The embedded-clause tense in (52) indicates the temporal relation in which its event denotes past perfective at the time denoted by the matrix tense. One problem in this case is how to handle the two occurrences of -ess, neither of which is a past-tense suffix. One possible way to get around this problem is to recognize the duplication of -ess as a stacked perfective, indicating perfective in the perfective. Such a duplication is unique to quotative constructions (and probably to matrix-clause constructions with a retrospective suffix). Another solution may be to treat quotative constructions (and probably also retrospective constructions) as if they were the combinations of two independent sentences, namely, the quoted part and the quoting part. I will not elaborate on these alternatives.

5.5 Nominalized constructions

Nominalized clauses are formed by means of such nominalizing affixes as -ki and -um, whose difference has been a time-honored topic among Korean linguists. In general, -ki is related to nonfactivity and -um to factivity (cf. I. Yang 1972). Compare the sentences in (53).

(53) a. Mary-nun [John-i hakkyo-ey ka-ss-Ø-um]-ul
    M.-Top J.-Nm school-Loc go-Perf-Past-Comp-Ac
    al-ass-ta.
    know-Past-Dec
    ‘Mary knew that John had gone to school.’

b. Mary-nun [John-i hakkyo-ey ka-ESS -Ø₁-N] kes-ul
    M.-Top J.-Nm school-Loc go-Perf-Past-Comp thing-Ac
    al-ass₂-ta.
    know-Past-Dec
    ‘Mary knew that John had gone to school.’

Sentences (53a) and (53b), have roughly the same meaning. However, their syntactic structure is different: while the former has a headless embedded clause, the latter has the defective head noun kes ‘thing’.
Headless embedded clauses may be classed as nominalized clauses, in that the clause is formed by a nominalizing suffix and functions as a nominal in a larger sentence. In contrast, sentences like (53b) are noun-complement constructions, as shown in 5.2.3.

(54) S-structure of (53a)

Since a nominalized clause functions as a nominal, the node dominating the clause is NP. I propose (54) as the tree structure for (53a). Nominalized clauses with -Ø are associated with both anaphoric and deictic interpretations of the null-form tense. Observe (55).

(55) a. Mary-nun [John-i ecey hakkyo-ey ka-Ø.i-m]-ul
   M.-Top  J.-Nm yesterday school-Loc go-Past-Comp-Ac
   al-assi-ta.
   know-Past-Dec
   ‘Mary knew that John was going to school yesterday.’

   ‘Mary knew that John is going to school tomorrow.’

D. Yang (1977: 218) claims that the tense of a complement clause can be interpreted only as endophoric (i.e., anaphoric). His examples are
TENSE IN NONCONJUNCTIVE EMBEDDED CLAUSES

given in (56). (I have inserted the null-tense forms and regularized the glosses.) As I mentioned above, it is true that (56b) has only an anaphoric reading for the null form since the embedded-clause event is interpreted as past perfective. However, contrary to what Yang observed, this is not true of (56a), as further evidenced in (57).

   M.-Top J.-Nm that book-Ac read hope-Past-Dec
   ‘Mary wanted John to read the book.’

   ‘Mary wanted John to have read the book.’

(57) a. Mary-nun [John-i ku chayk-ul ecey ilk-Øi-ki]-lul palay-ss;ta.
   ‘Mary wanted John to read the book yesterday.’

   b. Mary-nun [John-i ku chayk-ul nayil ilk-Øj-ki]-lul palay-ss;ta.
   ‘Mary wanted John to read the book tomorrow.’

   ‘Mary wanted John to have read the book yesterday.’

   b. Mary-nun [ pro kongpwula-Øj-ki] sicakhay-ss;ta.
   M.-Top study-Past-Comp begin-Past-Dec
   ‘Mary began to study.’

   ‘Mary began to study.’

Finally, compare the examples in (58). The ungrammaticality of (58c) is, needless to say, due to the violation of Condition C. Notice that the semantic properties of the matrix verb affect the occurrence of -ess and consequent temporal interpretations. Thus, for example, the matrix verb palata ‘to hope, want’ has irrealis mood as one of its semantic features, whereas the verb sicakhata ‘to begin’ requires the embedded clause to occur simultaneously with the ‘begin’ clause.
6.1 Findings
The purpose of this study has been to propose a unified account of
temporal expressions in Korean. The major proposals made in this study
are summarized in (1).

(1)  a. There exist both tense and aspect in Korean. While tense is obliga-
tory, aspect is not.

b. The notion of tense is crucially distinct from that of event time.
   While tense is a grammatical category that names a relationship
   between an event time and speech time, event time is not a gram-
   matical category.

c. Tense in Korean has only two values: past and nonpast. Past tense
   names the relation in which an event precedes speech time and
   nonpast tense names the relation in which the event follows or is
   simultaneous with speech time.

d. There are two forms for expressing tense contrasts: -ess (which
   always names the past relation) and -Ø (whose value can change).
   The overt tense form -ess enters into the same interpretive pattern
   as names or R-expressions and is subject to Principle C of the Bind-
   ing Theory. The null-form tense behaves like pro (a pronominal)
   in that its reference can vary: it can name either a past or a nonpast
   relation.

e. Like all pronominals, a null-form tense can receive its interpreta-
   tion from an antecedent (in its anaphoric interpretation) or it can
   refer freely (in its deictic interpretation). The deictic interpretation
   of the null form is nonpast, unless otherwise specified.

f. Since tense in the present study is a referring expression like a
   noun phrase, it can bear an index to indicate coreference or dis-
   joint reference with respect to another tense category. Coindexed
   tenses have the same value for the [±past] feature. Thus, two tense
categories can be coindexed even when their event times differ.

g. When an overt tense form is coindexed and c-commanded by an-
other tense category, it gives rise to ungrammaticality (by violat-
ing Principle C). Principle C accounts for the fact that the past
marker -ess is not allowed in embedded clauses where a matrix tense names a past relation.

h. The main thesis, that -ess is an R-expression subject to Principle C and that -Ø is a pronominal, holds true in various types of biclausal constructions, such as subordinate, coordinate, relative, complement, and nominalized clauses.

These major proposals address in an integrated and principled way the other issues raised in Chapter 1 involving temporal expressions in Korean. Other findings associated with these major proposals are listed in (2).

(2) a. The reduplicated suffix -ess-ess marks the past perfective, consisting of overt tense and aspectual features. Thus, the form -ess-ess names a time relation in which an event is completed before a past reference time.

b. The so-called retrospective suffix -te marks neither past tense nor aspect. However, it functions to provide an interpretation of pastness.

c. Conjunctive suffixes play a central role in the temporal interpretation. They are divided into two types: [+temporal] and [−temporal]. The temporality feature helps determine the anaphoric or deictic interpretation of the null-form tense.

d. The transferentive suffix -taka ‘while’ lacks inherent perfectivity and hence allows the overt aspectual marker -ess.

e. The suffix -ko ‘and/and then’ has dual functions: as a (temporal) subordinator and as a (nontemporal) coordinator. In both kinds of -ko clauses, the overt past -ess must be free, in accordance with Principle C.

f. Temporal adverbials help to disambiguate the temporal interpretation and provide a reference time. Different senses associated with nonpast or past are disambiguated. Furthermore, the deictic and anaphoric interpretations of the null-form tense in embedded clauses are also disambiguated by means of adverbials.

6.2 Theoretical implications and residual problems
The present study makes important distinctions between tense and event times. The treatment of tense as a referring expression allows us to account for two parallels within the framework of the Binding Theory.
First, the parallel between an overt tense and an R-expression (Principle C) has been applied to various biclausal sentences in chapters 4 and 5. The second parallel between a null-form tense and pro has also been extensively discussed throughout this monograph. These two parallels, which at first glance look unrelated, are in fact covered by the same grammatical principle (that is, the Binding Theory). This explains phenomena that have not been adequately addressed thus far in Korean linguistics. Coindexing and Principle C are essential in explicating the interpretation of the two tense forms in a principled way.

Furthermore, my assumption that INFL contains a tense category, realized as either an overt or a null form, can account for why nominative case is assigned to the subject NP of so-called tenseless clauses in Korean.

However, there is a residual problem with regard to tense indexing. Specifically, tense in relative clauses raises a problem since the abstract form -ESS-N is rarely actualized in phonetic form. In Chapter 5, I proposed to analyze -(u)n as -ESS-N. One problem with this analysis is shown in (3), since the interpretation in (3c) is not predicted.¹

M.-Top J.-Nm read-Rel book-Ac read-Past-Dec
a. ‘Mary read the book that John had read.’
b. ‘Mary read the book that John has read.’
c. ‘Mary read the book that John read.’

Notice that there are three possible interpretations associated with the tense of the relative clause. It is noteworthy here that the relative-clause suffix -(u)n always exhibits the meaning of completion (cf. Nahm 1978, Gim 1980a/b, H. Shin 1986). In other words, events or actions in -(u)n clauses are completed or occur prior to those of their matrix clauses. In this regard, the tense pattern in -(u)n clauses can be reanalyzed. Specifically, -(u)n can be analyzed as the optional aspect marker -ESS followed by the null-form tense -Ø and the suffix -N. This analysis of -un as -(ESS)-Ø-N can predict all three interpretations of (3), as shown in (4).


(5) Relative clause  Matrix clause
i. ess-Ø_i  ess_i
d. ess-Ø_j  ess_i
e. Ø_i  ess_i
f. Ø_j  ess_i
Since the aspectual marker -ess is optional, the tense pattern in (4) has four possible combinations, represented in (5). The pattern in (5i) indicates that a null-form tense in the embedded clause is coindexed with the matrix-clause tense. The tense interpretation for the relative clause in (5i) is past perfective, as in (3a). In (5ii), a null-form tense is not coreferential with the matrix tense, which is past. The relative-clause tense in (5ii) is interpreted as present perfective, as in (3b). The pattern in (5iii) shows the case where the aspect marker -ess does not occur and the null-form tense is coindexed with its matrix tense. Thus, the relative-clause tense in (5iii) is interpreted as simple past. Finally, consider (5iv), where the null-form tense is not coreferential with its matrix tense. This pattern (i.e., -Øj ... essj) is not permitted in my analysis. Since the form -(u)n already specifies the meaning of completion (past or perfective), the nonpast interpretation of the relative-clause tense is contradictory. Therefore, all three interpretations of the relative-clause tense in (3) are correctly predicted in my analysis.² My analysis of -(u)n as -(ESS)-Ø-N in (5) can also account for (6) and (7).

(6)  [John-i  ecēy  casalha-n]  kes-un
     J.-Nm  yesterday  suicide  fact-Top
     amwu-to  yeychuk  moshay-ss-ta.
     anybody-even  predict  not-Past-Dec
     ‘Nobody could have predicted John’s suicide yesterday.’

(7)  [John-i  Mary-lul  silheha-n]  kes-un
     J.-Nm  M.-Ac  dislike  fact-Top
     Mary-ka  sikihay-ss-ki  taymwun-i-ta.
     M.-Nm  be jealous-Past-Nml  reason-be-Dec
     ‘The reason why John disliked/has disliked/had disliked Mary
     is that she was jealous.’

In (6), the relative-clause tense is interpreted as simple past, following from (5iii). The past time adverb ecēy ‘yesterday’ blocks the present perfective meaning, and semantic properties of yeychuk ‘predict’ do not allow the past perfective meaning. Thus, only the (5iii) interpretation is allowed for (6). The relative-clause tense in (7) shows the same pattern as that in (4).

A second issue involves the syntactic position of different types of modifiers. For instance, the position of adjunct clauses ending in ttay ‘time’ has not been discussed thus far. I assume that such adjunct clauses are attached to CP on the grounds that they can take the topic marker -nun (cf. Moon 1987). Consider (8) and (9).
(8) [John-i tochakhay-ss-ul ttay](-nun)
    J.-Nm arrive-Past-Adn time(-Top)
    kicha-nun imi ttena-ss-ess-ta.
    train-Top already leave-Perf-Past-Dec
‘When John arrived, the train had already left.’

(9) [Nay-ka ku-lul manna-ss-ul ttay](-nun)
    I-Nm him-Ac meet-Past-Adn time(-Top)
    ku-nun koki-lul han mali-lul cap-ass-ess-ta.
    he-Top fish-Ac one Cl-Ac catch-Perf-Past-Dec
‘When I met him, he had caught one fish.’

These sentences have been discussed in Chapter 2 in connection with the double form -ess-ess (perfective-past). Note that the topic marker -nun can occur with the adjunct clause. Following Moon (1987), I assume that a topic in sentence-initial position occupies the specifier position of CP. That is, if there is more than one occurrence of -nun, as in (8) and (9), only the first can be the topic in the specifier position of CP. Note further that the past tense in the matrix clauses of (8) and (9) can be coindexed with the first clause -ess since both occurrences of -ess name the past relation. However, I maintain that there is no violation of Principle C because there is no c-command relation between the two tense categories.

(10) S-structure of (8)

Consider the S-structure of (8), given in (10). The second-clause tense -ess can be coindexed with the first-clause tense (i.e., -ss), but it does not c-command the first-clause tense. Since the maximal projection of the second clause tense is the [IP], it blocks c-command of the first-clause tense. As a result, there is no violation of Principle C.

A third issue that was not discussed in detail in this study is the tense behavior in quotative constructions. Quotative clauses show the same
tense patterns as other embedded clauses. However, the double form -ess-ess can occur freely in quotative clauses, but not in the other embedded clauses. I suggested in Chapter 5 that the duplication of -ess in such constructions seems to indicate double perfective, since there is no change in meaning between the single form and the double form. However, another solution may be to treat quotative constructions as the combination of two independent sentences, as in the coordinate -ko clause. However, this monograph suggests a framework that fits the tense phenomena in quotative clauses into an overall integrated account.

There are additional issues that need future investigation. For example, consider (11), which shows that the past-time adverb ecey ‘yesterday’ cooccurs with a null-form tense. Note that the matrix tense in (11) is interpreted as nonpast. I suggested that the deictic interpretation of the null form is nonpast, unless otherwise specified (cf. Section 3.1). The occurrence of the past-time adverb in (11) supports this study’s basic theory that the interpretation of the deictic tense can be influenced by indexicals or semantic context.

(11) [John-i ecey ka-Ø-se] cikum o-Ø-n-ta.
    J.-Nom yesterday go-and now come-Nonpast-Ind-Dec
    ‘John went yesterday and is coming back now.’

Finally, a major area for further study is aspectual phenomena. Future development of the framework to account for aspect as well as it has for tense would make a valuable contribution to Korean linguistics.

### 6.3 Conclusion

The significance of this study is that it provides a more comprehensive framework for Korean tense and aspect than any available previously. It integrates a theory of tense and aspect with the current Binding Theory. Whereas many Korean linguists have addressed parts of these issues, this monograph addresses tense in an overall integrated manner. While no linguistic theory can explain all phenomena perfectly, this work creates a new unifying theory of tense in Korean.
All Korean examples in this study are transcribed in accordance with the Yale romanization system.

**Chapter 1**

1. However, according to Enç (1987), complement clauses can have a simultaneous reading as well as a shifted reading. Example (ia) has two readings: shifted (ib) and simultaneous (ic). On the reading of (ib), John hears sometime in the past that Mary was pregnant at a time prior to that. This reading is predicted in the treatment of tense as a sentential operator. However, (ia) has another reading, given in (ic). On this reading, John hears at a past time t' that Mary is pregnant at the same time t'. That gives a simultaneous reading of (ia). As Enç (1987) points out, the simultaneous readings are problematic for the generative semantic analysis. For more details, see Enç (1987). Hornstein (1977) also discusses a weakness of the generative semantic account in that the system generates more possibilities than are actually to be found in natural languages.

   (i)  
   a. John heard that Mary was pregnant.  
   b. PAST [S₁ John hear [PAST [S₂ Mary be pregnant]]]  
   c. PAST [S₁ John hear [PRES [S₂ Mary be pregnant]]]

2. According to Hornstein (1977), there are basic tense structures and derived ones. Basic tense structures are defined as follows:

   (i) Basic tense structure (TS) is maintained iff:

   a. No SRE are associated in derived TS that were not associated in basic TS (S: speech time, R: reference time, E: event time)

   b. The linear order of SRE in basic TS is maintained in derived TS.

   (ii) Constraints on SRE Movement

   Rules shifting SRE to yield derived TS must maintain basic TS.

3. Diagram (i) illustrates this (Reichenbach 1947: 291).

   (i) a. Past perfect, extended

   ![Diagram](---|---|---)

   E R S
b. Simple past, perfective

\[ R,E \rightarrow S \]

Each tense need not appear in any one specific language. Rather, according to Hornstein (1981: 130), the Reichenbachian theory of tense delimits the range a language learner can choose from in constructing the particular tense grammar of his language.

4. For instance, Lyons (1968: 305) defines the notion of tense as follows: “The category of tense has to do with time-relations in so far as these are expressed by systematic grammatical contrast. ... The essential characteristic of the category of tense is that it relates the time of the action, event, or state of the affairs referred to in the sentence to the time of utterance (time of utterance being ‘now’).”

5. English shows the same phenomenon. See Enç (1987).

6. Ota (1971: 49) and Miura (1974) suggest that the tense system in Japanese may be described in terms of time relationships.


8. See Noonan (1985: 88–89) for discussion of tense copying in English.

Chapter 2

1. From this perspective, many linguists (cf. Fillmore 1975, Lyons 1977a, Comrie 1976, 1985) have classified tense as a deictic category, but aspect as a nondeictic category.

2. See S. Shin (1986) for details.

3. The seventeen meanings of -ess that Suh proposes include: resulting state up to the present, occurrence in the present, present progressive, repetition or habit in the present, present perfective, resulting state of the present perfective, continuity in the present, future perfective, resulting state of the future perfective, future state, past state, past progressive, past perfective, past progressive, presumptive past, and repetition or habit in the past.

4. Since the verb ota ‘to come’ implies that ‘I’ is in the United States at the time of speaking, Lee suggests that (15b) is a counterexample to N. Kim’s (1975) claim about the ‘not any longer’ sense of the double form (cf. Lukoff 1982: 336).
5. It was also pointed out to me by Anatole Lyovin (pers. comm.) that Russian, which has both tense and aspect as an inflectional category, shows the same phenomenon.


7. C. Lee (1985) points out that both -keyss and -(u)l kes-i (lit. 'is a fact to do/be') can indicate futurity, but they differ in terms of the speaker's commitment to presumptive (or conjectural) modality. Compare sentences (ia) and (ib) (from Lee). Sentence (ia) is natural, while (ib) sounds somewhat awkward, because, according to Lee, the shorter the form (i.e., -keyss in the examples), the closer the meaning is to the speaker's internal frame of mind, in other words, there is a stronger commitment. Then, (ib) is pragmatically unnatural because a layman is not in a position to utter such an expression without any strong scientific or circumstantial evidence. Other parallel phenomena are observed, for example, in suffixal vs. phrasal causatives, suffixal vs. phrasal passives, and short-form negation vs. long-form negation in Korean.

   (i) a. Samsipnyen twi-ey cikwu-ka phokpalha-l kes-i-ta.
   30 years after-Loc earth-Nm explode
   'Thirty years later, the earth will explode.'

   'I presume the earth will explode thirty years later.'

8. In this connection, Sohn (1986: 160) points out, "Many people must erroneously call -keyss and -(u)li future tense markers because they do not recognize this important unmarked category."

9. For discussions of temporal adverbials in other languages, such as English and Japanese, see Crystal 1966, Huddleston 1969, Hornstein 1977, Smith 1978, and Netsu 1981, among other works.

10. Some scholars treat semantic characteristics of verbs such as stativity or activity as aspecual features. For example, Vendler's (1967) classification of verbs in English is a good example of a semantic approach to aspctual properties.

11. In this connection, G. Mathias (pers. comm.) provided me with an insightful idea to test the importance of postulating the null form tense. Compare, for example, (i) and (ii). While the predicate in (i) can be changed to mwut-e iss-ta, the predicate in (ii) cannot. This supports my claim that -ess in (i) denotes perfective aspect, which is followed by the null-form tense, while -ess in (ii) denotes past tense.
(i) Os-ey hulk-i mwut-ess-Ø-ta (= [61b]).
   ‘There is dirt on the clothes.’

(ii) Ecey os-ey hulk-i mwut-ess-ta.
   ‘There was dirt on the clothes yesterday.’

12. Inchoative aspect, which is represented by the auxiliary -ki sicakha-, is used to indicate the beginning of a situation.

(i) Ai-ka pap-ul mek-ki sicakha-n-ta.
    child-Nm rice-Ac eat-Comp start-Ind-Dec
    ‘The child is starting to eat the rice.’

Habitual and iterative aspect are very similar. However, they are distinct in that the mere repetition of a situation is not sufficient to justify a marker of habituality (Comrie 1976: 27). Examples (ii) and (iii) show the difference. The latter is not habitual, although it involves the successive occurrence of coughing. In English, it would not be possible to use the habitual form with used to for the iterative meaning of (ii). Moreover, a situation can marked by a habitual form where there is no iterativity at all (Comrie 1976: 27). For instance, the English sentence The temple of Diana used to stand at Ephesus does not necessarily imply that several instances of the situation occurred in succession.

(ii) Ku yeca-nun ppalkan os-ul ip-kon ha-n-ta.
    the woman-Top red clothes-Ac wear-Habit do-Ind-Dec
    ‘The woman habitually wears red clothes.’

(iii) Ku yeca-nun kichim-ul hay tay-ess-ta.
    the woman-Top cough-Ac do Iter-Past-Dec
    ‘The woman coughed repeatedly.’
    *‘The woman used to cough.’

13. K. Lee (1981) suggests that the perfective function of -e iss- has historically been carried over to -ess. In Middle Korean, -e iss- did not have any particular distributional limitation. But since -ess took over the function of -e iss-, the latter seems to have begun to have a limited distribution. In addition, the perfective function of -e iss- partially overlaps with -ko iss-.

Chapter 3

1. Pro is classified as [+pronominal, –anaphoric] among the four types of Empty Categories (Chomsky 1986) shown in (i). D. Yang (1982)
claims that there is no need to posit a separate PRO in Korean, thus proposing a single category pro.

(i) a. NP trace [+anaphoric –pronominal]  
b. PRO [+anaphoric +pronominal]  
c. pro [–anaphoric +pronominal]  
d. variable [–anaphoric –pronominal]

2. As for the grammatical identity of empty pronouns, Huang (1984) claims that there is a subject–object asymmetry with respect to the unidentified empty pronouns. While the missing object is a variable bound by a null topic, the missing subject is a true empty pronominal. Arguments against this claim are made by Whitman (1988).

3. The term “anaphoric tense” is discussed by Manzini and Wexler (1987), but not in the same sense as in the present study.

4. For example, in a historical present or before the retrospective suffix -te (as discussed in Chapter 2), -Ø can be taken as past.

5. I have argued (S. Shin 1986) that there is an anaphoric binding between the omitted and the overt tense in a matrix clause whereby the null tense is coindexed and c-commanded by a higher-clause tense. This claim is revised in this thesis to clarify that tense is a pronominal that has two interpretations, deictic and anaphoric.

6. Enç’s (1987) recent research shows a new approach to the theory of tense in embedded clauses. In her analysis, tenses are treated as referential expressions denoting intervals (whereas, in the present analysis, tenses name relations rather than intervals). She further claims that the semantic interpretation of temporal expressions is subject to syntactic constraints.

7. In Stowell’s framework (1981), tense is the head of S.

8. Fukui (1987) argues that Japanese, which is very similar to Korean structurally, lacks Specifiers.

9. For instance, so-called multiple nominative constructions like the following are exceptions.

(i) John-i yangmal-i kwumeng-i na-ss-ta.  
J.-Nm socks-Nm hole-Nm exist-Perf-Dec  
‘As for John, his socks have holes in them.’

10. I will propose two types of -ko clauses, subordinating and coordinating, in Chapter 4.
11. Sag (1980), who treats VP-ellipsis in English as a genuine deletion rule, seems to face the same problem because his assumptions about deletion are inconsistent with the inverted Y model of Chomsky.

12. Sentences like (i), which seem to be counterexamples to the analysis proposed here, are analyzed as instances of nontemporal -ko. Temporal and nontemporal -ko will be discussed in Chapter 4.

this week-at-Top dance-Ac dance
‘Chelswu sang a song last week and dances this week.’

Chapter 4

1. For instance, in (17), the speaker views the two events as contiguous, one following the other. In other words, in Song’s view, the suffix -taka conjoins two logically unrelated events, performed by the same agent or happening to the same experiencer, which the speaker perceives to be contiguous (Song 1983).

2. For the negative conditionality of -taka(nun), see Akatsuka and Sohn (1994).

3. As discussed in 1.3.2, Song (1983) claims that the tense relation in -taka constructions allows only two possibilities. First, when the form -ess occurs in the matrix clause, the time for the entire sentence is in the past. Second, when -ess occurs in the embedded clause and the matrix clause has the nonpast tense, -ess casts only the embedded clause in the timeframe of the past and thus contrasts with the tense of the matrix clause. Song seems to have overlooked constructions like the (i).

(i) Celeheke nol-Ø-taka sihem-ey ttteleci-ess-ta.
like that play-Ø-and exam-at fail-Past-Dec
‘Playing around like that, he failed the exam.’

Intuitively, there may be two alternative interpretations associated with (i). One is to regard the null tense in the embedded clause as past, and the other to regard it as nonpast, which may be translated respectively as ‘While he played around like that, he failed the exam’ and ‘While he plays around like that, he failed the exam.’ In the former interpretation, the suffix is anaphoric, whereas in the latter, it is deictic. Song’s analysis predicts only the former interpretation, namely, that the embedded clause must have the same past interpretation as the matrix tense. I too
assume that only the anaphoric interpretation holds, because a close
examination of the sentence indicates that semantically the matrix clause
event ‘his failing’ is temporally preceded by ‘his playing’ and that the
dctic adverbial celehkey ‘like that’ can occur syntactically in simple
past tense sentences, as in celehkey nol-ass-ta ‘he played like that.’

4. The conjunctive suffix -nulako indeed shows a pattern very simi-
lar to that of -umyense. Like -umyense, -nulako can be interpreted as
nontemporal as well as temporal. In [A-nulako B] constructions, A can
denote a cause or a reason for B. Thus, for the nontemporal -nulako, the
relationship between A and B is not limited to simultaneous events, as
shown in (i) and (ii).

(i) Ecey nuckey kongpuwa-nulako, onul nuccam-ul ca-ss-ta.
yesterday late study-NULAKO today oversleep sleep
‘I overslept today because I cleared the snow on the road yesterday.’

(ii) Ecey nwun-kil-ul chiuwu-nulako onul sihem-ul
yesterday snow-road-Ac clean-NULAKO today test-Ac
calmos po-ass-ta.
bad take
‘I didn’t take the test well today because of clearing the snow on
the road yesterday.’

5. A simultaneous relation is also possible in Group B for some Ko-
rean speakers. Whether (60–63) are interpreted as precedence or as si-
multaneous relations seems to be controlled by pragmatic factors. For
instance, the two events in (61) cannot be interpreted as simultaneous
because the event of eating lunch cannot logically take place at the
same time as taking a nap.

6. For some Korean speakers, (64*) and (65*) can have the interpreta-
tion in (b) as well as in (a).

7. However, genuine nontemporal constructions (4.6.1) are strictly
subject to Ross’s Constraint.

what-Ac M.-Nm do-Past-but J.-Nm book-Ac read-Past-Dec
*‘What did Mary do, but John read a book.’

8. William O’Grady (pers. comm.) pointed out to me that this is
presumedly because there is no Wh-movement in Korean.

9. However, when the two events are considered conceptually inde-
dendent and separate, -ko clauses allow the two time adverbs ecey and
onul as in (i). In such cases, -ko clauses lose their temporal feature, and
hence become nontemporal -ko clauses. Thus, sentence (i) can allow the presence of the overt -ess in the embedded clause, as in (ii).

    ‘As for Sue, yesterday she was caught in the rain and
today she walked around.’


10. This was suggested by William O’Grady (pers. comm.).

Chapter 5

1. A similar phenomenon is discussed by Kuno (1973: 262) in connection with Japanese relative clause tenses.

2. Incidentally, there is still another reading in (9a): ‘Mary read the book that John has read’ and another reading in (9b) and (9c) ‘Mary read the book that John reads/is reading/was reading’ and ‘Mary read the book that John may/might read’, respectively

3. Consider the interpretation in (11a’). My theory predicts the interpretations of (11a) and (11a’), but not (11a”). An alternative analysis will be proposed in Chapter 6.

    ‘Mary read the book that John read.’

4. In this connection, C. Lee (1985) also points out that the event in the relative clause suffixed by -ul can precede or follow the matrix clause event.

5. In the case of the head noun kes ‘fact/thing’, the main verb requires the embedded-clause verb to take certain complementizers, as in (ia/b), originally from M. Lee (1968), but requoted from N. Kim (1984). M. Lee (1968) observes that certain classes of main verbs impose a tense restriction prohibiting the occurrence of the form -un in the complement clause. N. Kim (1984: 136) further points out that the form -ul as well as -un is unacceptable in the complement clause, as shown in (ic). I. Yang (1972) suggests a “modality adjustment rule” to account for the tense phenomena in complement sentences.

    ‘His handling things is prompt.’

    *‘His having handled things is prompt.’

6. The compound-verb-like behavior of the two verbs does not warrant translation as a compound verb, because frequently the accusative particle -(l)ul or a delimiter can be inserted between the two verbs.

   ‘John wanted to go to school.’

    ‘John wanted to go to school too.’

Chapter 6
1. Suppose in (3) that only the tense category is overt in the embedded clause, while aspect is simply empty, as illustrated in (i).

   Past               Past
   ‘Mary read the book that John read.’

(ii) S-structure of (i)
In (i), since the two tense categories refer to a past relation, they bear the same index. However, coindexing the two tense categories violates Principle C, since the R-expression -ess is bound by the matrix tense, as shown in (ii). The embedded-clause tense is c-commanded and co-indexed with the matrix tense, hence violating Principle C. My theory of indexing tense does not allow disjoint reference for the embedded tense above, since both instances of -ess name the same temporal relation.

2. Ho-min Sohn (pers. comm.) has suggested an alternative analysis that constrains the mechanism for tense indexing. I had proposed that when two tenses are coindexed, they have the same value for [±past]. However, Sohn’s alternative analysis allows disjoint reference for the embedded tense, as in (iii). This analysis assumes (i) and (ii).

(i) A deictic tense has disjoint reference.

(ii) The overt form -ess is always taken to be deictic.

     ‘Mary read the book that John read.’

Following this proposal, the past suffix -ess is deictic in that it is interpreted as past with regard to speech time. In other words, the deictic tense is taken to be independent of the matrix tense, and there is no coreferential relationship with the matrix tense. More specifically, the two tenses in (iii) are independent of each other, that is, there is no temporal dependency relationship between them, although both refer to past relations. Thus, the two tenses bear disjoint reference, as in (iii).

This alternative proposal could be the basis for insightful future research.
References


———. 1980b. A study on the meaning of {a iss-} and {ko iss-}. *Ene* (Language Research Center, Chungnam University) 1: 41–54.


REFERENCES


Monographs of the Center for Korean Studies


This comprehensive account of temporal expressions in Korean provides a more consistent, unified treatment of tense and aspect than in previous works on the language. It finds that only tense—the grammatical indicator of the relationship between event time and speech time—is obligatory in Korean, while aspect is not. Tense has only two values, past and nonpast. The overt tense form -ess always refers to events that precede speech time. It is interpreted in the same way as names and other referring expressions that are subject to Principle C of the Binding Theory. The null-tense form that contrasts with -ess, on the other hand, behaves like a pronominal in that its reference can vary. It can name either a past or nonpast relation and can be interpreted either anaphorically (from an antecedent) or deictically (from the context of utterance). This monograph provides a unified account of the behavior of tense markers not only in main clauses, but also in subordinate, coordinate, relative, complement, and nominalized clauses.

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