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Viewpoints in the Korean Verbal Complex:
Evidence, Perception, Assessment, and Time

by

Iksoo Kwon

A dissertation submitted in partial satisfaction of the
requirements for the degree of
Doctor of Philosophy

in

Linguistics

in the

Graduate Division
of the
University of California, Berkeley

Committee in charge:
Professor Eve Sweetser, Chair
Professor George Lakoff
Professor Lev Michael
Professor Johanna Nichols

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Abstract

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The central focus of this dissertation is the semantic and morphosyntactic analysis of tense, aspect, modality, and evidentiality (TAME) categories in Korean, using the frameworks of cognitive linguistics and construction grammar. Which of these grammatical categories Korean verbal markers belong to has been the subject of much debate. In this work, I pose the following questions:

- What are the systematic markers of TAME in the Korean verbal complex (KVC)?
- What are the meanings of the markers, and how do they fit into the larger system?
- How are markers of evidentiality and epistemic modality fitted into the broader grammatical system of the KVC?
- How does the analysis of these categories depend on an understanding of viewpoint; or what analysis of viewpoint do we need, underlying this analysis?

The answers to the first two questions are significant in that the grammatical categories tense, aspect, modality, and evidentiality in Korean have been contested and are in need of systematic accounts. Such an inquiry is even more significant in that the functions and distributions the Korean TAME elements have never been analyzed within the field of Cognitive Semantics. Starting from the assumption that meanings and functions are primary in linguistic analysis, this study begins by examining the paradigmatic units and syntagmatic relationships between the various tense and aspect elements in the KVC. I argue that grammatical units involving tense and aspect in Korean cannot be assigned purely to one category of the other. Rather, they should be given a more motivated analysis that takes into account their hybrid and versatile functional properties I therefore develop a multilayer approach to represent how information about tense, aspect, modality, and evidentiality is simultaneously accessed and exploited by interlocutors. In addition to demonstrating the interrelatedness of tense and aspect, this study further argues that tense and aspect information cannot be grasped without incorporating modality and evidentiality

information.

After introducing the multilayer framework in Chapter 1, Chapter 2 provides a foundation for modeling the construal of TAME elements in a cognitively motivated way by introducing some key temporal reference points previously described in the literature on tense and aspect, including event time, speech-act time, and reference time, and positing a fourth key reference point, secondary viewpoint time (which may be instantiated as either assessment time or perception time). That chapter describes in detail the roles of and constraints on these key temporal parameters in the multilayer framework.

In Chapter 3, I apply my proposed multi-layered framework to a description of the temporal suffixes of the Korean verbal complex, exploring two major groups of nonterminal temporal elements. The first group is comprised of four suffixes, the non-past imperfective marker *-nun-*, the anteriority marker *-ess-*, the presumptive/volitive epistemic-modal *-keyss-*, and the retrospective firsthand evidential marker *-te-*. The second group is comprised of two durative markers, the progressive marker *-koiss-* and the resultative marker *-eiss*. I argue that none of these elements can be described simply as tense markers or aspect markers, but that each also involves the semantics of modality and evidentiality.

The answers to the second set of research questions are significant in that most previous analyses of Korean have subsumed evidentiality under the category of modality (Strauss 2005). I argue that the Korean grammar does in fact have a distinct grammatical system for evidentiality and give a systematic account of that system, approaching it from the angle of multiple frameworks within the general field of cognitive semantics (cf. formal semantics approach, D. Lim 2010, J. Lee 2010, K.-S. Chung 2005). The second half of this dissertation provides an overall picture of the evidentiality and epistemic modality systems in Korean and gives detailed descriptions from various angles of the three elements I identify as evidential markers, the firsthand evidential *-te-*, the inferential evidential *-napo-*, and the quotative/reportive evidential *-ay*. These descriptions highlight the fact that the nature of these markers cannot be grasped without understanding how the deictic settings of the origo's sensory perception, conceptualization, and subjective assessment of the relevant focal events affect the construal of utterances – i.e., understanding the ubiquitous effects of viewpoint. The importance of viewpoint motivates my use of cognitive approaches such as Mental Spaces Theory (Fauconnier 1997, Fauconnier and Turner 2002) and construction grammar (Fillmore and Kay 1988, 1999).

In Chapter 4, I provide a qualitative and theoretical overview of the modality and evidential elements in the KVC. First, I describe the four major terminal epistemic-modal suffixes, the indicative marker *-e*, the committal marker *-ci*, the mirative marker *-kwun*, and the factive/realization marker *-ney*. Then I claim that the KVC can express three types of modes of access to information using the direct/firsthand evidential marker *-te-*, the inferential evidential marker *-napo-*, and the quotative/reportive evidential *-ay*. I argue that contemporary Korean can therefore be described as having a typologically-rare scattered three-term evidentiality system (contra K.-S. Chung 2005 and J.-M. Song 2007).

In Chapter 5, I provide cognitive semantic accounts of some viewpoint phenomena related to the three Korean evidentiality markers, using Mental Spaces Theory. The three markers share the syntactic/semantic property that utterances containing them show asymmetrical distribution of first- and non-first-person subject depending on whether they are paried with activity predicates or experiential predicates. I argue that the best way to describe these asymmetries is not using abstract formal syntactic rules per se, but that they are a matter of semantics, namely, of the interactions between the viewpoints of the speaker (the origo) and the experiencer of the focal event (the grammatical subject). I claim that MST can be used to clearly model and capture these interactions and their effects. The discussion of these phenomena leads to a discussion of

distancing effects (Dancygier and Sweetser 2005), contending that the cognitive distance between the multiple viewpoints relevant in the evidential constructions results in various syntactic and semantic constraints. To account for the conceptually distinct nature of grammatical evidentiality as compared to periphrastic descriptions of modes of access to information, Chapter 5 also proposes two novel means of mental-space elaboration, Backgrounded-Information Accommodation and Indirect Epistemic-Space Triggering. The former models how backgrounded information about mode of access is accommodated in the construal of utterances. The latter captures how inferential and quotative/reportive evidentials frame how the speaker's reasoning processes are triggered by evidence related to the focal event.

Finally, Chapter 6 argues that cognitive-linguistics approaches can better account for the TAME system of Korean in comparison with other formal frameworks in that they take into account the relevance of the cognizer's viewpoint, which is indispensible in understanding how the target constructions are construed. That chapter shows how my multilayer approach to TAME is based in cognitively grounded frameworks such as Cognitive Grammar (Langacker 1991) and x-schema models of aspect (Narayanan 1994). To further clarify my analysis of the Korean evidentials, I also provide construction grammar notations for the relevant constructions. The discussion in this chapter also includes a deeper exploration of the nature of inferential evidentiality, which has not received much attention in the literature, examining and schematizing its internal event structure.

Contents

Abbreviations and Acronyms

Agt	Agent	Acc	Accusative
Add.Hon	Honorific of Address	Adv	Adverbializer
Ant	Anteriority	AT	Assessment Time
BIA	Backgrounded Information Accommodation	Cat	Category
Caus	Causative		
CES	Causal Event Structure		
CxG	Construction Grammar	Cmt	Committal
Comp	Complementizer	Conj	Conjunct
Conn	Connective	Cop	Copular
Cnt	Counter noun (=classifier)	CXN	Construction
DA	Distinguished Argument	Dat	Dative
Decl	Declarative		
Desid	Desiderative	Disj	Disjunction
DL	Deictic Locus	E.Hon	Honorific ending
EM	Epistemic Modality		
ESC	Equi-Subject-Constraint	ET	Event Time
Ev, Evid	Evidentiality	Fh	Firsthand
Fut	Future		
Ftv	Factive Realization		
gf	Grammatical Function	Hon	Honorific
Hort	Hortative		
IEST	Indirect Epistemic-Space Triggering	Imper	Imperative
Imprf	Imperfective	Indic	Indicative
Infr	Inferential	Inter	Interrogative
KVC	Korean Verbal Complex	Lex	Lexical
l.form	lexical form	Loc	Locative
LV	Light verb	Max	Maximality
Mir	Mirative		
MST	Mental Spaces Theory	Neg	Negativizer
NESC	Non-equi-Subject-Constraint	Nmlzr	Nominalizer
Nom	Nominative		
NDL	Non-Deictic Locus		
NPI	Negative Polarity Item		
NTL	Neural Theory of Language	Obj	Object
Quot	Quotative	Pass	Passive
Pl	Plural	Pol	Politeness
Presum	Presumtive	Prog	Progressive
PstPrf	Past Perfect	PT	Perception Time
rel	Grammatical relation	Rep	Reportive
Recip	Reciprocal	Rltvzr	Relativizer
RT	Reference Time		
SE	Subjective Experience	Sem	Semantics
Syn	Syntax	ST	Speech Act Time
Subj	Subject		

SVT	Secondary Viewpoint Time		
TAME	Tense, Aspect, Modaliy, and Evidentiality		
Top	Topic	Vol	Volitive

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For my parents and m’Ahrim

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Writing a dissertation has been a challenging and enjoyable journey. It was enjoyable especially because many people were there for me. Without the map of their enlightening advices and the fuel of their wonderful support, I would still be lost on some dead-end street of confusion. Without the propulsion of their constant encouragement and incisive insights, my dissertation would still have been still spinning its wheels. I would like to thank those who were with me on my journey because the primary viewpoint in this dissertation is heavily indebted to them.

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Chapter 1
Introduction

1.1 General Introduction

It is never possible for users of language to produce utterances free of temporal context and their own egocentric viewpoints. What utterances linguistically encode is necessarily circumscribed by the inescapable cognitive constraints of time and perspective, because the linguistic contents necessarily include a temporal frame that is internally structured by an event, and because we, the language users necessarily locate ourselves in that event structure. In producing utterances, we can specify which point on a timeline we are referring to and recognize (or exclude) our own presence, as well as the presence (or absence) of things around us. As a result, utterances are constructed by our cognitive capability of invoking of temporal settings and our inherently subjective egocentric viewpoints. The way we think and speak is therefore substantially affected by temporal settings and by our egocentric viewpoints. This further implies that understanding of linguistic constructs is not mere symbol manipulation, but involves construing conceptual structures that are evoked and epistemically grounded (Langacker 2002) in human cognition. So to speak, to understand utterances is to understand what the linguistic elements signal in relation to the speech event and its participants (Langacker 2002: 122). The research described in this dissertation is based on this cognitive approach to meaning in its examination of tense, aspect, modality, and evidentiality in Korean. The semantics of tense, aspect, modality, and evidentiality are all tightly interwoven with the experiencer's viewpoint.

The question naturally arises, what do factors like temporal setting and the experiencing origo's[1] viewpoint evoke? They evoke the semantic frames PERCEPTION in our conception. These frames are cognitively grounded and thus, indispensable for the construal of utterances, and thence for effective communication between interlocutors. They are evoked because temporal setting and viewpoint are frame elements belonging to those significant semantic frames we live by. It is commonly assumed in the field of cognitive linguistics that these conceptual structures are not unique to language (Dodge 2010); rather, they are indispensable to the construal process because we understand what linguistic constructs mean in terms of the conceptual structures that those constructs tap into and activate in our brains.

A conceptual structure necessarily has a temporal grounding and a viewpoint that set up that structure. When someone experiences or perceives an event, that experience or perception must involve entities corresponding to frame elements such as an experiencer or a cognizer, a stimulus experienced (an event, a state, or a process), a temporal setting where the focal event takes place, a spatial setting where it takes place, and a viewpoint via which the experience or cognizer recognizes the stimulus, which includes herself. Therefore, what a speaker conceptualizes and encodes into a linguistic expression is never independent of temporal settings nor of her viewpoint.

When we examine communicative speech acts more closely, the matter becomes more complicated. A speaker's recounting of an event or description of an event in itself has an internal event structure, just as the focal event being talked about in the utterance does. There is a

[1] Brugman and Macaulay (2010) define 'origo' as "[t]he one who perceives the evidence identified by the evidential particle."

speaker, an addressee, linguistic content, a temporal and a spatial setting, etc. The speaker relates the described event to the current describing event in terms of various aspects such as time, space, perspective, and the validity of the information in the utterance. Putting this differently, understanding of utterances also requires epistemic grounding, since the linguistically profiled entity bears cognitive epistemic relationship to reality, existence, and speaker/hearer knowledge (Langacker 2002: 321). Temporal setting and viewpoint are thus the most fundamental factors: the relationship between the temporal settings of the described and describing events conveys critical information that substantially affects the construal, and no relationships nor construals can even exist without a person who reasons and puts the information into utterances. In other words, it is important to recognize that we actually produce and understand utterances by unconsciously and automatically construing the inherent temporal and perspectival constraints encoded in them.

Not surprisingly, the inherent anchoring of utterances to particular times and viewpoints is linguistically grounded in grammatical categories in languages, namely, in tense, aspect, modality, and evidentiality. Linguists have put significant effort over the years into accounting for the structural and functional properties of tense, aspect, modality, and evidentiality (TAME) categories across languages. Defining these four categories seems to be straightforward at first glance. Tense indicates that a certain point in time associated with an event, state, or process referred to in the linguistic structure ought to be viewed with respect to the time of utterance in a certain way. Aspect indicates that time period that receives attention ought to be viewed with regard to the internal structure of the relevant focal event, state, or process in a certain way. Modality indicates that a viewpoint on the target event, state, or process, whether located inside or outside of it, ought to be cognitively evoked; this enables language users to express a rich range of implications, such as emotional connotations, certainty about the information, and level of commitment to the utterance.[2] Lastly, evidentiality indicates that a source of information via which the speaker has obtained the information in question ought to be evoked.

The heart of my dissertation is a qualitative analysis and cognitive semantic explanation of the tense, aspect, modality, and evidentiality categories in Korean. Which of these grammatical categories Korean TAME markers belong to has been the subject of much debate. In this work, I pose the following questions:

- What are the systematic markers of TAME in the Korean verbal complex (KVC)?
- What are the meanings of the markers, and how do they fit into the larger system?
- How are markers of evidentiality and epistemic modality fitted into the broader grammatical system of the KVC?
- How does the analysis of these categories depend on an understanding of viewpoint; or what analysis of viewpoint do we need, underlying this analysis?

These research questions center around two areas of investigation, the layout of the TAME system in the KVC and its semantic functions and the grammatical system of evidentiality in the KVC and its status.

This first area of inquiry is significant in that the grammatical categories tense, aspect,

[2] Following Cover (2010), this paper assumes that modality has to do with possibility, probability, and necessity, and that these gradations can be found within different types of modality, which are manifested in different kinds of modal markers in sentence-terminal position in Korean. (For an in-depth discussion of modality, see Cover 2010, Chapter 2.)

modality, and evidentiality in Korean have been contested and are in need of systematic accounts. Such an inquiry is even more significant because the functions and distributions of the inventory of elements in the KVC have not been discussed within the field of cognitive semantics. Cognitive linguistics seeks to show how language is systematically grounded in human cognition and how our conceptual system emerges from everyday human experiences (Sweetser 1990:1). Starting from the assumption that meanings and functions are primary in linguistic analysis, I believe it is important to attempt to provide a cognitively motivated explanation of TAME elements. In this dissertation, I argue that grammatical units involving tense and aspect in the Korean verbal complex are functionally versatile and should therefore be examined using a multilayer approach in which tense, aspect, modality, and evidentiality are construed in relation to one another.

The second area of inquiry is also important because most previous analyses have subsumed evidentiality under the grammatical category of modality (Strauss 2005). Although some Korean linguists have argued more recently that Korean does have a specific grammatical category of for evidentiality (J. Lee 2010, D. Lim 2010, K.-S. Chung 2005, J.-M. Song 2002, etc.), more systematic accounts are still needed of the Korean evidentiality category: in particular, cognitive semantic accounts are lacking. In this dissertation, I present an overall picture of the evidentiality and the epistemic modality systems in Korean and elaborated explanations of the evidential markers, the firsthand evidential *-te-*, the inferential evidential *-napo-*, and the quotative/ reportive evidential *-ay*. Unlike previous analyses of these markers, this study considers them within the framework of cognitive linguistics.

The outcome of this investigation indicates that it is critical to understand how pervasive the semantics of viewpoint is. Understanding the temporal setting and the internal structure of an event that an origo experiences in a given context requires an understanding of the implicit grounding of the origo's viewpoint. In addition, understanding the speaker's degree of certainty and which kind of information source is being encoded requires an understanding of the semantic frame PERCEPTION, which requires the implicit grounding of a viewpoint (the experiencing origo). As Sweetser points out, the experiencing origo's recognition of time and her own embodied viewpoint is inevitable in any communicative activity in that the recognition builds the particular individual's mental space construal in ways specific to her cognitive and perceptual access (Sanders and Sweetser 2009, introduction).

As I will show in this thesis, Korean has a specific demand of expressing epistemic grounding explicitly. In this respect, recognizing the presence of the viewpoint is crucial. In particular, in order to understand how evidentiality is construed, we must recognize the presence of our viewpoint, zooming in and out on the focal event and assuming varied degrees of conceptual distance towards it. This means that we will be unable to understand how speakers of Korean construe evidential constructions by examining only their form and syntactic constraints. It is also necessary to understand the covert semantics underlying the relevant constructions.

Cognitive linguistics is the optimal framework for such an investigation of deep semantics because the target of study in this framework is the patterns in which and the processes by which conceptual content is organized in language. The formal properties of language are investigated from a conceptual perspective and grammatical structure is analyzed in terms of the functions it serves in the representation of conceptual structure (Talmy 2000a:2-3). This is exactly what we need for the analysis of the viewpoint phenomena this dissertation addresses. The covert semantics that the implicit interaction of viewpoints in the KVC gives rise to can be understood only by understanding the cognitive structures that are evoked and framed by the linguistic

constructs in the utterances. Another significant strength of cognitive linguistics is that it aims to relate its findings to the cognitive structures studies in psychology (Talmy 2000a:3). This attempt to prove the reality of the unconscious cognitive structures (Lakoff and Johnson 1999) underlying the conceptual structure evoked by linguistic expressions will also be useful in providing grounded explications of how the TAME elements in the Korean verbal complex are construed, although the main focus of this dissertation is simply on the modeling of those conceptual structures.

The main goal of this dissertation is to provide qualitative analyses and cognitive semantic explanations of the tense, aspect, modality, and evidentiality categories in Korean within the framework of cognitive linguistics. The data that that this study is based comes largely from the author's introspection, supplemented in some cases with relevant corpus data from KORTERM, online blogs, and other texts on the web. Because cognitive semantics focuses on conceptual organization, and therefore on the content experienced by consciousness, the main object of the study is qualitative mental phenomena as they exist in awareness (Talmy 2000a:4). This view is endorsed by Talmy (2000a), who has said that:

> "[C]ognitive semantics is thus a branch of phenomenology, specifically, the phenomenology of conceptual content and its structure in language. What methodology, then, can address such a research target? As matters stand, the only instrumentality that can access the phenomenological content and structure of consciousness is that of introspection." (Talmy 2000a:4)

However, Talmy adds the caveat that studies based on introspection must be supported with those based on other methodologies, including "[t]he analysis of introspective reports by others, the analysis of discourse and corpora, crosslinguistic and diachronic analysis, the assessment of context and of cultural structure, the observational and experimental techniques of psycholinguistics, the impairment studies of neuropsychology, and the instrumental probes of neuroscience" (Talmy 2000a:5).

Following these theoretical assumptions, this dissertation presents mainly introspective understandings of the TAME elements in the Korean verbal complex and the conceptual structures they evoke and frame. In particular, it presents detailed explications of how to understand perceptions and assessments made by (covert) viewpoint(s), which have not been covered much in the previous literature.

1.2 Outline of the Major Themes

At this point, it may be useful to outline the themes that characterize my dissertation. This sub-section introduces the main themes that I address: the multilayer approach to the tense and aspect categories in Korean; the mental spaces approach to evidential markers in Korean, including the informational statuses of different mental spaces involved in the construal of evidential constructions; and the typological status of the Korean evidential system.

1.2.1 A Multilayer Approach to Tense, Aspect, Modality, and Evidentiality in the KVC

Tense, aspect, modality, and evidentiality have received much attention, because the concepts involved are the fundamental underpinnings for the communicative activities of human beings. Without temporal configuration, which determines the temporal anchoring of her viewpoint, the utterances that a speaker made would not convey the intended meanings effectively. Without

understanding the internal structure of a focal event, we would not be able to simulate it and thus would not be able to construe it. Without understanding the speaker's stance towards the information she conveys, it would be difficult to grasp her illocutionary intent. Without construing which information source was involved in conveying some focal information, we would not be able to understand the speaker's intention effectively. In other words, every utterance must be anchored to a specific point in time; the action or state denoted in it must be choreographed unconsciously when we are simulating it; and it must contain some level of implications and/or emotional, or epistemic attitude towards the proposition in question, which must be based on some type of evidence available in the given context.

I believe that these prototypical functions of TAME systems are universal and that every language has some means to express speakers' intentions in terms of tense, aspect, modality, and evidentiality, because we as human beings cannot be free from time, space, and subjectivity grounded in time and space. Applying the definitions of these grammatical categories to individual languages is, however, a different story. When we examine the grammar of a language, it is often not easy to clearly distinguish them. The definitions of grammatical categories differ across languages, as Comrie (1976:9) has pointed out:

> "[t]he relation between grammatical categories of individual languages and semantic categories is even more complex than is suggested by the simplistic view of semantic categories that are either grammaticalized or not in particular languages. … language-particular categories often combine aspect with some other category, most usually tense."

In this dissertation, I argue that the tense, aspect, modality, and evidentiality categories in languages can be analyzed using a multilayer approach in which the layers of tense, aspect, modality, and evidentiality are considered simultaneously; such an analysis can help us to better grasp how these categories fit into the grammar of a language.

The multilayer approach is based on two of the foundational theoretical assumptions in the field of cognitive linguistics that conceptual structure is not unique to language, and that language processing is neither linear nor modular, but is a matter of simultaneous neural activation via the simulation of linguistic constructs. The four functional categories tense, aspect, modality, and evidentiality form the layers of the framework, and whenever the meaning of one of the layers is accessed, the other layers also affect the construal to some degree. The assumptions about the construal process the approach is based on include several common cognitive linguistics concepts. My approach uses Langacker's notion of profiling, which is important in Cognitive Grammar (1987) and Narayanan's concept of X-schemas (executive schema). When a particular portion of an event (the reference time (RT)) is profiled, it receives more attention and thus becomes more psychologically salient than the other portions. X-schemas are used to represent the internal structure of events more intuitively; they were originally developed to represent simulated sensory motor actions (Narayanan 1997). By integrating these two key cognitive notions into the multilayer approach, we can represent TAME information in a cognitively motivated way that accounts for embodiment.

Korean is an agglutinative language. The verbal complex can contain a wide range of TAME information, allowing a huge amount of information to be conveyed in a single syntactic clause. For example, in the sentence in (1), the verb stem is followed by 6 suffixes in a row involving tense, aspect, modality, and/or evidentiality.

(1) *ku-ka* *chayk-ul* *ilk-koiss-ess-napo-te-kwun-a*

he-Nom book-Acc read-Prog-Ant-Ev.Infr-Ev.Fh-Mir-Indic
'**Oh**, he **must have been** reading a book.'

In fact, the utterance in (1) shows the presence of implicit viewpoints; the single syntactic clause in Korean would require multiple predications if it is translated in English, and each of the predications has its own viewpoint. A periphrastically equivalent interpretation to (1) would be 'I'm telling you, I just now remember I guessed, based on evidence that I myself observed, that he might be reading a book.' In this vein, we see that the Korean verbal complex contains lots of abstract viewpoint semantics (for detailed discussion of how covert/overt profiling works for the construal of the Korean verbal complex, see Chapters 3 and 4). Note that, in order to make the translation as close as possible to how the overall meaning would actually be expressed in the target language (Korean), I put the bolding phrases in the source language (English) that is backgrounded, and thus not being translated via overt predicates of perception and communication in the target language throughout this dissertation.

The construal of this utterance involves bringing together a variety of information. First of all, *-koiss-* profiles the ongoing (i.e., non-initial, non-final) stage of a dynamic event (progressivity), and *-ess-* indicates that the focal event (in this case, someone reading a book) took place before the encoding time (anteriority). *-Napo-* encodes that the speaker made an inference based on some evidence she perceived that was available in the context (inferential evidentiality). *-Te-* encodes that the evidence the inference was based on was directly perceived by the speaker prior to the speech-act time (retrospective firsthand evidentiality) and *-kwun-* indicates that the focal information has just become the speaker's knowledge (mirative). (The mirative can also be described as an assimilation[3] marker (H.-S. Lee (1991).) Lastly, *-a* marks the sentence as indicative; it is simply conveying information that is part of the speaker's knowledge. As shown in the translation, the semantics of all of the elements are superimposed on top of each other and converges into an interpretation.

However, it is not always so easy to determine the functions of the TAME elements introduced above. For example, let us look further at *-ess-* and *-te-*, whose grammatical categories are a matter of debate.

(2) a. *ku-ka* *talli-ess-ta*
he-Nom run-Ant-Decl
'He ran.' or 'He has run.'
b. *ku-ka* *talli-te-la*
he-Nom run-Ev.Fh-Decl
'He **ran**.'

The two sentences in (2) both indicate that the focal event of 'someone running' occurred prior to the speech-act time (ST) (the time when the actual utterance took place); this anteriority of the event time (ET) gives rise to a past-tense reading for both. However, the focal information is packaged differently in the two sentences. In a past/perfective sentence like (2a), the focal event is viewed as bounded and its construal relies on either the temporal relationship between the bounded event as a whole and the speech-act time (namely, past-tense) or on the relationship

[3] An assimilated experience refers to an experience is assimilated to the preexisting mental system to be stroed as knowledge (the 'premonitory consciousness' in Slobin and Aksu (1982); the 'integrated part of the knowledge system' in DeLancey (1986)) (H.-S. Lee 1991:65).

between the whole event time and its end (namely, perfective). In other words, the temporal relationship between the event time (the whole time during which the subject was running) and the reference time[4] determines that one of the readings conveyed by (2a) has perfective aspect and the temporal relationship between the event time and the utterance time determines that the other reading has past tense.

The sentence in (2b), generally called a retrospective sentence, would be licensed when the speaker has observed the middle stage of the running event (but neither the beginning nor the end of it) in the past and narrating the memory at the current speech-act time while looking back into the past. This raises a problem for an analysis of verbal functions that uses only the three temporal reference points event time, reference time and speech-act time. Another temporal reference point is needed to accommodate the process in which the speaker perceives or otherwise apprehends the event which I call perception time (PT). (A fifth reference point is also needed to accommodate the speaker's assessment of the focal situation based on her perception or apprehension of it, which I call Assessment Time (AT); both of these are discussed in more detail in Chapters 2 and 3.)

In (2b), the reference time focuses on the on-going stage within the Event Time (which encompasses the whole time within which he was running). The origo's perception and construal process occurred immediately after the time period encompassed by the RT (at the perception time). The events occurring within the period of the RT must take place earlier than the speech-act time, because the utterance cannot be made until the origo has perceived some evidence that the focal event has occurred (PT > ST). Thus, what is actually encoded in (2b) by *-te-* is the anteriority of the PT to the ST. The past-tense reading arises not directly from the anteriority, but indirectly from the semantic restriction that the focal event must have happened before the speaker's perceptual understanding of it, which requires that the RT have been earlier than the ST. In addition, because the utterance has been constructed based on the speaker's firsthand experience, it also conveys the speaker's certainty about the occurrence of the event.

These facts demonstrate that neither *-ess-* nor *-te-* can be assigned to any single grammatical category, tense, aspect, modality, or evidentiality. The use of these markers indicates that interlocutors access multiple information related to tense, aspect, modality, and evidentiality. An utterance with *-ess-* conveys information about tense (past) and aspect (perfective) simultaneously, and an utterance with *-te-* conveys information about tense (past), aspect (imperfective), modality (strong positive epistemic modality), and evidentiality (firsthand) simultaneously. In short, it is simply not clear where one would demarcate a boundary between grammatical categories in the elements of the Korean verbal complex. It is therefore not surprising that previous research does not yet seem to have developed a unified approach towards the tense, aspect, modality, and evidentiality system of Korean.

Furthermore, it is difficult to account for the markers *-ess-* and *-te-* only in terms of event time, reference time, and speech-act time, and in fact, Korean has a number of TAME markers that cannot be accounted for only in terms of those temporal reference points that have thus far been discussed in the literature. I suggest that this means we need to posit a secondary viewpoint time (SVT) that is separate from the speech-act time. The Korean examples above show that we particularly need to add temporal reference points that are part of another layer of modality and evidentiality, namely, perception time and assessment time. The multilayer approach described here accommodates each of the various kinds of markers in the Korean TAME system (Each of

[4] Klein (1994) argues that this concept should be called 'topic time,' in that it refers to the time period about which the speaker wants to make an assertion. I use the term 'reference time' throughout my dissertation for consistency.

these kinds of markers is discussed in further detail in Chapter 3.)

For the reasons described in this subsection, I argue that the inventory of markers in the Korean verbal complex should be considered using a multilayer approach in which multiple functions, tense, aspect, modality, and evidentiality, are construed simultaneously.

1.2.2 A Cognitive Semantic Approach to the Korean Evidential System

Aikhenvald (2003:1) defines evidential markers as: "[l]inguistic devices that mark and specify type of the evidence on which a statement is based—whether the speaker saw it, or heard it, or inferred it from indirect evidence, or learnt it from someone else." In short, evidentiality is the grammatical category whose primary function is specifying an information source (Aikhenvald 2004:1). This grammatical category is relatively pervasive: it has been reported to appear in about a quarter of the world's languages (Aikhenvald 2004:1). By Aikhenvald and Dixon's definition, the function of marking the source of information is the semantic core of evidentiality.

Evidentiality in Korean seems to have received little attention, because it is often analyzed as being subsumed under the category of modality (H.-S. Lee 1991, Strauss 2005:441). Given that evidence facilitates the origo's assessment of the focal event, we might understand why Korean evidential constructions have been included under the umbrella of the modality category. In this dissertation, however, I claim that the contemporary Korean has developed a system of evidentiality that includes three markers, the retrospective firsthand evidential *-te-*, the inferential evidential *-napo-*, and the reportive/ quotative *-ay*. Examples are given in (4)-(6).

(3) *pi-ka* *o-n-ta*
rain-Nom come-Non.past.Impf-Decl
'It's raining.'

(4) *pi-ka* *o-te-la*
rain-Nom come-Ev.Fh-Decl
'It **was raining**.'(firsthand)

(5) *pi-ka* *o-napo-ta*
rain-Nom come-Ev.Infr-Decl
'It**'s raining**.' (inference)

(6) *pi-ka* *o-n-t-ay*
rain-Nom come-Non.past.Imprf-Decl-Ev.R**e**p
'It**'s raining**.' (reportive)

Unlike the present depictive statement in (3), the statements with *-te-, -napo-,* and *-ay-* indicate that their sources of information are firsthand experience, indirect inference, and hearsay, respectively. It should be noted, however, that these three linguistic items do not belong to the same paradigm; *-te-* and *-napo-* are in non-terminal suffix positions, whereas *-ay* occupies a terminal suffix position. In this respect, contemporary Korean has a 'scattered' evidentiality system (Aikhenvald 2004:80, Kwon 2011).

There has been very little previous work on the grammatical system for evidentiality in

Korean (K.-S. Chung 2005, 2006, 2007, J. Lee 2010, D. Lim 2010). Although these attempts to bring attention to this under-studied topic in Korean linguistics are welcome, there are many phenomena that have not been explained adequately with formal symbolic logic and formal syntactic approaches. For example, the formal semantic approach can capture the asymmetrical uses of evidential markers with first person and non-first-person subjects, for example the uses of the firsthand evidential marker *-te-* in (7) and (8), but it does not provide sufficient cognitive motivation to explain the phenomena.

(7) a. *ku ttay* *nay-ka* *oylop-te-la*
the time I-Nom be.lonely-Ev.Fh-Decl.
'I **was** lonely at that time.'

b.?*ku ttay* *yenghuy -ka* *oylop-te-la*
the time Yenghuy-Nom be.lonely-Ev.Fh-Decl.
'Yenghuy **was** lonely at that time.'

(8)a.?*nay-ka* *hakkyo-ey* *ka-te-la*
I-Nom school-Loc go-Ev.Fh-Decl
'I **was** going to school.'

b.*Yenghuy-ka* *hakkyo-ey* *ka-te-la*
Yenghuy-Nom school-Loc go-Ev.Fh-Decl
'Yenghuy **was** going to school.' (from Seo 1993)

When a firsthand evidential marker is used with an experiential predicate like *oylop-* 'feel.lonely,' as in (7b), a third person subject is normally not licensed in Korean. In contrast, as shown in (8a), when *-te-* is coupled with an action predicate like *ka-* 'go,' the pattern is reversed and a first person subject is not licensed.

The cognitive semantic approach offers a cognitively motivated explanation for this asymmetry. This is because the evidential constructions are perspective phenomena that involve multiple viewpoints and because the cognitive semantic model predicts, for example, the asymmetry showin in (7) and (8). In general, the evocation of certain conceptual structures is necessary for the construal of evidential statements. An evidential statement evokes the semantic frame PERCEPTION which includes roles such as a perceiver, a thing perceived, a mode of access, and an intention to perceive. The focal event that is being talked about in the utterance also has semantic participants. The evidential utterance is construed by superimposing the two conceptual structures; the focal event as a whole corresponds to the thing perceived in the perception frame and the agent or experiencer of the focal event corresponds (or does not correspond) to the perceiver in the PERCEPTION frame.

The cognitive semantic model shows that different viewpoints are involved in the construal of (7) and (8), and correctly predicts the (non-) first person subject asymmetries in them. In (7b), the third person subject is not licensed because the experience described by the predicate would be that third person's internal experience, which the speaker would not be able to access directly. In other words, the experiencer of the focal event should not be a person who is being construed as objectively observed, because the experiential predicate expresses the origo's internal experience. In (8), the first person subject is not licensed, because the retrospectivity encoded by

the marker constrains the actor/agent of the predicate to be a third person who can be objectively perceived, which conflicts with the use of a first-person subject. In other words, the agent of a focal event does not normally correspond to a perceiver who is objectively observing her own action, unless she has been unconscious or *non compos mentis*.

In fact, frames and different mental spaces in particular allow us to talk about this conceptual distance and analyze it systematically. For instance, the sentence in (9) is licensed even though it has a first person subject, an action predicate, and a firsthand evidential marker.

(9) *na-man* *kong-ul* *cha-te-la*
I-only ball-Acc kick-Ev.Fh-Decl
'Only I **was** kicking the ball.' (=It turned out I was the only one kicking the ball)

The linguistic item *-man* 'only' in (9) creates an additional conceptual distance between the two viewpoints so that the speaker is able to observe her 'self' in the past from a distance. I consider it unlikely that a traditional formal semantic approach could ever adequately explain these types of utterances.

Such viewpoint phenomena are the main focus of the second half of this dissertation, which analyzes them using Mental Spaces Theory (MST) (Fauconnier 1997, Fauconnier and Sweetser 1996, Fauconnier and Turner 2002, Dancygier and Sweetser 2005). Mental Spaces are partial conceptual structures that are constructed as we think and talk, for purposes of local understanding and action (Fauconnier 1985, 1997). They contain elements and are structured by semantic frames (Fillmore 1982) and cognitive model (Lakoff 1987). Hence, every mental space is created by a perspective from which the elements are viewed. I am using this theory for the following reasons. First, MST is optimally designed for analyzing linguistic constructs that require interlocutors to access multiple levels of event structures simultaneously. Second, the theory enables us to measure the conceptual distances imposed by particular types of linguistic constructs ('space builders,' per Fauconnier (1997)); the interactions of such features in evidential statements have substantial effects on acceptability judgments. Third, because the interlocutor accesses multiple viewpoints in the construal of an evidential statement, it is necessary to have an effective means of representing the anchoring of the shifted viewpoint; MST provides such a means (for detailed discussions, see Chapter 5).

Using the cognitive semantic approach, this study aims the spotlight on Korean evidentiality markers and thoroughly explores their functions and distributions.

1.2.3 The Informational Statuses of the Mental Spaces Involved in Evidential Constructions

Human experiences put important constraints on the ways we are able to access perspectival construals (Sweetser forthcoming: 2). Evidential constructions are perspective phenomena that involve multiple viewpoints; in order to understand evidential constructions fully, we need to simulate an event/ state or process from multiple perspectives: a perspective of an experiencer/undergoer and a perspective of an observer. Because of its accessibility of multiple levels of event structures, Mental Spaces Theory is therefore an optimal tool for capturing their perspectival conceptualizations.

MST is an optimal framework that accounts for the evidential constructions, also because it has means to correctly represent different informational statuses of events in the constructions.

Evidential constructions evoke a speaker's subjective experience space where the focal information she has obtained is accessible only to her. However, the way mental spaces are embedded in Korean evidential constructions is notably different from normal space evocation processes. As soon as an utterance that contains an evidential element is made, the addressee immediately accesses the backgrounded information that the speaker has obtained the focal information via a particular mode of access. This is conceptually different from how normal space-embedding works, because space builders are not generally considered to deal with backgrounded knowledge, but express focal information that is foregrounded in the discourse context. So to speak, the evidential constructions mark the relative informational significance of the focal information by profiling it, not by asserting it. This study shows that MST captures this, by arguing that the backgrounded knowledge should be accommodated independently of Base space in construal. I propose a means of representing that backgrounded knowledge, that I call Backgrounded information accommodation (BIA, henceforth).

Backgrounded information is necessarily involved in evidential constructions; whenever an evidential element is used in discourse, it imposes the precondition that the speaker has obtained the focal information via some particular mode of access. The situation differs from that of a periphrastic expression like *I saw that*…, or *I heard that*…when a periphrastic evidential strategy is used, the focal information is the event of the speaker's observation, while the focal information in an evidential construction is the event that is observed by the speaker (Kwon 2011). In evidential constructions, the mode of access is backgrounded.

How the information about the mode of access is encoded in an evidential construction can be tested using negation. If information is backgrounded, it is outside the scope of negation. In an evidential construction, the negated part is only the focal information of the observed event, not the backgrounded information of the mode of access. The examples in (10), where the quotative/reportive evidential marker *-ay* is coupled with the negativizer *an-*, shows the expected patterns.

(10)a. *pakk-ey* *pi-ka* *o-n-t-ay*
outside-Loc rain-Nom come-Imprf-Decl-Ev.Rep
'It**'s raining**.'

b. *pakk-ey* *pi-ka* *an* *o-n-t-ay*
outside-Loc rain-Nom Neg come-Imprf-Decl-Ev.Rep
'It **is**n't **raining**.'

In the sentence in (10b), the event within the scope of negation is the raining event, not the speaker's perception event. It is infelicitous to talk about the question of whether the speaker observed the event because it has been backgrounded by the speaker. This example suggests that, when we employ an evidential element, the fact that the speaker has obtained the information via some mode of access is necessarily backgrounded.

This study also introduces and employs another novel means of space elaboration, the indirect epistemic-space triggering (IEST). [5] The proposed way of space elaboration is

[5] A mental space is "built" when particular types of linguistic elements ('space-builders') that evoke structured and framed knowledge/information are used, whereas a mental space is "elaborated" when a discourse goes on from the mental space that has previously been set up. The kind of a mental space is determined by what kind of information it represents. For example, when a mental space contains information of the speaker's epistemic stance – certinaty or

particularly necessary for representing inferential evidential and reportive evidential constructions. These two constructions have a common internal structure that distinguishes them from the other types of evidential. When the speaker is exposed to some piece of evidence, the evidence catalyzes the speaker's reasoning, and this reasoning process functions as the information source. The reasoning is thus based on both sensory experience and indirect experiences such as inference processes and recognition of the content of hearsay. For instance, in (11), an inferential evidential statement is licensed because the speaker is exposed to evidence that triggers her inductive reasoning.

(11) [the speaker hears raindrops from inside a room that does not have a window]
pi-ka *o-napo-ta*
rain-Nom come-Ev.Infr-Decl
'It**'s raining**.'

Such an inferential statement is licensed only when some piece of evidence (such as the sound of raindrops) causes the experiencer to make an epistemic assessment. In this context, the evidence is conspicuous and immediately accessible in the context.

My claim is that the way the speaker's inference space is built in (11) differs from the normal way a mental space is evoked. The evidence that is immediately accessible to the speaker must trigger the speaker's indirect-experience space. The triggered space is epistemic in nature in that it affects the construal of the epistemic stance that the speaker takes towards the focal event. For example, the speaker's epistemic stance is likely to be weaker when her inference space is evoked, than when her firsthand experience is involved. I call this kind of space elaboration indirect epistemic space triggering (IEST) and use the concept to analyze inferential- and reportive evidential constructions in Chapter 5.

Based on the reasons presented in this subsection, I argue that we need these novel means of space elaboration BIA and IEST to account for Korean evidential constructions in Mental-Spaces Theory. Accommodating such different kinds of information requires different kinds of space-building. I show in Chapter 5 that by differentiating these novel space-building methods from the ways a normal mental space is set up, we can provide a unified account of the Korean evidential constructions.

1.2.4 The Typological Status of the Korean Evidentiality System

This dissertation also addresses a typologically rare characteristic of Korean evidentiality, namely, that multiple modes of access are licensed in a single syntactic clause. Most languages do not allow the simultaneous use of multiple evidentials (Aikhenvald 2004:93); for example, in most languages, the constraints imposed by firsthand evidential semantics simply conflict with those imposed by the hearsay mode of access. Korean, however, allows multiple evidentials in a single clause as in the sentence in (11).

(11) *Inho-ka* *manhi* *aphu-ess-t-ay-napo-te-la*
Inho-Nom much be.sick-Ant-Decl-Ev.Rep/Quo-Ev.Infr-Ev.Fh-Decl
'Inho **seems to have been** very sick.'(= I remember that I made an inference from what

belief – toward a certain event, the mental space is epistemic in nature and hence it is called an epistemic space (For more detailed discussion, see Fauconnier 1997, Sweetser and Dancygier 2005).

someone said that that person seemed to have been told by another person who knew about it that Inho had been sick and based on the reasoning, I am telling you that Inho was very sick.'

The multiple evidentials in (11) are licensed because the events that each of the markers is associated with are different; *-ay* encodes that the conveyed information came from someone else (A), not from the speaker, *-napo-* encodes that the linkage between A and the ultimate source (B) was inferred by the speaker, and *-te-* encodes that the speaker herself inferred that A had been told about the information by B.

The question is, what does this say about Korean's typological status? According to Aikhenvald (2004), language groups differ with regard to the number of terms for marking modes of access in each language, varying from systems with two choices to those with five or more choices; examples are given in Table 1.

a. Two-term systems (Aikhenvald 2004:25-42)	b. Three-term systems (Aikhenvald 2004:42-51)
A1. Firsthand and non-firsthand: Cherokee, Yukaghir A2. Non-firsthand and everything else: Abkhaz, Turkish. A3. Reported and everything else: Lezgian, Kham, Estonian. A4. Sensory and reported: Ngiyambaa, Diyari, Latundê. A5. Auditory and everything else: Euchee.	B1. Direct (or visual), inferred, and reported: Wanka Quechua, Shilluk, Qiang. B2. Visual, non-visual sensory, and inferred: Washo, Siona. B3. Visual, non-visual sensory, and reported: Oksapmin, Maricopa, Dulong. B4. Non-visual sensory, inferred, and reported: Nganasan, Retuarā. B5. Reported, quotative, and everything else: Comanche.
c. Four-term systems (Aikhenvald 2004:51-60)	d. Five-term systems (Aikhenvald 2004:60)
C1. Visual, non-visual sensory, inferred, and reported: Tucano, Barasano, Tatuyo. C2. Direct (or Visual), inferred, assumed, and reported: Tsafiki, Shipibo-Konibo. C3. Direct, inferred, reported, and quotative: Cora, Northern Embera.	D1. Visual, non-visual sensory, inferred, assumed, and reported: Wintu, Kashaya.

Table 1. Aikhenvald's Classification of Evidentiality Systems Across Languages (2004, Chapter 2)

Table 1 classifies languages into four major groups depending on how many different types of information source can be encoded by their grammatical systems. Each of the major groups is divided into sub-groups according to which particular kinds of sources the languages can encode. For instance, languages with A2-type systems, including as Abkhaz and Turkish, have a two-way grammatical distinction, between non-firsthand evidentiality and everything else. Aikhenvald groups systems with five or more terms together as a major group; however, she notes that there are very few languages with more than five terms, if any (2004:60).

My claim in this dissertation is that contemporary Korean is a B1-type system, as it has markers for firsthand (*-te-*), inferred (*-napo-*), and reportive/quotative (*-ay*) sources. It is

noteworthy that the proposed system is different from K.-S. Chung (2005) and J.-M. Song (2007); K.-S. Chung (2005) argues that *-te-* is not an evidential marker, but a spatial deictic tense marker; J.-M. Song (2007) contends that the factive realization epistemic modal marker *-ney* is a firsthand evidential marker and the volitive/ presumptive modal marker *-keyss-* is an inferential evidential marker. For more detailed discussion, see Chapter 4, Kwon 2011c).

1.3 Overview of Chapters

This section provides an overview of the structure and content of the remainder of this dissertation. In the first part of the dissertation (Chapters 2 and 3), I identify the relevant inventory of tense and aspect markers in Korean and describe their paradigmatic and syntagmatic relations. I show that it is not a simple matter to assign them purely to either category tense or aspect. Rather, I believe they should be given a more motivated label that encompasses their hybrid, versatile functional properties; I call this the multilayer approach.

I argue that Korean has no pure, exclusive tense category, but that it instead has a variety of versatile markers that mark both aspect and tense. Chapter 2 argues that construal of tense, aspect, modality, and evidentiality in languages should be analyzed using a multilayer approach, because tense and aspect information cannot be grasped without incorporating modality and evidentiality information. We as cognizers do not simply obtain and transmit information that is sitting out there in the world waiting to be grasped, but actively construe tense and aspect information and convey it with our subjective stance on it. Tense, aspect, modality, and evidentiality thus cannot be fully understood without attempts to construe them in a unified way. I argue that the TAME system should be analyzed using a multilayer approach that simultaneously takes into consideration the tense, aspect, modality, and evidentiality layers. To aid in this analysis, Chapter 2 introduces key constructs of such as event time, speech-act time, and reference time, and secondary viewpoint time (which includes assessment time and perception time) and explores their roles and constraints. The discussion in Chapter 2 also includes canonical definitions of the TAME categories and describes some semantic tests for them, which are later used in (re)defining the TAME elements in the KVC.

In Chapter 3, I examine the temporal suffixes in the Korean verbal complex in detail, giving a multilayer account of them in terms of the temporal reference points discussed in Chapter 2. This discussion divides the inventory of temporally-relevant affixes in the KVC into two major categories, the nonterminal temporal markers and the nonterminal aspectual markers. The first group includes four suffixes, the non-past imperfective marker *-nun-*, the anteriority marker *-ess-*, the presumptive/ positive-epistemic modal marker *-keyss-*, and the retrospective firsthand evidential marker *-te-*. The second group includes two durative markers, the progressive marker *-koiss-* and the resultative marker *-eiss-*. Chapter 3 explores the functions and distributions of these markers and uses the semantic tests described in Chapter 2 to show that they operate as more than mere tense or aspect markers, but rather also involve modal and evidential semantics.

The second part of this study, Chapters 4, 5, and 6, explores the inventory of epistemic modal and evidential markers in the Korean verbal complex and their constructional and functional properties. Based on these descriptions, I show that they cannot be grasped without understanding the deictic settings for the origo's perception and assessment. These epistemic-modal and evidential characteristics form systems of modality and evidentiality in contemporary Korean; these systems are the main target of analysis in the second half. My analysis employs cognitive approaches such as Mental-Spaces Theory (Fauconnier 1997, Fauconnier and Turner

2002) and Construction Grammar (Fillmore et al. 1988, Kay and Fillmore 1999).

In Chapter 4, I discuss the systems of modality and evidentiality in the Korean verbal complex, exploring the functional distributions of the epistemic modal and evidential elements and their interactions with one another. I focus for the most part on four epistemic-modal terminal suffixes: the indicative *-e*, the committal marker *-ci*, the mirative marker *-kwun*, and the factive/realization marker *-ney*. In addition, this study shows that three kinds of sources of information can be expressed using *-te-* (firsthand), *-napo-* (inferential), and *-ay* (reportive/quotative). The discussion also considers the status of evidentiality as a grammatical category in contemporary Korean.

In Chapter 5, I provide cognitive semantic accounts of viewpoint phenomena of related to the three evidentiality markers within Mental Spaces Theory. The three evidentiality markers in Korean share the syntactic/semantic constraint in common that utterances containing them show asymmetrical distribution of first and non-first-person subjects, depending on whether the predicate is an activity or an experiential predicate. This subject asymmetry cannot be explained from a purely syntactic perspective in that it is not a matter of formal syntactic rules per se, but a matter of the semantic tension that arises from the interaction between the speaker and the experiencer of the focal event. I therefore argue that to better grasp how evidentiality markers are construed, we must examine their semantics in terms of how the origo's viewpoint and the grammatical subject's viewpoint interact with each other and how different meanings can arise from the subjectivity of those interactions. The explanation relies on novel means for space elaboration that are proposed here: backgrounded space accommodation and epistemic space triggering. These proposed concepts help us to clearly represent the different informational statuses of spaces like the speaker's subjective-experience space and the mode-of-access space. The discussion in Chapter 5 also covers the semantics of subjectivity and the kinds of distancing effects (Dancygier and Sweetser 2005) that the evidentiality constructions give rise to.

Chapter 6 considers the significance of this cognitive approach within the context of other formal literature on tense, aspect, modality, and evidentiality. I argue that the cognitive approach is superior to other formal frameworks in how it accounts for the TAME system in Korean because it presupposes the existence of the cognizer's viewpoint and the cognitive mechanisms of profiling and active zones. These mechanisms unconsciously and automatically zero in on the target of a given context, determine the best-fit scope for the active zone to be attended to, and construe that target. Cognitivist formalisms such as Cognitive Grammar (Langacker 1991) and Narayanan's (1997) X-schemas (a tool for representing aspect) are briefly introduced. To provide a yet more detailed account of evidential constructions, Construction Grammar notations for the relevant constructions are given. These latter explanations enhance our understanding of how the structural relations and semantic bindings among the participants are construed. Finally, Chapter 6 tackles the issue of the nature of inferential evidentiality, asserting that language users examine the internal event structures encoded by the relevant construction (Kwon 2011a).

Chapter 7 concludes the discussion and addresses potential directions for the future study.

Chapter 2
A Multilayer Approach to Tense, Aspect, Modality, and Evidentiality

2.1 Introduction

Human beings' unique cognitive capacity is to integrate information into a broader world without experiencing it directly; language lets them automatically integrate the information. This chapter shows that the proposed system in this chapter intuitively reflects this human cognitive capacity; by showing that tense, aspect, modality and evidentiality information are not proceesed independently of one another, this chapter argues that the multilayered approach automatically accommodates information that is epistemically grounded, even though the information is not linguistically encoded.

Tense, aspect, modality, and evidentiality have received quite a bit of attention in the literature because they are fundamental underpinnings of both human conceptual structure and language. It is, after all, necessary for utterances to be anchored to some point in time relative to the present, and an addressee must be able to simulate the described events, including aspects of their internal structure.

However, understanding abstract concepts like tense, aspect, modality and evidentiality is not about understanding the direct relationships between entities in the physical world and expressions in language. The construal process requires abstract mental simulations (Bergen and Chang 2005, Lakoff and Gallese 2005, Feldman 2006, Lakoff 2008, Dodge 2010). The focal action, event, or state in question must be scanned unconsciously in order for us to grasp it. The simulated event or state is temporally grounded with reference to the deictic center of an experiencing origo (the here and now). Furthermore, when we are simulating utterance content, we must take into account its complex inferential structure; an utterance reveals the speaker's intentions and also guides the listener's – and/or presents the speaker's – inferences to further the mutual understanding of the interlocutors. An utterance also makes reference to the speaker's epistemic stance towards the conveyed information and the experiencing origo's physical mode of access to the focal information. None of these functions is *construed* without being embodied (Feldman 2006) and this observation has been proven valid in the study of tense and aspect in narratives (Davidse and Vandelanotte 2011).

Tense, aspect, modality, and evidentiality are not each processed in isolation. In the simulation process, we access a bundle of tense, aspect, modality, and evidentiality (TAME) information simultaneously. As we unconsciously decompose the internal structure of the focal event, we anchor its temporal configuration to a metaphoric time line in such a way that we can relate it to our deictic center and assert our stance towards the focal information in conveying because we, as cognizers, include information of subjectivity in what we convey. The interdependence of the construal of tense, aspect, modality, and evidentiality information is consonant with the fundamental tenets of the simulation-semantics model (Feldman 2006, Bergen and Chang 2005). This model assumes that an interlocutor cannot conceptualize any kind of information, including information about tense, aspect, modality, and evidentiality without a viewpoint from which she can simulate the frame that the linguistic content taps in her brain. An interlocutor must subjectively access multiple pieces of information to understand utterances (for

more detailed discussion, see Section 6.2.3.2). For that reason, this study argues that tense, aspect, modality, and evidentiality should be approached using a framework that assumes we can simulate and understand them simultaneously.

The examples that demonstrate the necessity of the approach in which the bundle of TAME information is processed simultaneously are found in Korean, which are shown in (1) and (2).

(1) *ne-nun* *nayil* *cwuk-ess-ta*
you-Top tomorrow die-Ant-Decl
'Tomorrow, you**'re dead**.'

(2) *ne-nun* *nayil* *cwuk-nun-ta*
you-Top tomorrow die-Imprf-Decl
'Tomorrow, you**'re dying**.'

-Ess- and *-nun-* primarily mark past-tense and present-tense reference, respectively. The question that arises is, what makes the markers licensed with the future tense adverbial *nayil* 'tomorrow'? To solve this puzzle, this chapter argues that tense, aspect, modality, and evidentiality information cannot be construed independent of one another and thus proposes the multilayered approach in which a bundle of TAME information is simultaneously processed.

This remainder of this section defines some of the key concepts this work relies on in explicating tense, aspect, modality, and evidentiality in an intuitive way, such as event time (ET), speech-act time (ST), and reference time (RT), exploring their roles and constraints. As another preliminary to the full analysis of the Korean TAME system, the rest of the chapter summarizes some canonical definitions of tense, aspect, modality, and evidentiality (Smith 1997) and describes some semantic tests for membership in each of the categories used in linguistic fieldwork (Lai 2009). These definitions and tests are necessary reference points for identifying the TAME elements in the Korean verbal complex. As I demonstrate throughout this work, the Korean TAME system provides evidence that counteracts the seemingly widely-held belief that the construal of modality and evidentiality is independent from the construal of tense and aspect. The remainder of this chapter proceeds as follows. Section 2.2 introduces the temporal-semantics apparatus we need to provide a plausible conceptual analysis of the TAME system of Korean, including definitions for a proposed set of analytic constructs that includes event time, reference time, speech-act time, perception time (PT) and assessment time (AT). In Section 2.3, I briefly discuss the necessity of developing an alternative method, namely the multilayer approach, for analyzing the Korean TAME system in which tense, aspect, modality, and evidentiality are so tightly entangled both conceptually and grammatically that it is difficult to separate them. Section 2.4 discusses the semantic constraints on the temporal reference points in the multilayer approach including those newly proposed in this work. Canonical definitions of tense, aspect, modality, and evidentiality and semantic tests used to identify them are provided in Section 2.5. Finally, 2.6 summarizes some interim conclusions.

2.2 Proposed Temporal Constructs and Reference Points

Most work on tense and aspect takes for granted that 'time' exists in the real world, and therefore that what tense and aspect elements in grammar do is simply to denote it or refer to it. Further, it is commonly assumed that we understand time in terms of locatable points or intervals

on a timeline with which a particular event is associated. Believing that the timeline has a direct correspondence with a physical aspect of the real world has an appeal because it is a simple and familiar model; the timeline gives one a palpable template where one can manipulate symbols representing the 'physical' time.

Time, however, has physical reality only within the neural architecture of our processes of conceptual construal and cultural knowledge. In other words, our construal of time is a consequence of the neural activities of our brains. Only because millions of neurons and neural circuits enable this construal to happen does the concept exist. This is not a matter of arbitrary activation of random neurons; the neural activation responsible for our understanding of a given concept activates other relevant control nodes that are bound to various other semantic primes, just as we evoke the relevant semantic frames with reference to which a concept can be properly construed. The timeline and the points and intervals on it are good examples of neural activation (Lakoff 2008, Gallese and Lakoff 2005).

In the domain of grammar, temporal conceptualization is reified in grammatical elements like tense and aspect. In addition, the subjective semantics imposed by the cognizer's belief and perception processes is reified in modality and evidentiality. The goal of this section is to make explicit the unconscious assumptions that are part of our understanding of these grammatical elements.

It is clear why a timeline with points and intervals on it have been seen as intuitive conceptual tools for understanding tense and aspect. They play a vital role in grammar; tense locates an event in time, and aspect characterizes its internal temporal structure (Chung and Timberlake 1985). The understanding of utterances is based on these concepts; every event that is referred to must be anchored to a particular time point and have an internal structure if it is to mean anything.

Analysts have long recognized the need to refer to temporal reference points in their discussions of tense, aspect, and modality. This thesis attempts to provide a unified account of tense, aspect, modality, and evidentiality in terms of the temporal reference points which are shown below including Reichenbach's reference time (1947) and Klein's topic time (1994).

- Event time (ET): the time during which the focal event or process takes place ('Situation time' in Klein (1994))
- Speech-act time (ST): the time during which the experiencing origo (speaker) makes the utterance that conveys the focal information ('Speech time' in Reichenbach (1947) and in Klein (1994))
- Reference time (RT): the time period that the experiencing origo (speaker) attends to within the focal event ('Topic time' in Klein (1994))
- Perception time (PT): the time at which the experiencing origo (speaker) processes a sensory stimulus that results in a mental representation of the event
- Assessment time (AT): the time at which the experiencing origo (speaker) makes an assessment of the information about the event available in the given context

Using these constructs, tense, aspect, modality, and evidentiality can be defined as follows.[6]

[6] There are a variety of similar temporal constructs have been used in the literature on tense, aspect, and modality, including Reichenbach's reference time (1947) and Klein's topic time (1994). This thesis uses *reference time* as a cover term for these concepts: there is a more detailed discussion of how 'RT' as it is used here compares with other similar notions in Chapter 6.

Tense profiles[7] the relationship between the speech-act time and the reference time in that it concerns the relationship between when the focal event takes place and when the current speech act takes place. Aspect profiles the relationship between event time and reference time in that it concerns which temporal portion of a focal event is attended to and how this salient part is construed relative to the event as a whole. Note that the concepts of PT and AT are the temporal reference points that this paper is proposing to represent the temporal structures of modality and evidentiality; Modality profiles the AT's relevance in the timeline in that it encodes the experiencing origo's assessment of the focal situation; evidentiality profiles a PT's relevance in that evidentiality requires that the experiencing origo's perception (or lack thereof) of some kind of evidence take place. I believe that PT and AT can be grouped together under the cover term 'Secondary Viewpoint Time,' as both are used in situations where the experiencing origo's viewpoint – which is originally anchored deictically to the current speech-act time – attends to the time at which she perceives and/or assesses information about the situation at the RT.

Reference time (RT) is a crucial concept in that it refers to a temporal locus or a temporal interval whose discourse presence (evoked by linguistic constructions) creates relationships with other temporal loci such as the ST and the ET. For example, the past tense is construed by profiling the precedence of the RT to the ST, while the perfective aspect is construed by profiling the final stage of the action (the final stage of the ET) as encompassing the RT. In other words, the RT can be either a deictically oriented temporal locus or a non-deictic temporal locus in terms of its relationship with the ST. If the RT is defined in terms of its relationship to the ST, where the speaker anchors herself by default, it has a deictic sense, and thus a tense reading. In contrast, if the RT is defined in terms of its relationship to the ET, it makes no reference to the location of the speaker on the time line, but rather gives rise to some aspectual sense, depending on which portion of the ET it is associated with.

When tense, aspect, modality, and evidentiality are construed, another viewpoint may be involved than the one that arises from the speaker's anchorage to her deictic center. When such a viewpoint is present, the speaker's subjective experience and epistemic stance are expressed. This secondary viewpoint time (SVT) constitutes another temporal point that the viewpoint can anchor to for the purpose of epistemic construal. It is another conceptual anchorage in a different domain epistemicity, that is then superimposed on the other domain so that they are metaphorically construed as being located on a single time line; the potential candidate perspectives are that of perceiving origo and assessing origo. The SVT may be instantiated as perception time or assessment time, depending on the given context.[8] This is not surprising, if we acknowledge that linguistic representations are consequences of cognizers' construals.

On the one hand, tense and aspect information is understood naturally because information about a focal event's deictic anchorage and its internal structure is necessary for the cognizer's construal. On the other hand, because it is the speaker who processes the information and who conveys that information to the addressee, it is natural that the information conveyed be more or

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[7] The notion of profiling is based on cognitive psychology. In our cognition, some portion of our experience (some entity or status, including entities or statuses expressed by linguistic content) receives relatively more attention, while the other parts are backgrounded. The portion that receives more attention is described as "profiled" (for more detailed discussion, see Section 6.2)

[8] SVT is conceptually similar to Sanders et al.'s (2009) notion of Subject of Consciousness (SOC) in that 'SVT' refers to an underspecified viewpoint that a construer empathizes with for the purpose of scanning a particular portion of an encoded event in a content domain and/or an epistemic domain regardless of the speaker's fixed primary viewpoint (deictic center), and in that the unspecified SVT has a value only when it is used in an actual context (Eve Sweetser. p.c.).

less distorted by the speaker/cognizer's and that the distortion of the nuances is conveyed along with the cognizer's stance towards the information, which is usually based on the evidence available in the given context. The cognizer's construal necessarily involves her subjective knowledge or belief about the target information, which results in a tight link between the construal of tense and aspect and the construal of modality and evidentiality.

Assessment time and perception time play a crucial role in defining the functions and meanings of the TAME elements in Korean; Korean has a specific demand of expressing epistemic grounding explicitly. Modality and/or evidentiality are necessarily encoded when tense and aspect elements are processed in Korean. Hence, these concepts are particularly useful in analyzing the Korean verbal complex, where modal and/or evidential readings arise from interactions with the understanding of tense and aspect: the further discussion follows in Section 2.3.

2.3 The Multilayer Approach

This section argues that explaining the complexities of tense, aspect, modality, and evidentiality systems in language requires an understanding of how the four subsystems interact with each other simultaneously. Examples showing the usefulness of a multilayer approach that combines the semantics of modality and evidentiality with the construal of tense and aspect construal can easily be found; the English "present tense" is one such example. As Langacker (2009:185) and Brisard (2002) discussed in detail, it is controversial whether the English "present tense" is best described as marking tense or modality. The English simple present does not actually mark present time consistently or exclusively, but rather can be used to indicate various types of modal semantics, as shown in the examples below in (3) (Langacker's example (1); 2009:185),

(3)	a. **I read a book right now*	[present]
	b. *I get home last night and find a note on my door*	[past ("historical present")]
	c. *They leave next week for Darfur.*	[future]
	d. *Sugar dissolves in water.*	[time-independent]

As indicated by the ungrammaticality of (3a), the simple present is not used for prototypical present-tense reference, namely, temporal coincidence: rather, it is licensed for events that are in the past, such as (3b), or future, such as (3c), or that are time-independent (3d). Brisard (1999, 2001, 2002, cited in Langacker 2009) has argued that the English simple present is best characterized as having a kind of modal import; Langacker (2009) describes this import as 'epistemic immediacy.'

Langacker (2009) elaborates the notion of epistemic immediacy by explaining that the notion is a consequence of inheritance of the fundamental premise; living creatures including human beings are continually striving to gain or maintain control of their circumstances in various levels, physical, perceptual, mental, and social. In the pursuit of the control, our incessant effort to conceptualize the world is necessarily involved and as life continues, a conceptualizer is constantly engaged in adjusting and augmenting this reality conception (2009: 201). The notion of epistemic immediacy refers to the epistemic relationship between the reality conception and an upcoming stimulus that is about to enter the conceptualizer's cognition. The upcoming stimulus that has not been assimilated to the conceptualizer's cognition would not be referred to

by present tense, strictly speaking, because it does not coincide temporally with the speech act time. Rather, the present tense refers to the epistemic relationship between the ground (the speech event and the participants) and the event of the conceptualizer's assessment of the upcoming information. This is a modal import and in this respect, the English present tense can convey the modal property of epistemic immediacy.

I believe that the presence of the controversy over how to characterize the English present tense strongly supports the relevance of the multilayer approach that I am proposing here. The ungrammaticality of (3a) shows that different grammatical and lexical contributions can be made to temporal grounding employing temporal adverbs and tense marking, and that the modal property of epistemic immediacy must be accompanied by present-tense semantics. It is conceptually difficult to depict a situation where a bounded event and the speech-act event referring to it take place simultaneously. This suggests that we may need to analyze the English simple present from a perspective that encompasses layers of tense and modality together (at the least), rather than one that makes reference only the single layer of tense.

More examples that demonstrate the necessity of a multilayer approach can be found in the Korean TAME system. For instance, in the following examples, the anteriority marker *-ess-* and the non-past imperfective marker *-nun-* are coupled with a future-tense adverbial: they indicate the speaker's epistemic perfective and the speaker's epistemic immediacy, respectively:

(1') *ne-nun* *nayil* *cwuk-ess-ta*
you-Top tomorrow die-Ant-Decl
'Tomorrow, you**'re dead**.'

(2') *ne-nun* *nayil* *cwuk-nun-ta*
you-Top tomorrow die-Imprf-Decl
'Tomorrow, you**'re dying**.'

If we assumed that *-ess-* simply marks past tense and tried to analyze it only in terms of ET, RT and ST, it would be difficult to find a plausible explanation for the grammaticality of (1') and (2'), because the futurity of the adverbial *nayil* 'tomorrow' would seem to clash with the past reading of *-ess-*. However, what *-ess-* indicates in (1') is that the speaker's subjective judgment regarding the event has already been made in the speaker's epistemic mental space. In other words, the speaker's assessment time (AT) immediately follows the RT in an epistemic domain, profiling the end stage of ET in that epistemic domain. The AT and/or PT must be later than the RT, because nobody can make an assessment or an observation before the focal event they are assessing or observing has taken place.

-Nun- is a non-past imperfective marker (H.-S. Lee 1991). It is used in (2') to indicate that, in the speaker's epistemic world, the addressee's being dead is literally happening at ST. The coincidence of the speaker's AT (assessment of the fact that the addressee will be dead – or punished – soon) and the ST enables the non-past imperfective marker to be used. If we introduce the concept of a secondary viewpoint time that includes AT and PT, it can accommodate a speaker's epistemic judgment, because the time when the speaker makes the epistemic judgment belongs to an epistemic-modal domain, not to a realis domain. The traditional notions of topic time (Klein 1994) or reference time (Smith 1997) that do not account for the embodiment of cognition are not able to capture this distinction: according to those traditions, information that the speaker intends to assert in (2') is the time of the focal event

(tomorrow), but actually what is asserted in (2') is the time of the speaker's assessment, not the future event.

The facts we have discussed so far indicate that there are at least four layers (G. Lakoff, p.c.) involved in the Korean TAME system. The layers are represented in terms of cognitive semantic frameworks; the temporal structure of each layer is represented using Langacker's (1991) Cognitive Grammar, and internal contour of an event or a process in question is represented in terms of Narayanan's (1997) x-schema (for detailed discussion of the frameworks, see Section 6.2). The following sub-sections discuss each layer in detail.

2.3.1 Layer 1: Tense

In this first layer there is a speech act that takes place and there is an event or a process that is described by the speech act and that stands in some relationships to it. In this layer, the speaker is temporally located at 'now,' which forms a deictic center for the primary viewpoint at the time of the speech act. The focal event or process is attended to by the primary viewpoint. Since the event or process described by the speech act has its own temporal configuration, the temporal relationship between the focal event or process and the speech act determines the tense information included in an utterance. In short, this layer involves an event time when the focal event takes place (a deictic RT) and the default 'now' (ST). For example, the elements involved in past-tense reference are represented in Figure 1a.

Figure 1a. Tense Layer: Past Tense

In past tense, the time period that the viewpoint attends to in the utterance, i.e. the reference time (RT) precedes the speech-act time (ST), which is when the actual utterance is made. The structure of the present and future tenses are represented in Figures 1b and 1c, respectively.

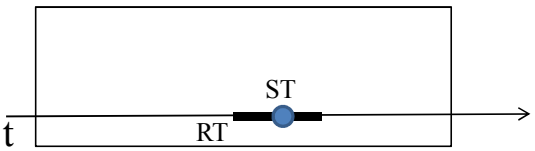

Figure 1b. Tense Layer: Present Tense

Figure 1c. Tense Layer: Future Tense

The present tense is represented in terms of the RT's overlap with the ST, and the future tense is represented in terms of the ST's preceding the RT. Note that the future-tense is represented as being in an epistemic dimension; understanding a future event involves understanding the experiencing origo's assessment of an irrealis event. An utterance about an event that has not taken place necessarily involves the speaker's subjective assessment of the irrealis event as well as her anchoring of the event to a particular temporal point.

2.3.2 Layer 2: Aspect

The second layer pertains to the internal structure of an event or process, i.e. to the aspectual

information conveyed by the utterance. The aspectual information can be represented in terms of ET and RT. Which phase of the event is profiled determines the value of the aspectual meaning. My discussion of this layer employs Narayanan's (1997) X-schema model to represent the logical phases of an event; this model has been designed to represent neural and computational understanding of event structure. (This is discussed further in Chapter 6.) The representation consists of a set of phases called 'ready,' 'start,' 'ongoing,' and 'done,' as shown in Figure 2. The model is intended to intuitively capture the distinctions of viewpoint aspect; the imperfective aspect profiles the ongoing phase within the ET, whereas the perfective aspect profiles the ET as a whole and the internal contour of the ET is not focused.

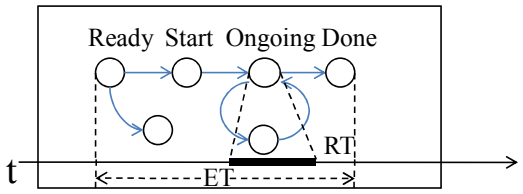

Figure 2a. Aspect Layer: Imperfective

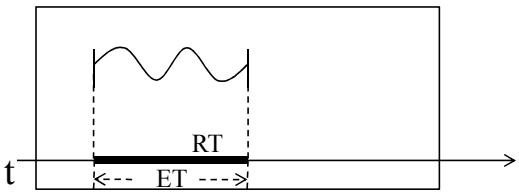

Figure 2b. Aspect Layer: Perfective

This type of representation also captures the boundedness and unboundedness readings associated with imperfective and perfective aspects, respectively. When we profile the ongoing phase within the ET, we are focusing only on the middle stage of the event; because the endpoint is not profiled, we obtain an unbounded reading. In contrast, when we profile the overall ET, we obtain a bounded reading. Note that the internal contour of the ET in Figure 2b is not specified (cf. Figure 2a) to indicate that the internal contour is not focused.

Situation aspect distinctions such static vs. dynamic and telic vs. atelic are represented in Figures 2c and 2d.

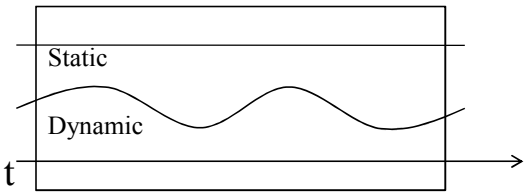

Figure 2c. Aspect Layer: Dynamicity

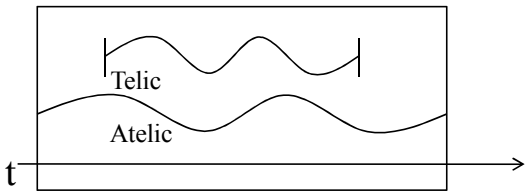

Figure 2d. Aspect Layer: Telicity

In Figure 2c, a dynamic event is represented using a wavy line to signify its heterogeneous phases, while a stative property is represented using a straight line to signify its homogeneous internal state. A wave will be employed throughout this thesis to represent a dynamic event when the internal structure of the event is not in focus (e.g. when the RT refers to a bounded event as a whole). In Figure 2d, a telic event is depicted as a wavy line between two vertical bars (in this case, the focal event is dynamic), while an atelic event is represented by a wavy line that is not limited by any vertical bar. This proposed method of representation for the aspect layer attempt to capture more intuitively various types of viewpoint aspects and situation aspects.

2.3.3 Layer 3: Modality

Another layer is proposed to represent how modality information is incorporated in the

construing of utterances. What I mean by 'modality' here is the linguistic tools a speaker uses to indicate her subjective assessment of a given piece of the common ground, including levels of speaker belief, possibility, socio-physical necessity, and certainty. The modal meaning is constructed only after the experiencing origo has made an assessment of the given situation; this layer captures the point in time when she makes her subjective assessment of the temporal portion of the focal event that the viewpoint is attending to. Figure 3 represents the modality layer involved in the construal of the English sentence *She must have been home last night*, which conveys the speaker's assessment that it is certain that the person in question was home last night:

Figure 3. The Temporal Structure of the Modality Layer

Figure 3 indicates that the instantiation of the modality layer is a consequence of the temporal profiling of modal relations. This layer involves an RT and a Secondary Viewpoint Time, specifically an Assessment Time. Here, AT is a temporal locus rather than an interval. The SVT refers to a time point when the original viewpoint at the deictic center reviews the RT. In this case, the SVT is instantiated as the AT because the origo is making an assessment, taking a stance towards the period of time that she is attending to. An origo's assessment is usually made at the same time the utterance is made, or immediately before. However, this study assumes that our representation must include an AT that is distinct from the ST because the semantic domain in which the origo accesses tense and aspect information is not the same domain in which the origo makes assessments.[9]

2.3.4 Layer 4: Evidentiality

The final layer I am proposing is the layer where the speaker perceives some information about and constructs a mental representation of the focal event after it takes place. In this layer, that of evidentiality, the information source or mode of access to the focal information is construed. An SVT is also necessary for defining evidentiality, as evidential semantics relates to a situation where the viewpoint at the deictic center considers a temporally-anchored event, in which an experiencing origo perceives and processes some focal information associated with the RT portion of some focal event. In this layer, the SVT is instantiated as the perception time.

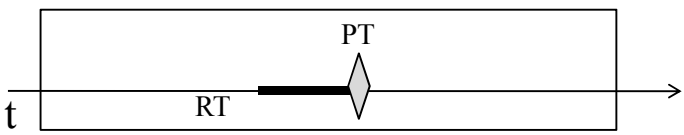

Figure 4. Temporal Structure Evidentiality Layer

[9] I believe that the representation in Figure 3 is the basic schema for all modal interpretation, including modal judgment of future events. Utterances with future modality cannot be accounted for only in terms of the modal layer, but must be considered using a multilayer approach such as the one this study proposes. An example that involves multiple layers simultaneously is analyzed in sub-section 2.4.5.

Figure 4 depicts the temporal profile of an evidential layer; it is similar to the representation of the modality layer in Figure 3. The PT is also a temporal locus, rather than an interval. In the situation depicted in Figure 4, the experiencing origo scans the period of the RT as a whole and her processing of the input stimuli takes place immediately after the event encompassed in the RT occurs. Comparing this representation to the representation of the modality layer in section 2.3.3, AT and PT function similarly in that both of them come after RT. The use of 'SVT' as a cover term for both is cognitively motivated in that epistemic judgment is usually based on an origo's perception of the evidence available in a given context and in that readings in both of the relevant layers are obtained only when the viewpoint attends to and scans the RT.

2.3.5 The Integrated Multilayer Representation

My claim is that the TAME semantics of utterances are construed using our cognitive ability to access the four layers simultaneously. As the examples of the English simple present tense and Korean tense suffixes discussed above show, we cannot construe tense and aspect information without accessing modality and evidentiality, because utterances are products of the experiencing origo's mental simulation, which necessarily involves her viewpoint's subjective stance and assessment. In other words, tense, aspect, modality, and evidentiality are construed in terms of simultaneous interaction among the proposed layers. The full temporal grounding of the layers that I have proposed is shown in Figure 5; there is no point having these layers separate rather than having them mapped on to each other because of the simultaneous interaction of the TAME information. Figure 5 represents a set of schemas representing the past-progressive English sentence *He was sleeping*.

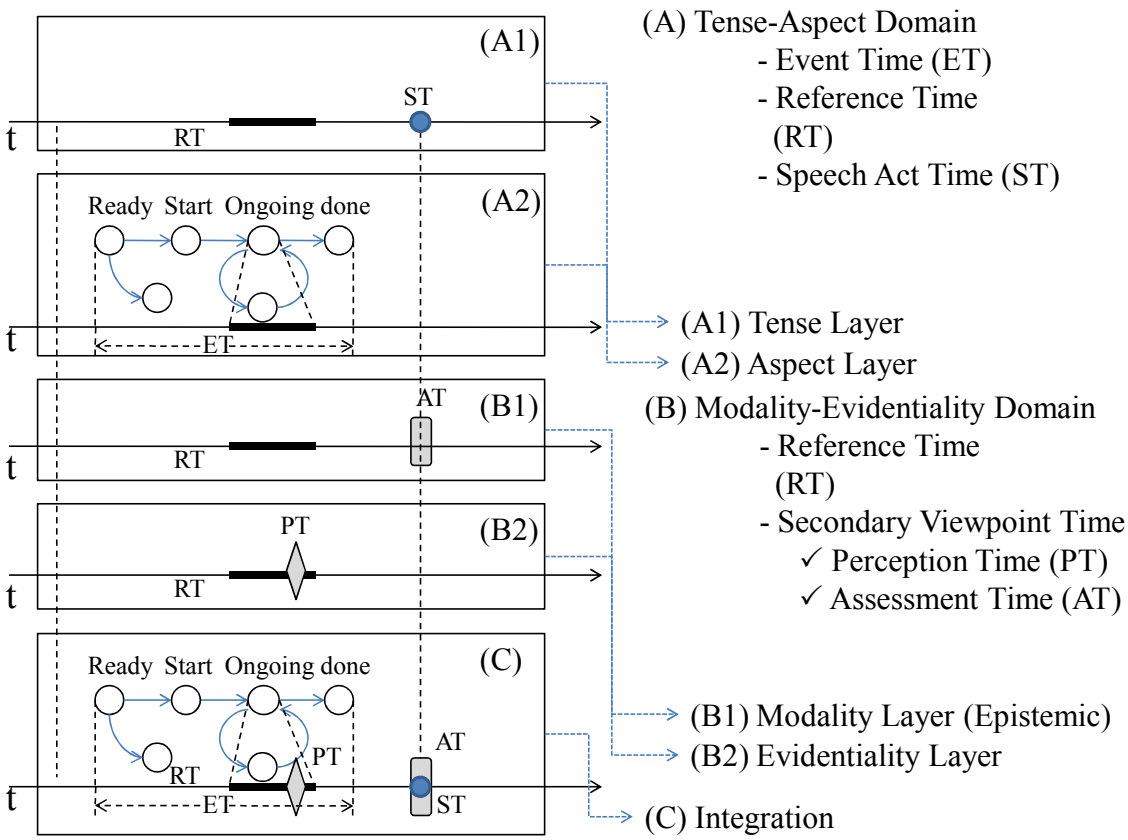

Figure 5. The Multiple Layers of Tense, Aspect, Modality, and Evidentiality and Their Temporal Reference Points in *He was sleeping*

The first layer depicted (A1), represents the past tense in the target sentence; the RT precedes the ST. In other words, because the RT precedes the ST, the construction's tense must be past. In this case, the cognizer is located at the ST and the RT is associated with the temporal locus when an event that the speaker recollects happened. This layer involves a deictic locus in that it relates to the deictic center the speaker's viewpoint originally anchors to. The second layer (A2) represents an imperfective aspect, namely, the progressive. As shown in the diagram, the ongoing stage of the ET is attended to and is thus covered by the RT. Note that there is no ST nor deictic center in this diagram, because aspect is, strictly speaking, not an absolute temporal concept, but a relative temporal concept in which one particular phase within a given event or process is in focus; hence, it involves a nondeictic locus. The tense and aspect layers both fall into the overarching category of the non-epistemic domain (after Sweetser (1990), who distinguishes content, epistemic, and speech act domains); the elements in this domain are listed in Figure 5A. Figure 5A includes the trio of generally-accepted reference points for embodied temporal loci: event time, reference time, and speech-act time. Because the target sentence (*He was sleeping*) is past progressive, the ongoing stage of the focal event is in focus, i.e., covered by the profiled time. The RT is prior to the ST, and therefore the tense is past.

However, this is not the end of the story. Although they are not explicitly grammatically marked, this utterance conveys modality and evidential information as well. It has epistemic modality in that making the utterance is the speaker's attempt to represent the content in question

– an event in which someone was sleeping – with certainty. If she were not sure whether the focal event had happened, there would be no reason to speak of it aloud. Rather, her utterance conveys evidential semantics; for her to be sure about it, the information would very likely have been based on some kind of evidence available in the given context and the source would be encoded by her utterance. For this reason, the modality and evidentiality layers are represented in Figures (B1) and (B2) along with the tense-aspect layers.[10] The two layers can form another domain, the epistemic domain, that is separate from the content domain. The crucial difference is that the epistemic domain includes SVT, the time period the time period in which the origo evaluates the focal information that is conveyed by the construction. In (B1) and (B2), the potential reflexes of SVT namely, the proposed temporal parameters PT and AT, are involved, which gives rise to evidential readings and epistemic- modal readings. The time when the origo makes an assessment based on what she recognizes follows the PT and usually overlaps with the ST.

The individual layers are integrated into the overall interpretation of the utterance, as depicted in Figure 5C, which is an integration of the two domains. The integrated layer is the conceptual structure evoked by the utterance in question. The evocation of this integrated conceptual structure entails that construing the tense, aspect, modality, and evidentiality information in language is not concerned only with what linguistic constructs encode, but also with what is automatically grounded. This study thus argues that in order to analyze the TAME system of languages, we must employ such a multilayer approach that can account for both realis and irrealis events using the same analytical constructs.

The true benefit of the multilayer approach is most apparent in the analysis of languages where distinct morphological markings among tense, aspect, modality, and evidentiality (which are common in Indo-European languages) do not hold such as Korean. The example in (4) contains the Korean firsthand evidential retrospective marker *-te-*:

(4) *Chelswu-ka* *pap-ul* *mek-te-la*
Chelswu-Nom meal-Acc eat-Ev.Fh-Decl
'Chelswu **was having** a meal.'

The functional properties of the marker *-te-* are discussed in more detail later: in brief, it indicates a situation in which the speaker directly (via firsthand experience) obtained the information in question and in which the focal event is unbounded. The sentence in (4) would be licensed in a context where the speaker saw Chelswu having a meal (but the meal was not completed) yesterday and is reporting that direct observation to her current addressee.

If the speaker did not see the event with her own eyes, (4) would not be licensed, as *-te-* indefeasibly encodes firsthand evidential semantics. However, because the event was observed by the speaker herself, her certainty about its occurrence is high (i.e., it has strongly positive epistemic modality). In addition, the focal event is imperfective; if it were not, the anteriority marker *-ess-*, which encodes perfectivity, would be included between verb stem *mek-* 'eat' and *-te-*. Because the information comes from the speaker's past observation or memory, the focal event must necessarily have occurred in the past. Although the conditions that *-te-* conveys are a normal situation that is easily found in everyday life – a speaker is remembering and recounting

[10] De Haan (2000) notes that the speaker's assessment usually, but not necessarily follows, the speaker's perception of information about the focal event. The conceptual relationship between epistemic modality and evidentiality is discussed in further detail in Kwon (2011a) and in Chapter 5 of this thesis.

what she herself directly observed in past – the accompanying semantic properties are grammatically complex. The focal event itself is not marked as past-tense by the use of *-te-*, in and of itself; rather it is interpreted as past-tense as a consequence of the fact that the speaker's perception event took place in the past. In the multilayer approach, what the marker *-te-* encodes is not the RT's precedence to the ST, but the SVT's (specifically, the PT's) precedence to the ST. The layers involved in construing the sentence in (4) are shown in Figure 6.

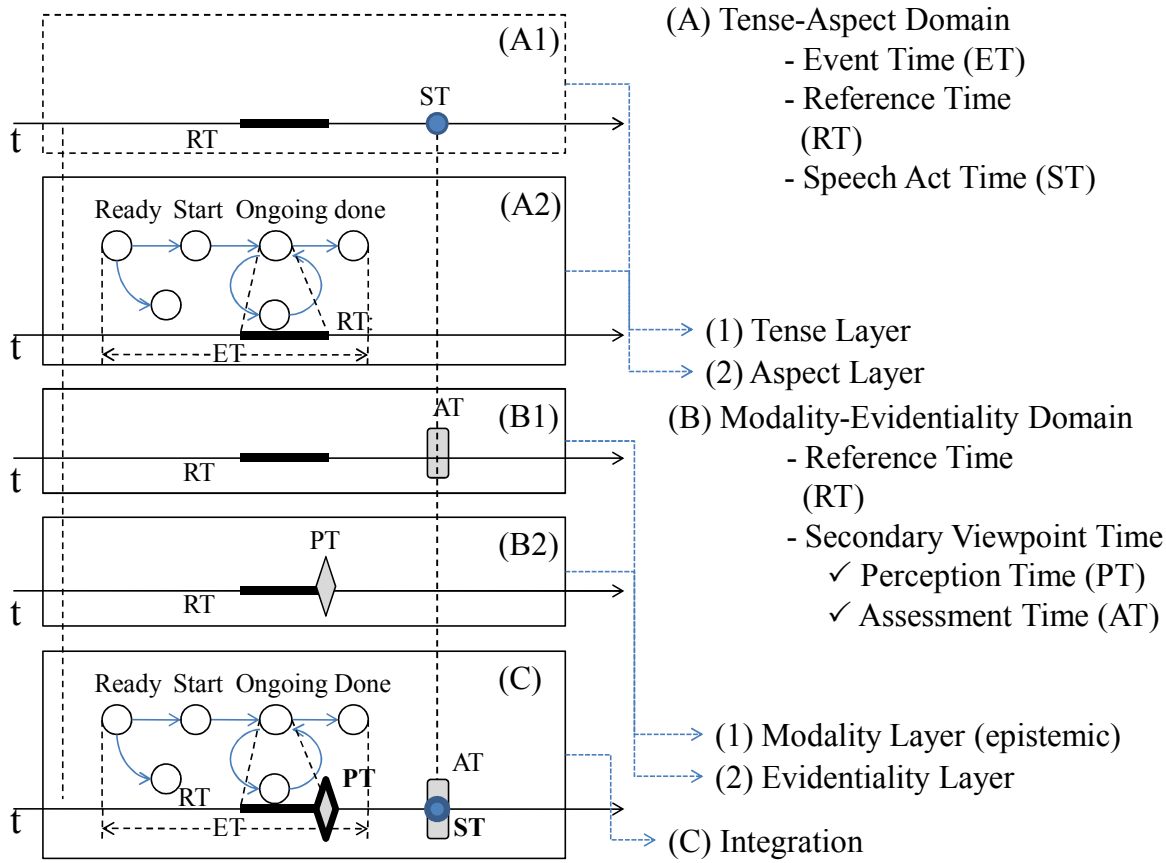

Figure 6. The Multilayer Parameters for Tense, Aspect, Modality, and Evidentiality in Korean in Example (4)

The relationship between the SVT (PT) and the ST in this example cannot be accounted for in a single layer. In this representation, the tense layer is surrounded by a dotted line, to indicate that the tense information is not explicitly linguistically encoded; rather, its past-tense reading is inferred from the relation between the PT and the ST. (Because the PT always follows the RT (the time period of the focal event), if the PT precedes the ST, then the RT must precede the PT).

What *-te-* encodes is actually explained only in the superimposed layer, depicted in (6C). The PT temporal precedence relative to ST is encoded by the construction as a whole and taking the layers together, the marker as used in (4) conveys multiple meanings of firsthand evidentiality, strongly positive epistemic modality, past tense, and imperfectivity. This study argues that the multilayer approach provides a conceptually motivated and intuitive means with which to analyze complex TAME system in languages – including the wide variety of ways tense, aspect, modality, and evidentiality are grammatically encoded in non-Indo-European languages – more appropriately. The multilayer approach provides best-fit accounts of multifunctional elements,

which do not belong to a single grammatical category and thus must have simultaneous access to all the layers to be processed. In the following subsections, I further demonstrate that Korean TAME elements require simultaneous access to all four layers and discuss how the multilayer approach can account for the Korean TAME system in a transparent and intuitive way.

2.4 The Semantic Constraints on Temporal Reference Points in the Multilayer Approach

Semantic constraints arise naturally from the interaction among the four layers. For example, the speaker's encoding time is always anchored to the present. At least some portion of a focal event must take place prior to the speaker's Perception Time because the speaker's perception is not possible without a target event. In addition, the speech act cannot precede the speaker's perceptual understanding of the relevant information nor the speaker's assessment of it in the content domain, because, for example, utterances with evidentiality are generally formed based on the speaker's perceiving and processing of some focal content and her assessment based on that perception.

These semantic constraints are summarized the following set of restrictions on how each of the layers uses the temporal reference points.

- Bounded situations are not licensed at ST in the tense-aspect domain. Because the speech-act time is a temporal point, not an interval, it cannot include the target event in it (Langacker 1991; Smith 2003) (e.g., **I drove a car now*).
- The RT is the same as the ET when the event or process is construed as bounded. When the event or process is not construed as bounded, the RT comprises a phase within the ET (which may include its post-phase (for example in the case of the perfect).
- The AT always overlaps with or at least immediately precedes, the ST. If both the AT and the PT are active in context, the PT always precedes the AT within the modality evidentiality layer because epistemic-modal semantics arise from the origo's assessment, which is based on some evidence available in the given context.
- There is no temporal relationship between the AT and the RT because they belong to different mental spaces. When the speaker makes an assessment as to whether the focal event has taken place (or is taking place, or will take place), that focal event does not belong to the tense-aspect domain but to the modality evidentiality domain, where the speaker's epistemic stance is relevant.
- When an utterance conveys a positive evidential reading, the PT must follow the RT in the combined domain because the conveyed information is the event that is covered by the RT, evidence about which is perceived and construed by the experiencing origo
- When the RT comes after the ST in the tense-aspect domain, the epistemic domain is evoked, because projecting a future event inherently involves the speaker's epistemic stance towards such an event.

Using these semantic constraints and the multilayer approach that has been proposed, the next chapter explores, identifies, and (if needed) redefines the TAME inventories that describe the verbal complexes in various languages, suggesting that such an approach provides a more intuitive explanations for the Korean TAME system.

2.5 The Cognitive Motivations for the Multilayerd Analysis

The term 'reference time' should be understood in terms of the cognitive assumption that meanings are about cognizers' construal, i.e., about how linguistic constructions prompt and evoke mental simulations and schemas in interlocutors' minds (in contrast with the objectivist assumption that meanings are direct pairings between words and the world, which does not take into account the presence of a cognizer). This understanding of 'reference time' means that the assumptions underlying the traditional uses of the term (or similar terms), such as Reichanbach's (1947) 'reference time' or Klein's (1994) 'topic time' are in need of revision. (This is discussed in more detail in Chapter 6.) This study is based on the fundamental assumption that meanings are our understandings, not disembodied manipulations of symbols.

Once we acknowledge this cognitive assumption, we can account for intriguing semantic phenomena such as subjectivity which arises from the interaction between the origo's viewpoint and other temporal and modal elements. The way I am using the term 'reference time' is distinct from how it is used in traditional accounts in that it is defined in more cognitive terms, indicating that the speaking origo's viewpoint scans a specific portion of an event and that the speaker can apprehend a process, event, or state as an on-looker, as an experiencer, or indirectly.

Another consequence of acknowledging the relevance of cognitive construal is a better understanding of how the experiencing origo's perception processes and assessments are reflected in the construal of tense and aspect. The information that is conveyed by tense and aspect marking is more than mere disembodied information about grammatical tense and aspect. The information has been subjectively processed (and distorted) by the speaker– consciously or unconsciously – and, because of this grounding, usually conveys additional information about modality and/or evidentiality. This unified multilayer approach I am proposing works well for describing all languages, but it is especially necessary for describing languages like Korean, where a single morpheme can convey information about tense, aspect, modality, and/or evidentiality simultaneously, as noted in Section 2.4. (These morphemes are discussed in detail in Chapter 3.). An analysis that involves a PT and an AT (secondary viewpoint times) is a natural consequence of acknowledging the presence of a cognizer.

This study is not the first that has pointed out the need for a second viewpoint time (SVT) in the analysis of tense, aspect, modality, and evidentiality. Condoravdi (2002) proposes a 'perspective time,' the time at which an eventuality is judged to be possible, probable, or necessary (cited in Cover 2010:37-39).[11] This notion is employed to explain modal properties that are the underpinnings for the construal of tense and aspect. In addition, Lewis (1979) proposed 'believing time' in a similar context (cited in Cover 2010: 50). These notions are similar to the notion of assessment time that I am proposing here. However, the concept of assessment time is based on one further presupposition that the speaker's observation and perceptual construal of some piece of information is the basis for the assessment. We therefore must also posit a perception time at which the focal information enters the origo's understanding.

I conclude that the multilayer approach to tense, aspect, modality, and evidentiality is a more fine-grained analytical tool for describing languages, especially for describing Korean, in which tense, aspect, modality, and evidentiality are tightly entangled in linguistic elements. By describing the reference points PT and AT as reflexes of SVT, we can account for the interaction

[11] Condoravdi (2002, cited in Cover 2010:50) also proposes another temporal parameter 'evaluative time,' the time at which an eventuality must be realized in order for a sentence to be true. I believe that the notion of reference time can cover this function.

between tense, aspect, modality, and evidentiality in a more conceptually motivated way in that the interaction is where the semantics of subjectivity can arise including epistemic modality and evidentiality. To temporally ground some event with reference to another temporal point naturally involves the speaker's subjectivity, because the psychological activity of manipulating and simulating temporal constructs involves multiple events, multiple roles, and a variety of interactions among them. Two significant events are necessarily involved, an event that the speaker intends to manipulate and the event of the speaker's manipulating the target event; other events such as the speaker's observation of the target event and the speaker's assessment of the temporal sequence may also be involved. The interaction among multiple protagonists in the construal yields a semantics of subjectivity. Because the construed conceptual and/or deictic distance among the protagonists varies, varying degrees of subjectivity can be expressed. These varying degrees of subjectivity give rise to meanings such as the speaker's degrees of certainty, the speaker's level of commitment to truth of the information, and the speaker's modes of access to the information.

2.6 Semantic Tests for Categories of Tense, Aspect, Modality, and Evidentiality

As a basis for the in-depth analysis of Korean tense and aspect data in the following chapters, this subsection describes some canonical notions of tense and aspect (Smith 1997) and some semantic tests used by fieldworkers (Lai 2009, among others). I believe that it is useful to consider these canonical definitions, because these prototypical notions of tense, aspect, modality, and evidentiality can be used as reference points by which we can identify (and, if necessary, redefine) the various functions of the Korean verbal morphology inventory. Because of their practical orientation, the semantic tests used by fieldworkers are the clearest criteria we can use to (re)define what roles the target elements are playing.

TAME elements are the underpinnings that every single event structure is based on, including the processes or events that are depicted by the speaker experiencing origo and the events of depiction themselves. No event structure is free from tense, aspect, modality, and evidentiality. Firstly, the origo must locate the target temporal locus in a particular region on the time line with reference to the origo's deictic center *now*. Secondly, the origo must decide whether she will attend to the target event as a whole or consider the internally structured temporal contour of the target event and pick a particular phase of to focus on it. Thirdly, the origo must assess the given situation and form some attitude – committal, supportive, oppositional, respectful, neutral, etc. – to satisfy the communicative needs of her context. Lastly, the origo must refer, directly or indirectly, to a source of information or mode of access (Hanks 2005) to back up the information that is being conveyed in the utterances.

The prototypical functions of TAME elements with respect to these aspects of event structure seem to be clear. Tense locates an event in time, aspect characterizes the internal temporal profiling of the event, epistemic modality describes the actuality of the event (Chung and Timberlake 1985), and evidentiality marks the speaker's mode(s) of access to the target information about the event. In the remainder of this sub-section, I describe useful semantic tests for tense, aspect, modality, and evidentiality.

2.6.1 A Semantic Test for Tense Category: Compatibility with Temporal Adverbs

First, let us explore semantic tests for tense. According to Lai (2009:39), there are two main

ways to determine whether a morpheme conveys tense information. The first is to examine whether the element is obligatory in a finite sentence. The second criterion is to examine whether the element is compatible with the kinds of time adverbials that are naturally paired with particular tenses.

The first criterion is too coarse to be used here, as it cannot distinguish between tense and aspect in the KVC. It will not be helpful in cases where the elements play roles in both tense and aspect or where the aspectual elements make implicatures about tense. (This is discussed in detail in later chapters)

The second criterion, however, should be helpful in determining whether an element has a tense property. The ungrammaticality of (5) demonstrates that English *will* carries the property of future tense.

(5) *Ahrim will write her dissertation yesterday.

Because the past adverbial *yesterday* is not compatible with the auxiliary *will*, we can be sure that *will* carries an indefeasible expression of futurity. The time adverbials that convey inherent tense information in English include *yesterday*, *today*, *tomorrow*, *now*, *still*, and *already*; this study employs their Korean counterparts to identify tensed elements in the KVC.

2.6.2 Semantic Tests for Aspect Category

An aspect is a way of viewing the internal temporal structure of a situation (Comrie 1976:3). Following Smith (1997), this study assumes that there are two major kinds of aspect, viewpoint aspect and situation aspect. Viewpoint aspect is concerned with the relationship between a particular temporal portion of an event (the RT) and the entire duration of the target event (the ET), parameterized by location of the origo's viewpoint (the deictic center). If the RT is located within the ET, and especially if the RT covers a middle phase of the ET, it prompts an imperfective construal, whereas if the RT coincides with the 'done' phase of the ET, it prompts a perfective construal. These definitions are similar to earlier ones. Comrie's definition of imperfective, viewing the situation from within (1976:24), is similar to my approach, in which the origo's viewpoint scans the RT and the RT is located inside the ET. Comrie's definition of perfective, viewing the situation from the outside, is also similar to my approach, in which the RT covers the 'done' stage, which demarcates an end point of the ET.

Situation aspect, on the other hand, is related to the patterns in the internal structures of events that are encoded by predicates regardless of the temporal location of the viewpoint. Vendler's well-known classification of four kinds of predicates later augmented by Smith into five includes statives, activities, accomplishments, achievements, and semelfactives.

As Lai argues in detail (2009:28), viewpoint aspect and situation aspect are construed independently; for example, imperfective viewpoints may focus on the preliminary or the resultant stages of a situation, in which case the schema of the situation and the span of the viewpoint do not necessarily coincide. I have found the distinction between the two types of aspect useful in identifying and distinguishing tense and aspect elements in Korean. Since the distinction has been covered in numerous works (Comrie 1976 and Smith 1997, among others), a detailed discussion here would be redundant. The remainder of this subsection reviews some semantic criteria for these two types of Aspect.

2.6.2.1 Semantic Tests for Viewpoint Aspect

The first commonly-used criterion for identifying aspectual viewpoints is a semantic test using conjunctions. Because conjunction requires compatibility of the two assertions, especially in terms of continuability, it makes an ideal test for identifying viewpoint aspect. The imperfective aspect is compatible with an assertion that the situation continues, whereas the perfective aspect is not, as shown by the infelicitousness of the sentence in (6).

(6) #Mary walked to school and she's still walking (Smith, 1997:64).

Because the implicatures of perfective aspect obtain in the first clause, the second clause, asserting via a progressive construction that the target event is continuing to happen, is not compatible. In other words, the perfective viewpoint profiles an entire situation and, therefore, is incompatible with an assertion that the event continued (Lai 2009: 27).

Another useful test is adding an *after-* construction onto the utterance in question, as demonstrated in (7).

(7) # John was singing after Mary broke the glass. (Smith 1997: 65)

Because *after*-clauses require sequentiality – a bounded event B takes place after another bounded event A has been completed – it is infelicitous to add an *after-* clause to an imperfective clause. In (7), the *after-* clause requires the temporally later event to occur within a bounded interval, and the imperfective construction does not depict a bounded interval. Rather, it focuses on the period covered by the RT within a potentially unbounded ET. Hence, (7) is unacceptable.

When- clauses can be used as another semantic test for viewpoint aspect. According to Lai (2009:67), in Iquito, where there is a *when* clause and a main clause, if one of the clauses has imperfective aspect, the RTs of the two clauses are construed as overlapping; if both clauses have perfective aspect, the RTs are construed as following each other, prompting a sequential reading; *when* constructions in English function similarly. However, the imperfective is not licensed, if there are other elements in the construction that impose a sequential reading as shown by the examples in (8).

(8) a. Mary broke the glass when I arrived.
?/*b. Mary broke the glass when I was arriving.

(8b) is judged as less grammatical than (8a) because the non-durative semantics of the verb *arrive* impose a sequential reading on the construction, but the *when-* clause in (8b) has imperfective aspect, which conflicts with sequentiality. *When-* clauses can be used to distinguish the imperfective viewpoint from others because, with the imperfective, a sequential reading is not available (Lai 2009:27). The imperfective aspect profiles an unbounded situation, with no information on the initial and final endpoints, while the perfective aspect profiles a situation in its entirety, i.e., a bounded situation including initial and final endpoints (Lai 2009:39). These characteristics of the constructions can be captured by the tests described; I have therefore employed them to identify elements in KVC in this study.

2.6.2.2 The Characteristics of Situation Aspect

Let us direct our attention next to situation aspect. As I noted above, there are five major types of predicates, stative, activity, accomplishment, Achievement, and semelfactive. Table 1 gives a featural analysis of the types of predicates; it is followed by a summary of the characteristics of the situation types (after Lai 2009:40-41).

Table 1. Features of Aktionsart Types

	Dynamic	Telic	Durative
Activity	+	-	+
Accomplishment	+	+	+
Achievement	+	+	-
Semelfactive	+	-	-
Stative	-	-	+
Ingressive	+/-	-	+

- An activity predicate depicts an event with dynamic stages that goes on for some interval of time without an outcome, and therefore without a natural endpoint. It is notable that, because they are atelic, imperfective activity sentences entail perfective activity sentences; referring to the ongoing phase of an atelic event using an imperfective element entails that a starting phase has occurred, which would be encoded by a perfective element. Predicates such as *talk*, *sleep*, and *run* belong to this category.

- An accomplishment predicate depicts a process that has an outcome or change of state. Because they are telic, imperfective accomplishment sentences, unlike imperfective activity sentences, generally do not entail perfective activity sentences. Predicates such as *read a book* and *build a house* belong to this class.

- An achievement predicate depicts a single-stage event that results in a change of state. It is notable that because they are telic and nondurative, imperfective achievement sentences focus on the preliminary stage of an event and do not entail perfective achievement sentences. Predicates such as *reach the top* and *arrive* belong to this category.

- A semelfactive predicate depicts an instantaneous single-stage event with no outcome nor result. Predicates such as *cough*, *kick*, and *blink* belong to this class.

- A stative predicate depicts a process that has a homogeneous internal state that holds over an unbounded period of time. Predicates such as *be young*, *be old*, and *know* are examples of this category.

- An ingressive predicate depicts an event that has an initial boundary and continues after that. Note that the event that is referred to by this predicate involves both dynamic and non-dynamic phases. A test for an ingressive predicate is 'v-*ed and is still* v-*ing*' referring to the same event (e.g., *he sat down as soon as he came in and he's still sitting down*) (Bickel 1996, 1997). Predicates such as *sit down* and *get it* (in the sense of 'catch on,' for

instance) belong to this category.[12]

The attributes of these situation types can be used as a set of criteria that can be employed in defining the elements of the KVC. The patterns in their relationships with viewpoint aspect are particularly useful in identifying TAME elements in the KVC.

2.6.3 Semantic Tests for Modality Category

Because they are related to the origo's assessment of the given situations and can express a variety of attitudes on the part of the origo, we can easily distinguish grammatical markers or elements of modality from those of tense or aspect. It might therefore be thought that no semantic test is needed for modality. However, the kind of modality that this study is particularly interested in is epistemic modality (EM), which expresses the origo's level of commitment to vouching for the occurrence of the target event. EM is often confused with evidentiality (EV): the following semantic test is useful in distinguishing the two. (The distinction is discussed in greater conceptual depth in Chapter 5). This test has been applied in, for example, attempting to determine whether the particle *-mi* is an EM marker or not in Imbabura Quechua (Kwon 2011b).

(9)? *nyarazha* *tamya-gri-n(*-mi)*
maybe rain-Fut-3sg-mi
'Maybe I'**m sure** that it will rain.'
(10)?*nyarazha* *tamya-xu-n(*-mi)*
maybe rain-Imperf-3sg-mi
'Maybe I'**m sure** that it rains.'

In (9) and (10), the utterances with the particle *-mi* are ruled out because the strongly positive EM linguistically encoded by the marker conflicts with the weakly positive EM of the word *nyarazha* 'maybe.' Using such a test to determine the compatibility of a potentially epistemic-modal element with some particular adverbial that inherently conveys some degree of epistemic modality allows us to determine whether that element involves epistemic-modal. An expression equivalent to English *for sure* will be compatible with a strong EM element, while an expression like *maybe* will be compatible with a weak EM element. A modal element's compatibility with particular modal adverbials makes a useful semantic test for identification of modal elements in languages.

2.6.4 Semantic Tests for Evidentiality Category

The main function of evidential elements is to linguistically encode what kind of source of information or mode of access is involved in the information that the origo is conveying. The evidentiality of an element can be tested by negating the mode of access it expresses. For

[12] Johanna Nichols pointed out that there is a sixth type, ingressive (Bickel 1996, 1997). This type is interesting in that it has both characteristics of activity and stative situation types. I believe that the hybrid characteristic of the ingressive situation type makes it distinguished from the other situation types. This study mostly concentrates on the interactions of the first five situation types, whose relationships with viewpoint aspect are critical in defining the tense, aspect, modality, and evidentiality elements in the Korean verbal complex. For the ingressitve situation type, this study discusses its relevance to the Korean durative marker *-eiss-* in Section 3.2.2.2.

example, we can test whether the function of direct evidentiality is linguistically encoded by the particle *-mi* by following it with an utterance that negates the speaker's firsthand visual access to the information in question, such as 'I didn't see it happen' (Kwon 2011b).

(11)?*Ines-ka* *kayna* *paypa* *nyanya-ta-mi* *tupa-ri-rka*
Ines-Top yesterday 3sg.gen sister-Acc-mi meet-Recip-Perf

nyuka *na* *riku-rka-ni-chu*
1sg Neg see-Perf-1sg-NPI
'Ines **visited** her sister yesterday. I didn't see it happen.'

The cancellation of the evidential implicature in (11) results in a logical contradiction, which yields a judgment of unacceptability. Such semantic tests, negating the encoded mode of access, are employed in this study to identify evidential elements.

A semantic test that has been applied to identifying both modality and evidentiality is that of changing a first-person subject to a non-first-person subject or a non-first-person subject to a first-person subject. Modality and evidentiality both involve multiple viewpoints, including the grammatical subject and the experiencing origo (in the case of modality, the origo who assesses the given situation, and in the case of evidentiality, the origo who perceives some stimulus (the evidence). Modality involves the experiencing origo's judgment of the situation in question regardless of whether the origo is the grammatical subject: if they are identical, the construction will have a strong connotation of subjectivity. Evidentiality also involves the experiencing origo's perception of some kind of information about a focal event regardless of whether that origo is the actor in the event. In some languages, including Korean, when the origo and the subject are identical in an evidential construction, conceptual distancing is in action and the construction conveys a complex semantics of subjectivity. (This is discussed in detail in Chapter 5) The closest in English is the periphrastic expression 'It seems,' as in the sentences in (12).

(12) a. It seems he came here by himself.
b. ?It seems I came here by myself.

While (12a) is generally licensed, (12b) is more restricted, being licensed only in cases where the experiencing origo (the speaker) is conceptualized as being a separate observer from the grammatical subject (*I*) so that the origo can observe the subject objectively. (Conceptual distancing is discussed in more depth in Chapter 5.). If we find such an asymmetric licensing of first- and non-first-person subjects in utterances, the utterances must involve modal and/or evidential semantics. The semantics of subjectivity due to the involvement of multiple viewpoints is a typical characteristic of modal and evidential constructions.

2.6.5 A Summary of Common Tests for Tense, Aspect, Modality, and Evidentiality

The following chapter provides detailed analyses of the inventory of elements found in the KVC. That qualitative analysis employs the semantic tests that have been discussed in this subsection, which are summarized in (13).

(13) a. Tense

- Compatibility with temporal adverbials: a non-past construction cannot be used with a past adverbial

b. Aspect

i. Viewpoint aspect

- Compatibility with conjunction: A perfective construction cannot be followed by a conjoined clause that refers to the continuation of the same event.
- *after*- clauses; The imperfective is not licensed in the main clause because *after* constructions require a sequential reading.
- *when*- clauses; When there are elements in the construction that impose a sequential reading, the imperfective is not licensed in either clause.

ii. Situation aspect

- Types of predicate: stative, activity, accomplishment, achievement, semelfactive
- Characteristics that interact with viewpoint aspect:
    - Because they are atelic, imperfective activity sentences entail perfective activity sentences.
    - Because they are nondurative, imperfective achievement sentences do not entail perfective achievement sentences, focusing rather on the preliminary stage of an event.

c. Epistemic modality

- Compatibility with epistemic-modal adverbials
- Asymmetric uses of first-person and non-first-person subjects caused by semantics of subjectivity.

d. Evidentiality

- Compatibility with clauses that negate the potential relevant mode of access
- Asymmetric uses of first-person and non-first-person subjects caused by semantics of subjectivity.

2.7 Summary

In this chapter, I have argued that the construal of tense, aspect, modality, and evidentiality in languages should be analyzed using a multilayer approach because tense and aspect information cannot be grasped without acknowledging modality and evidentiality information. Information about tenses, aspect, modality, and evidentiality cannot be teased apart in linguistic usage because every meaning is a consequence of mental simulation, for which four are necessary. We as cognizers construe and convey tense and aspect information with our subjective stance on it; we do not simply obtain and pass on information that is out there in the real world waiting to be grasped. Tense, aspect, modality, and evidentiality therefore cannot be fully understood without an analysis that construes them in a unified way. In this chapter, I have argued that the analysis of TAME systems should be undertaken using a multilayer approach that takes into consideration all four layers simultaneously and have introduced some methods for to be used in such an approach.

This chapter also defined the key notions involved in this multilayer approach, including event time, speech-act time, and reference time, and secondary viewpoint time (which includes assessment time, perception time), and explored their roles and constraints. Taking the Korean retrospective firsthand evidential marker *-te-* as an example, I argued that in the Korean TAME system, it is difficult to separate modality and evidentiality from the construal of tense and aspect, and that therefore the proposed framework is necessary for analyzing the Korean verbal complex.

I then described the functions of each layer in the multilayer framework and argued that the TAME semantics of every utterance can be accounted for in terms of a layer that combines tense, aspect, modality, and evidentiality together. In addition, I discussed the semantic constraints potentially imposed by the various temporal reference points. As another crucial preliminary, this chapter has provided canonical definitions of tense, aspect, modality, and evidentiality and described some semantic tests used to identify them, which refer to in (re)defining the TAME elements in the KVC.

Based on these preliminaries, the following chapters explore the Korean verbal complex where complex TAME semantics arises.

Chapter 3
Tense and Aspect Elements in the Korean Verbal Complex

3.1 Introduction

Korean is an agglutinative language; a number of grammatical elements that might occur as separate words or clauses if they were translated into an Indo-European language such as English are concatenated into a verbal complex. Tense, aspect, modality, and evidentiality are expressed by various suffixes or grammaticalized markers. The overall morphological template for temporal elements in the Korean verbal complex is shown in Figure 1.[13]

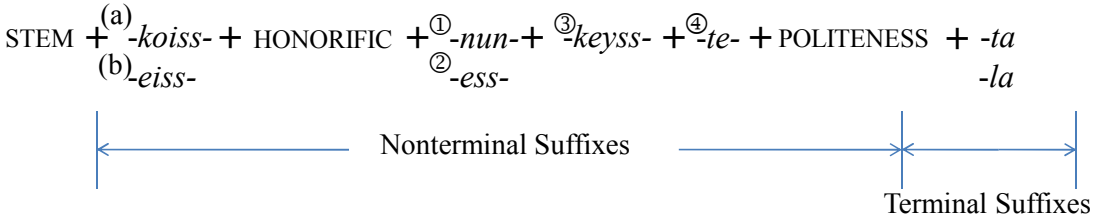

Figure 1. Configuration for the Korean Verbal Complex

A verb stem is followed by elements that can be divided into two major morphological categories: terminal suffixes and non-terminal suffixes. Nonterminal suffixes convey tense, aspect, modality, and evidentiality information.

The semantic boundaries among the elements are, however, not clearly demarcated; the semantics of tense, aspect, modality, and evidentiality arise from interactions among the elements, and most of the TAME markers serve multiple functions at the same time. Hence, there has been a controversy over a question in the Korean linguistics literature (to be discussed in detail below): which grammatical category do the TAME markers belong to? This thesis aims to answer this question adequately by saying that the TAME information should be understood together, not separately. To obtain this goal, this study investigates the markers' interactions with one another in the Korean verbal complex as well as the individual markers' functions. Among the numerous nonterminal suffixes, this study focuses on suffixes expressing TAME information.[14]The terminal suffixes indicate the speaker's certainty of, commitment to, and/or assessment of the proposition in question (epistemic modality) and the sentence type (the illocutionary force).

This configuration poses two major questions, one general and one theory-specific. First, for any given suffix or marker, how should we define it and explain its distribution and possible combinations? Second, what are the functions of these suffixes and grammaticalized markers,

[13] Note that Figure 1 is not a full configuration. The full configuration will be provided in Chapter 4, as more epistemic modal terminal suffixes are explored in the chapter.

[14] Korean also has a grammaticalized system of honorification in the verbal complex; there are slots for an honorific marker *-si-* and for a politeness marker *-(u)p-*. The former encodes the speaker's deference to the subject in the utterance, and the latter downgrades the status of the speaker as a form of politeness to the addressee. However, this system does not significantly interact with the TAME morphology, and is therefore beyond the scope of this study.

and how can their conceptual structures be modeled in the cognitive-linguistics framework? The second question is addressed in this chapter (about tense and aspect elements) and Chapter 4 (about modality and evidentiality elements), and Chapter 5 focuses on the semantics of subjectivity found in the evidential elements using Mental Spaces Theory.

However, this chapter mainly addresses the first question, which can be broken down into a series of smaller questions. What are the major elements involved in the KVC, especially the ones that are involved in construing tense, aspect, modality, and evidentiality? What does the Korean TAME system look like as it is manifested in the Korean verbal complex? Are the definitions of the individual suffixes or markers in the KVC in the literature clear and accurate? That is, can functional categories that have been developed mainly by analyzing Indo-European languages be applied transparently to the elements of the KVC?

This chapter seeks to answer these outstanding questions by examining the major elements that play a role in encoding tense and aspect in Korean and showing how firmly they are entangled with the semantics of modality and evidentiality. Within the structure layout of the KVC, this study finds that the elements in the tense, aspect, modality, and evidentiality inventory cannot be defined as belonging to pure functional categories, such as tense morphemes, an aspect morphemes, and the like, but rather, every marker has versatile functional coverage that depends on the particular context.

Because tense, aspect, modality, and evidentiality elements are naturally the target of interlocutors' negotiations of meaning, and such negotiation tends to trigger productive grammaticalization processes (Hopper and Traugott 1993), diachronic research may offer valuable insights into the complexity of the elements' semantics and their versatility. Although this study focuses primarily on how the TAME elements work synchronically in contemporary Korean, with the goal of shedding light on how they work in the minds of speakers, historical accounts of particular morphemes are included where they relevantly enhance the analysis (for example, in the account of the presumptive/ volitive/ positive epistemic modal *-keyss-*).

This chapter argues that the approach used to account for the tense, aspect, modality, and evidentiality inventories of Indo-European languages is unable to fully account for the functional properties of the TAME elements in the KVC, because the traditional approach has not fully taken into account the potential for simultaneous interactions between the various functional categories. For example, the nonterminal suffix *-te-* in the KVC encodes multiple functions, including firsthand evidentiality, strong epistemic modality, imperfectivity, and past-tense reference, making it difficult to define it in terms of belonging to a single category. Furthermore, the construal of tense and aspect in Korean is dependent on the speaker's modes of access to her direct and indirect experiences and her assessment of the target event based on those experiences. In other words, tense and aspect cannot be understood without grasping how modality and evidentiality are processed in Korean. This study argues that a multilayer approach to the TAME system is needed to account for the KVC and presents an analysis of each of the target categories within the KVC in terms of the multilayer approach introduced in the previous chapter.

In this chapter, I explore the inventory of nonterminal temporal suffixes in the KVC, laid out in Figure 1 above. I explore the possible distributions of the morphemes, especially cases where multiple tense, aspect, modality, and evidentiality markers can appear simultaneously, blurring the boundaries between the functional categories. The analysis in this chapter focuses on how the tense, aspect, modality, and evidentiality markers are distributed when the terminal suffix is fixed as a declarative ending (*-ta* or *-la*). Oher terminal suffixes that convey various modal meanings are briefly discussed in Chapter 4. In Section 3.2, I provide analyses of two subsets of the tense,

aspect, modality, and evidentiality elements found in the KVC. Section 3.3 discusses their combinations and distributions. Section 3.4 revisits how the multilayer approach can be used to tackle the issue of the inseparability of tense, aspect, modality, and evidentiality, and Section 3.5 summarizes the conclusions of this chapter.

3.2 Tense, Aspect, Modality, and Evidentiality as Contested Categories in the Verbal Complex

The inventory of TAME elements can be divided into two major groups, the nonterminal temporal suffixes and the durative aspectual expressions that have undergone grammaticalization. I will explore each in turn. To begin, I will examine cases where each morpheme or expression is employed by itself in an utterance, to form a basis for better characterizing what it encodes.

3.2.1 Major Nonterminal Temporal Suffixes

There are four major nonterminal suffixes in the Korean verbal complex that are concerned in the temporal structure of an utterance; the nonpast imperfective-aspect marker *-nun-*, the anteriority marker *-ess-*, the retrospective firsthand evidential marker *-te-*, and the presumptive/ volitive/ epistemic modal marker *-keyss-*. As these markers are obligatorily involved in the temporal grounding of every utterance, I will call them temporal suffixes, although they also convey other information like aspect, modality, and evidentiality.[15] The following subsections give a thorough analysis of each of these markers in turn.

3.2.1.1 The Nonpast Imperfective-Aspect Marker *-Nun-*

When *-nun-* is used by itself, the utterance containing it conveys either simple present tense or imperfective aspect. The sentence in (1) could have any of the three given readings.

(1) *ku-ka* *pap-ul* *mek-<u>nun</u>[16]-ta*
he-Nom meal-Acc eat-Imprf-Decl
a. 'He is having a meal.'
b. 'He has a meal.'
c. 'He's going to have a meal.'

The default reading of (1) is that the subject is eating a meal at the speech act time (1a). This conforms to Comrie's (1976:66) general statement with regard to present tense: "[s]ince the present tense is essentially used to describe, rather than to narrate, it is essentially imperfective, either continuous or habitual, and not perfective." It can also convey a habitual reading, as in (1b) or a near-future or scheduled-future reading, as in (1c).

3.2.1.1.1 Nonpast-Tense Reference

The sentence in (2) is ungrammatical because there must be at least one non-terminal TAME

[15] The modal and evidential functions of these markers are discussed in further detail in Chapter 4.
[16] *-Nun-* also has an allomorph *-n* that occurs when the marker follows a verb stem that ends with a vowel. For instance, when it is coupled with the verb stem *ttena-* 'leave,' it is realized as *-n-*, and thus we will obtain *ttena-n-ta*.

suffix which makes the focal event temporally grounded in the verbal complex; a tense-aspect morpheme like *-nun-* is obligatorily required between the verb stem *mek-* 'eat' and the declarative ending *-ta* for the utterance to anchor its deictic center.[17]

(2) **ku-ka* *pap-ul* *mek-ta*
he-Nom meal-Acc eat-Decl

The fact that *-nun-* has a specifically present-tense reference can be shown using the temporal-adverb semantic test described in the previous chapter.

(3a) ?*ecey* *ku-ka* *pap-ul* *mek-nun-ta*
yesterday he-Nom meal-Acc eat-Imprf-Decl
'Yesterday he is having a meal.'

(3b) *onul* *ku-ka* *pap-ul* *mek-nun-ta*
today he-Nom meal-Acc eat-Imprf-Decl
'He will have a meal today/ he will be having a meal today.'

(3c) *nayil* *ku-ka* *pap-ul* *mek-nun-ta*
tomorrow he-Nom meal-Acc eat-Imprf-Decl
'He will be having a meal tomorrow.'

The examples (3a)-(3c) show that *-nun-* marks nonpast semantics; it is not compatible with the past-tense adverbial *ecey* 'yesterday,' but is compatible with present and future adverbials. What *-nun-* conveys is that the scheduling of the event takes place at the ST. In short, the fact that *-nun-* can be employed in examples with future- or present-tense adverbials, but not with past-tense adverbials, shows that it definitely conveys a semantics of tense, specifically of nonpast tense.

3.2.1.1.2 Imperfective Aspectual Meaning

-Nun- can also prompt progressive or imperfective readings. That is, among the possible logical phases of an *eating* event – beginning to eat, being in the middle of eating, and finishing eating – *-nun-* draws attention to the middle stage, which is ongoing at the utterance time. The example in (4) shows that *-nun-* can be analyzed as imperfective because the imperfective aspect coupled with a durative *while*-clause sets up a prototypical imperfective scenario.[18]

(4) *coking-ul* *ha-nun-tongan* *ku-nun* *caychayki-lul* *ha-ess-ta*
jogging-Acc do-Imprf-while he-Nom sneeze-Acc do-Ant-Decl

[17] Tense- and aspect-neutral sentence such as (2a) is sometimes found in the headlines of newspapers, which focus on schematic representation of the focal events rather than on deictic reference to the temporal information. Because the letter-counts of the headlines are very limited, the omission of this and other information is specially licensed.

[18] According to H.-S. Lee (2011), the shape of the tense system in noun modification is different from that in predication in Korean. (for a detailed overview of how the Korean tense system operates in noun modification and predication, see H.-S. Lee (2011).) The point here is that *-nun-* must have an imperfective reading if, when it is used in noun modification, it occurs with the durative conjunction *-tongan* 'while.'

'While he was jogging, he sneezed.'[19]

Note that *-nun-* is used in the subordinate clause indicating that the focal event of the jogging is not a bounded event. (*-Tongan* 'while' embeds a durative event or process, and the focal time period that we attend to is the ongoing (middle) phase, not the final phase.) In other words, the speaker's viewpoint is anchored inside the focal event and describing the ongoing situation.[20]

Another piece of supporting evidence for the claim that *-nun-* is compatible with imperfectivity is that *-nun-* is not licensed in *when*-clauses, as is shown by the ungrammaticality of (5).

(5) **coking-ul* *ha-n-ttay* *ku-nun* *caychayki-lul*
joggin-Acc do-Imprf-when he-Nom sneeze-Acc
ha-ess-ta
do-Ant-Decl
'When he jogged, he sneezed.'[21]

The *when*-clause in Korean indicates a punctual event, i.e., an event that is conceptualized as occurring at a temporal point rather than over temporal interval. It requires a bounded event, as the speaker is recounting a bounded time period during which another event took place. The imperfectivity of *-nun-* contradicts the boundedness that is required by *when*-clauses. Thus, the ungrammaticality of (5) shows that *-nun-* acts as an imperfective marker as well. In short, when *-nun-* is used in a clause by itself, it is ambiguous between the nonpast-tense sense and the aspectual sense, whereas when it is used in complex sentences, it only conveys imperfectivity.

We can also employ another of the semantic tests discussed in Chapter 2, compatibility with a *before-* clause.

(6) ?*Yenghuy-ka* *chengsoha-ki-ceney* *Chelswu-ka* *pap-ul*
Yenghuy-Nom clean-Nmlzr-before Chelswu-Nom meal-Acc
mek-nun-ta
eat-Imprf-Decl
'Chelswu is having a meal before Yenghuy cleans up.'

The acceptability of (6) is marginal because the unboundedness conveyed by *-nun-* clashes with

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[19] There is another type of utterance that has both *-nun-* and *-koiss-* (the progressive suffix) at the same time, as in (i). This construction is not licensed in a main clause with a declarative ending.

(i) *coking-ul* *ha-koiss-nun-tongan* *ku-nun* *caychayki-lul* *ha-ess-ta*
jogging-Acc do-Prog-nun-while he-Top sneeze-Acc do-Ant-Decl
'While he was jogging, he sneezed'

The fact that *-nun-* is licensed in both (3) and (i) shows that *-nun-* can be analyzed as an imperfective morpheme.

[20] Although the tense of the sentence in (3) is past, the non-past imperfective marker *-nun-* can be employed in the subordinate clause. This seems to be related to some general characteristics of TAME morphology in Korean, namely, that the distribution of TAME morphemes in attributive or nonpredicative clauses differs from that in predicative clauses (for more details, see H-S. Lee 1991). This asymmetry is beyond the scope of this study.

[21] In contrast with English, where *when* clauses are functionally compatible with both punctual events and durative events in Korean, punctual events and durative events are marked with distinct temporal conjunctions. Punctual events are marked with *-ttay* which imposes a reading framed as a single temporal point. In contrast, durative events are marked with *-tongan*, which imposes a reading framed as a temporal interval.

the discontinuity conveyed by the *-ceney* clause. In other words, the boundedness required by the sequentiality reading imposed by the *-ceney* clause is not compatible with the imperfectivity conveyed by *-nun-*.

Imperfectives in general do not co-occur with telic prepositions like *in* because such prepositions normally require a natural endpoint. *-Nun-* shows this conflict when it is coupled with the preposition, as it is in (7), further demonstrating that it is imperfective.

(7)	?*Chelswu-nun*	*samsip-pwun-an-ey*	*pap-ul*	*mek-nun-ta*
	Chelswu-Top	thirty-minute-inside-Loc	meal-Acc	eat-Imprf-Decl
	'Chelswu is having a meal in thirty minutes'			

The sentence in (7) is not acceptable in most contexts because the imperfectivity conveyed by the marker is not compatible with semantics of the preposition *an* 'in.' However, (7) is licensed in a limited number of contexts. For example, if it is known in the context that Chelswu is planning to have a meal, (7) is acceptable for conveying an immediate future reading, 'Chelswu will be starting his meal in 30 minutes.' It is also acceptable for conveying a habitual reading, as in 'It usually takes 30 minutes for Chelswu to finish his meal.' In other contexts, however, the imperfective character of *-nun-* conflicts with the telic semantics conveyed by the preposition *an*.

The fact that *-nun-* is normally not licensed in progressive constructions also supports the claim that it conveys imperfective semantics. If another progressive construction were already present, *-nun-* would not be licensed in the utterance because it would be redundant; this is demonstrated by the ungrammaticality of the sentence in (8).

(8)	**ku-ka*	*pap-ul*	*mek-koiss-nun-ta*
	he-Nom	meal-Acc	eat-Prog-Imprf-Decl
	'He is having a meal.'		

As (8) indicates, *-nun-* does not co-occur with the progressive marker *-koiss-*. Interestingly, there is an exception to this rule; the two markers can co-occur in performative/ imperative sentences such as that in (9).

(9)	*ku*	*tongan*	*chengso-lul*	*ha-koiss-nun-ta!*
	the	while	cleaning-Acc	do-Prog-Imprf-Decl
	'Get cleaning now!'			

This further supports the claim that *-nun-* marks non-past imperfective aspect, because in a performative sentence, the focal process is construed as synchronized with the speech event. In the speaker's epistemic world, the two events should coincide as the shape of the world fits itself to the performative utterance. In this context, the imperfective marker *-nun-* and the progressive marker synergistically convey a performative reading.

3.2.1.1.3 Modal and Evidential Meaning: Epistemic Immediacy

Interestingly, (6) is licensed in some specific contexts. If the utterance were made as a vivid real-time narration from a third person's perspective, there would be no problem processing it. This is because *-nun-* can also involve modal semantics: it can mark that the utterance's meaning is in

sync with the speaker's perception or the speaker's expectation. This epistemic immediacy (Langacker 2009) is one of the readings that *-nun-* conveys; this is not unexpected given that *-nun-* covers the semantics of the epistemic imperative discussed above.

The modal characteristics of *-nun-* can also be tested, as shown in (10).

(10)a.**amato* *Chelswu-ka* *cikum* *pap-ul* *mek-nun-ta*
probably Chelswu-Nom now meal-Acc eat-Imprf-Decl
'Chelswu is probably **having** a meal now.'[22]

b. **Chelswu-ka* *cikum* *pap-ul* *mek-nun-ta,* *na-nun* *mos*
Chelswu-Nom now meal-Acc eat-Imprf-Decl I-Top Neg
po-ess-ciman
see-Ant-but
'Chelswu **is having** a meal now, but I haven't seen it happening.'

The sentence in (10a) is ruled out because the weak epistemic-modal adverb *amato* 'probably' is not compatible with the marker *-nun-*. If *-nun-* were replaced with *-keyss-*, which is a presumptive/ volitive/ modal marker, (10a) would be acceptable. The ungrammaticality of (10b) also indicates that *-nun-* necessarily has an evidential reading, because it is not compatible with a conjoined second clause that negates a direct mode of access to the information conveyed by the verb it attaches to. These tests show that *-nun-* carries modal and evidential semantics as well as tense and aspect.

3.2.1.1.4 The Historical Present

The phenomenon of the historical present has been reported crosslinguistically as a case of noncanonical interpretation of tense (Cutrer 1994). Korean is no exception. Although *-nun-* is canonically defined as a nonpast imperfective marker, it is licensed in sentences referring to the past, such as that in (11):

(11) *isip-nyen* *cen* *onul* *ku-ka* *pap-ul* *mek-nun-ta*
twenty-year ago today he-Nom meal-Acc eat-Imprf-Decl
'So it's twenty years ago, and he's having a meal...'

This also is not surprising, because what *-nun-* primarily indicates is that the perceiving origo's viewpoint is currently scanning through the focal event, as if the situation were occurring concurrently. In (11), as the time adverbial anchors to the past (20 years ago), our common sense tells us that the focal event happened in the past. In this special case of past-tense marking, however, the marker seems to be concerned only with the inner structure of the event, as if it were present-tense. By utilizing *-nun-*, the speaker highlights the unboundedness of the focal event, anchors her viewpoint inside it, and narrates it vividly as if it were occurring in the present. If *-nun-* were simply a tense marker, (11) would be an anomaly.

[22] Boldface is used in translations throughout this thesis to highlight cases where the Korean verb complex has backgrounded epistemic and/or evidential information that would probably not be explicitly represented in an English sentence in a similar context.

3.2.1.1.5 A Unified Account Within the Multilayer Approach

Because of *-nun-*'s functional versatility, even simple sentences like (1) (repeated here) can be ambiguous.

(1') *ku-ka* *pap-ul* *mek-<u>nun</u>-ta*
he-No meal-Acc eat-Imprf-Decl
a. 'He's **having** a meal.'
b. 'He has a meal.'
c. 'He's going to have a meal'

The sentence in (1) can have a present-tense reading in which the speaker is describing the focal event as a whole, a habitual reading,[23] or an imperfective reading, where the speaker's viewpoint looks into the event in a fine-grained sense and zooms in on the ongoing stage. It can also have a planned-future reading or an epistemic immediacy reading. And modal and evidential semantics permeates each of these attested readings.

Now let us model the semantics of this versatile marker in terms of the multilayer framework. In (1), because the speaker is depicting a telic event (having a meal), the ET is bounded. *-Nun-* indicates that the speaker is vividly describing what is happening at the ST, i.e., that the origo is paying attention to the middle stage of the event. This is represented in Figure 2.

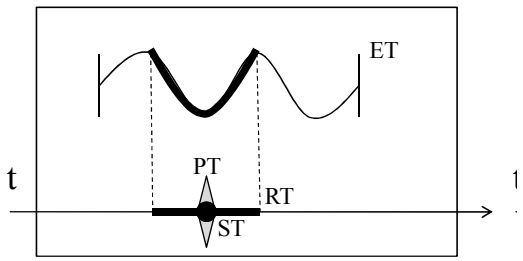

Figure 2. A Schematic Representation of *-Nun-* When Used as a Present/ Imperfective Marker as in (1)

The event time encompasses the reference time that the viewpoint scans and attends to (the ongoing stage of having a meal). It should be noted that secondary viewpoint time is active in relation to the RT; the RT contains the SVT, in this case the speaker's perception time, because she is watching the focal event proceed at the same time as she makes the utterance; i.e., she is describing, but not narrating. The RT includes the ST and the PT because the event is taking place when the speech act is made and when the speaker is observing. The ST coincides with the PT in that the perceiving origo's viewpoint coincides with the ongoing event and the speech act. The PT is involved in the representation to suggest that the marker involves evidential (and modal) semantics in that it is concerned with the relationship between the narrator's perception and the utterance time (This relationship will be discussed more in comparing *-nun-* to the functionally similar marker *-koiss-* in a later section.) This relevance of the PT is supported by

[23] In this case, however, (1) means 'he eats rice' rather than 'he has a meal.' Since it conveys a habitual reading, *-nun-* does not seem to be a prototypical progressive marker. That is because in general, progressive aspect tends not to convey generic reading or habitual reading by default (*I'm running* vs. *I run* in English).

the fact that *-nun-* imposes semantic restrictions on the person of sentential subjects. If a first person subject were used in a sentence like that in (1), the utterance could not be a normal description of the speaker's current actions, but would have only a reading of epistemic immediacy and in near-future timing, as in 'It is I who will have a meal soon.' The fact that a *-nun-* utterance with a first-person subject cannot be interpreted as a present-tense descriptive utterance indicates that the perceiving origo cannot be construed as objectively observing what she is doing in the moment. If the PT were not involved in *-nun-* constructions, i.e., if there were two separate roles, the observer and the one who was being observed, there would be no such semantic anomaly. This suggests that PT is involved in the construal of such constructions.[24]

The planned-future reading of the sentence in (1) is represented in Figure 3.

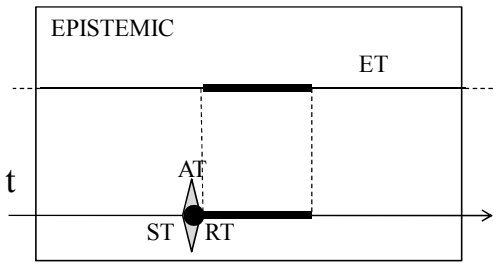

Figure 3. Schematic Representation of *-Nun-* as Used as a Planned Future Marker, as in (1c)

In the planned-future reading of (1), *-nun-* evokes an epistemic domain in the construal. In Figure 3, ST and AT precede the RT, representing the future-tense reading. Note that the target of the assessment is occurrence of the event in question. Furthermore, because it is in an epistemic domain, the RT can be located after the AT. The involvement of the AT is related to epistemicity, and its immediate precedence of the RT specifically is related to epistemic immediacy. What is the same is that the ST overlaps with the SVT in all readings.

3.2.1.1.6 Interactions with Situation Types

-Nun- is also compatible with an atelic stative verbs; it can refer to some central portion (RT) of any type of ET and indicate that that focal portion of the event is being scanned from the experiential origo's perspective. For instance, when it is used with the atelic stative predicate *al-* 'know,' as in the sentence in (12), some portion of the constant state of knowing is profiled, and this profiled portion is construed as containing the SVT (instantiated here as AT)[25] and the ST.

(12) *Inho-nun* *ku* *sasil-ul* *a-n-ta*
Inho-Top the fact-Acc know-Imprf-Decl
'Inho knows the fact.'

[24] Note that, in the habitual reading of (1), the AT rather than the PT would be relevant because the habitual reading involves the speaker's assessment rather than her perception. (Of course, the speaker's assessment is based on her repeated perception of iterations of the focal event.) As I pointed out in Chapter 2, the SVT's value is determined by the given context.

[25] The AT is the relevant value in this case because the conveyed message is not the kind of information that can be the target of direct perception, but comes from a process of assessment (Technically, we cannot see someone knowing something, because it is an internal state.)

Figure 4 represents the way *-nun-* is used with stative predicates.

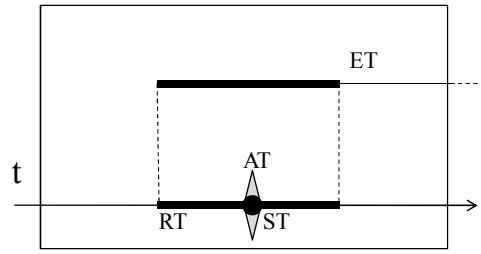

Figure 4. Present-Tense Reading of *-Nun-* With an Atelic Stative Process

This schematic representation is similar to that in Figure 2. The stative predicate *al-* 'know' depicts the transition from the state of not-knowing to the state of knowing as well as the internal homogeneity (stativity); this is why the ET does not extend to the left the representation in Figure 4. Only after the experiencer recognizes that the grammatical subject is in a state of knowing something can the ET line begin. Then, among the potential phases of the continuous, atelic event time, a focal portion is scanned and profiled; this RT contains the ST and the AT.

Stative verbs with *-nun-* can also convey a planned-future reading, as in the example in (13).

(13)	*nayil-i-myen*	*Inho-nun*	*ku*	*sasil-ul*	*a-<u>n</u>-ta*
	tomorrow-Cop-if	Inho-Top	the	fact-Acc	know-Imprf-Decl
	'Inho will know the fact by tomorrow.'				

In (13), the situation in question, Inho's knowing of a certain fact, will take place after the speech act. However, the assessment that the event will take place is made at the speech-act time. Because the construal of (13) involves the speaker's epistemic judgment, the representation of (13) also involves an epistemic domain, as shown in Figure 5.

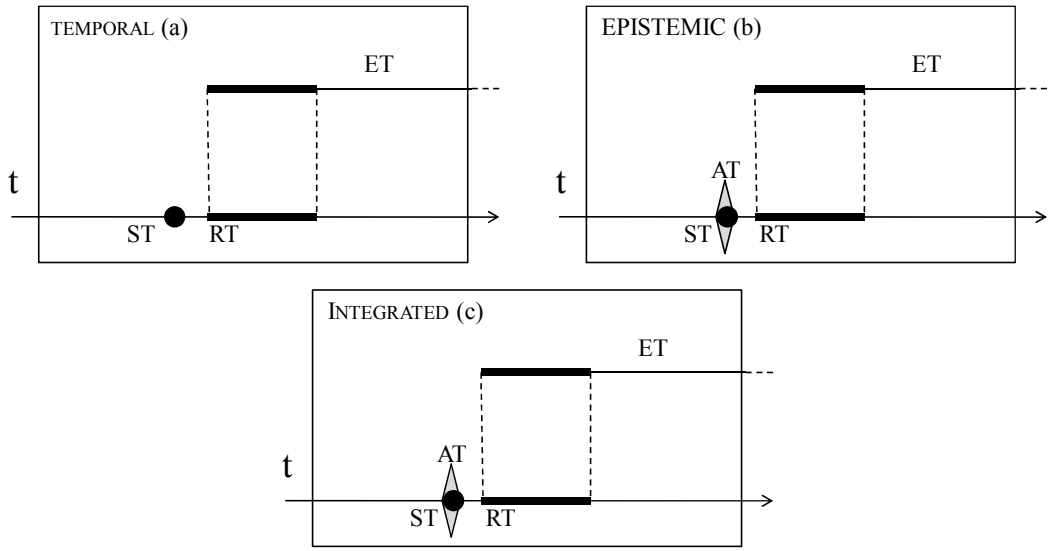

Figure 5. Planned-Future Reading of *-Nun-* with an Atelic Stative Process

The schematic representation of the utterance in (13) consists of layers in two domains as shown in Figures 5a and 5b. In Figure 5a, the ST precedes the RT, which indicates the focal situation

will take place after the speech act. Its modal import of the epistemic immediacy is represented in Figure 5b; the assessment of the likelihood of occurrence of the event (AT) is being made at the speech-act time (ST). The two layers are integrated into one temporally structured schematization in Figure 5c.

However, *-nun-* is not compatible with stative adjectival predicates such as *yeyppu-* 'be.pretty,' *chakha-* 'be.kind,' *yongkamha-* 'be.courageous,' and so forth (H.-S. Lee 1991:275). For instance, the sentence ***kunye-ka yeyppu-n-ta*** 'She is being prety' is ungrammatical because conceptually, adjectives presuppose that the internal state of the focal process remains the same, so the origo's viewpoint does not need to scan the constant state laboriously.

Stative adjectival predicates are different from stative verbs in that stative verbs entail at least one change of state. For example, *know* entails a transition from not knowing to knowing and *feel* entails a transition from not feeling to feeling. (Klein's [1994] 1-state predicates); in contrast, stative adjectival predicates such as *be.old* and *be.pretty* do not entail any change of state. (Klein's 0-state predicates). In the diagrams in this thesis, the event times for processes encoded by adjectives are represented by continuous lines, both of whose ends extend infinitely, while the event times of processes evoked by stative verbs are represented by lines whose left end does not extend earlier than the beginning of the reference time (for example, in Figures 4 and 5). This difference between stative verbs and adjectives is captured in the difference between the diagrams in Figure 4 and Figure 6.

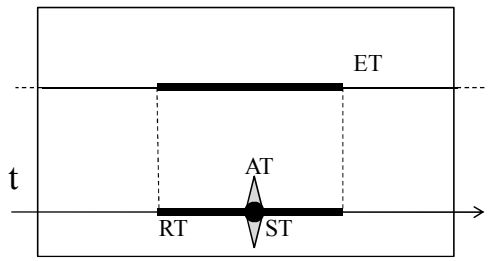

Figure 6. Present-Tense Reading of *-Nun-* With a Stative-Adjectival Predicate

Unlike stative verbal predicates, stative adjectival predicates indicate that there is an unchangeable and constant state, which is represented in Figure 6 by the fact that the ET line extends to both left and right. Under these conditions, the imperfective marking is conceptually redundant because the ET itself is an unbounded and imperfective state. This conceptual redundancy prohibits *-nun-* from being used with stative adjectival predications. If it were a simple present-tense marker, there would be no such constraint. This further demonstrates that *-nun-* is an imperfective marker.

-Nun- can be used with all of the other types of telic and atelic predicates, such as *talli-* 'run' (atelic, activity), *chak han kwen-ul ilk-* 'read a book' (telic, accomplishment), *tochakha-* 'arrive' (telic, achievement), and *kichimha-* 'cough' (semelfactive). These types of predicates are exemplified in (14)-(17).

(14) *Chelswu-ka* *talli-n-ta*
Chelswu-Nom run-Imprf-Decl
'Chelswu is running.'

(15) *Yenghuy-ka* *chak han-kwen-ul* *ilk-nun-ta*

Yenghuy-Nom book one-volume-Acc read-Imprf-Decl
'Yenghuy is reading a book.'

(16) *Chelswu-ka* *tochakha-n-ta*
Chelswu-Nom arrive-Imprf-Decl
'Chelswu is arriving.'

(17) *Yenghuy-ka* *kichimha-n-ta*
Yenghuy-Nom cough-Imprf-Decl
'Yenghuy is coughing.'

These examples show that *-nun-* can be freely used with any of these situation types. Furthermore, the sentences have the expected entailments. The imperfective activity verb *talli-* 'run' in (14) entails some previous phase of running, thanks to its atelic character. The imperfective achievement predicate *tochakha-* 'arrive' in (16) focuses on the preliminary stage of an event and does not entail its perfective counterpart. These behaviors are expected, and they verify that the marker is semantically imperfective.

The observations I have made thus far do not deviate from previous analyses of *-nun-*. There has been disagreement in the literature about whether the morpheme's major functionis to convey present tense, nonpast tense, a situation in progress (at least in some contexts), or an experience that is concurrent with the moment of the speech act. The major positions are summarized below; for a detailed review, see H-S. Lee 1991: 262-3.

- Present, nonpast tense (H.-B. Choe 1977, H.-M. Sohn 1975, S.-H. Kim 1967, J.-S. Na 1971, C. Lee 1987)
- Present tense and present progressive (H.-B. Choe 1977, S.-H. Kim 1967, J.-S. Na 1971)
- Non-past or present tense (H.-B. Choe 1977, and C. Lee 1987)
- Actual tense (K.-D. Lee 1981),
- Process aspect, in-progress (Martin 1954),
- Indicative mood marker (H.-M. Sohn 1975 and S.-O. Shin 1988)

(cited in H.-S. Lee 1991:262)

One interesting thing to note is Sohn's and Shin's claim that *-nun-* is an indicative mood marker. This claim seems to be related to the marker's morphosyntactic distribution: the formal declarative ending *-ta* always requires that *-nun-* be present when it is used in non-past utterances. For this reason, *-nta* and *-nunta* are sometimes analyzed as a single unit, therefore *-nun-* has been regarded – erroneously, in my view – as a functor marking indicative mood. The other interpretations can be related in one way or another to the uses I discussed above. This thesis claims that *-nun-* can best be analyzed as a nonpast imperfective marker because its most prototypical property, imperfectivity, evokes the concurrent timing of the speaker's viewpoint and the speech act, i.e., its prototypical use is one in which the construer's viewpoint is located inside the focal event.

In sum, *-nun-* indicates that the focal ET is overlapping with the RT, the ST, and the SVT (which is instantiated according to whether the speaker intends to encode her assessment or her perception). Because this is the main function of the marker, *-nun-* functions as a non-past imperfective aspect marker, rather than solely as a present tense marker. This follows the

typological tendency for the imperfective aspect to be unmarked with present tense (Comrie 1976:121). When *-nun-* is used by itself in the tense, aspect, modality, and evidentiality slot, its tense is nonpast. Within the nonpast tense, it profiles the unboundedness of the focal event and puts the RT inside of the focal event. This analysis is supported by the occurrence of the morpheme in utterances that convey scheduled future, epistemic immediacy, habitual readings, historical present, and performative/ imperative speech-act status. *-Nun-* encodes that the SVT coincides with the RT. This is why a sentence containing *-nun-* has the effect of vivid description, which means that it involves modal properties as well as aspectual properties. I have therefore argued that *-nun-* has a variety of functions such as marking nonpast tense, marking imperfectivity, and marking modality (the involvement of an SVT).

3.2.1.2 The Anteriority Marker *-Ess-*

There is another temporal linguistic item in the verbal complex that supports the claim that the Korean tense, aspect, modality, and evidentiality system should be analyzed using a multilayer approach: the anteriority marker *-ess-*. The term 'anteriority' is adopted from H.-S. Lee (1991), who uses it to indicate that *-ess-* has multiple functions, indicating that the RT precedes the ST (past), that the greatest portion of the ET is anterior to the RT, which only covers the final phase of the focal event (perfective), or that the ET precedes the RT (perfect). The label 'anteriority' represents a generalization over those functions – anteriority to other temporal parameters – which can be manifested as past tense or as relative tenses/aspects such as perfective and perfect.

3.2.1.2.1 Past-Tense Reference

An uncontested function of the marker *-ess-* is to mark past tense. The claim that *-ess-* marks past tense is supported by examples like the one in (18).

(18) *ku-ka* *pap-han-kki-lul* *mek-ess-ta*
he-Nom meal-one-Cnt-Acc eat-Ant-Decl
'He had a meal.'

The focal event, the subject's eating a meal, is construed as having occurred entirely prior to the ST.

As I noted in Section 3.2.1.1, the sentence in (2) (repeated here as (2') is ungrammatical because it is not temporally grounded; again, a tense-aspect morpheme like *-ess-* can be added to provide temporal grounding and form a grammatical sentence.

(2') **ku-ka* *pap-ul* *mek-ta*
he-Nom meal-Acc eat-Decl

The fact that the temporal grounding *-ess-* provides is in the past can be proven by and adverbial test, shown in (19).

(19) **ku-ka* *nayil* *pap-ul* *mek-ess-ta*
he-Nom tomorrow meal-Acc eat-Ant-Decl
'He ate a meal tomorrow.'

The sentence in (19) is ungrammatical because there is a semantic clash between the adverbial *nayil* 'tomorrow' and the past tense of the utterance, showing that *-ess-* by itself in a clause conveys a past-tense reading.

3.2.1.2.2 Aspectual Meanings: Perfective and Perfect

-Ess- may operate as a past-tense marker in (18), but this is not the end of the story; it can also be used for other functions, the perfective aspect and the perfect. In its perfective use, the marker *-ess-* indicates that the origo is viewing the focal event as bounded, with her viewpoint located outside of the bounded event. The example in (20) employs the conjunction semantic test for perfectivity.

(20) ?*Chelswu-ka* *pap-ul* *mek-ess-ta,* *kuliko* *Chelswu-nun*
Chelswu-Nom meal-Acc eat-Ant-Decl, and Chelswu-Top
acikto *mek-koiss-ta*
still eat-Prog-Decl
'Chelswu ate a meal and Chelswu is still eating.' (from Smith 1997)

The sentence in (20) is only marginally acceptable because the aspect marked by *-ess-* in the first clause contradicts the progressive reading of the second clause. The perfectivity marked by *-ess-* is clearly shown in (21), to provide supporting evidence that *-ess-* has a perfective functions.

(21) *ku-ka* *tuleo-ess-ul-ttay* *na-nun chak-ul*
he-Nom come.in-Ant-Rltvzr.Imprf-when I-Top book-Acc
ilk-koiss-ess-ta
read-Prog-Ant-Decl
'When he came in, I was reading a book.'

When-clauses make a typical case for perfective, because the focal event (in this case, the subject's coming in) is viewed as bounded, and its internal structure is not in focus.[26] Because *-ess-* is licensed in the first clause in (21), we can see that it conveys perfectivity. *-Ess-* is also licensed in sentences whose main clause is future-tensed. The anterior marker is used in the *when* clause in the example in (22), where the event of the subject's arrival is a bounded process.

(22)a.*ku-ka* *o-ess-ul-ttay* *nay-ka malha-keyss-ta*
he-Nom come-Ant-Rltvzr.Imprf-when I-Nom say-Mod.Vol-Decl
'When he gets here, I'll tell him.'

b.?*ku-ka* *o-ess-ul-tongan* *nay-ka malha-keyss-ta*
he-Nom come-Ant-Rltvzr.Imprf-when I-Nom say-Mod.Vol-Decl
'While he is here, I'll tell him.'

In the *when*-clause in (22), the anterior marker is licensed even though the tense of the main

[26] In Korean, *-ttay* 'when' is only licensed with a bounded event because it encodes a temporal point rather than a temporal interval.

clause is future, i.e., the focal-event time is located temporally after the speech-act time. *When*-clauses mark an anchoring point that grounds the event denoted in the main clause. *-Ttay* constrains the anchoring point to be a temporal point, rather than an interval, and the anterior marker is compatible with the boundedness imposed by *-ttay*. In contrast, in the *-tongan* clause in (22b), the anteriority marker is not licensed, since *-tongan* 'while' marks the anchoring point to be an interval. The anteriority marker is not compatible with it. This shows that *-ess-* functions as a perfective marker when it is used in a subordinate clause that is anterior to the time indicated by the main clause's tense.

3.2.1.2.3 Perfect Marking

-Ess- also has a perfect sense.[27] The example in (23) (borrowed from E.-H. Lee 2007:5), where the adverbial phrase *cikum-kkaci* 'now-until' is employed, not only indicates that the focal event has been completed, but also that it lasts from a certain time in the past to the current time, i.e., right before the utterance is made.

(23) *ku-ka* *pap-han-kki-lul* *cikum-kkaci* *mek-ess-ta*
he-Nom meal-one-Cnt-Acc now-till eat-Ant-Decl
'He's just eaten.'

This particular marker also marks the past of past (this is often called relative tense in the Korean linguistic literature. I believe that the relative tense is another term of perfect because it refers to the past of past (Lev Michael p.c.)); it can encode past perfect tense, when the given context provides a configuration where its reference time anchors to the past tense. An example is given in (24).

(24) *ecey* *Yenghuy-nun* *cinswu-ka* *cip-ey*
yesterday Yenghuy-Top Cinswu-Nom home-Loc
ka-ess-tako *sayngkakha-ess-ta*
go-Ant-Comp think-Ant-Decl (T-W. Han 1996:19)
'Yesterday Yenghuy thought Cinswu had gone home.'

Taking the past tense that is marked in the main clause (*ecey Yenghuy-nun sayngkakha-ess-ta* 'yesterday Yenghuy thought') as a reference point, the speaker marks the tense of the embedded event, which took place earlier than the main-clause event, with *-ess-*. The embedded event '*Cinswu-ka cip-ey ka-ess-ta* 'Cinswu went home' is marked with *-ess-* to indicate that the event is prior to the tense of the embedding clause *Yenghuy-nun sayngkakha-ess-ta* 'Yenghuy thought.'

This shows that *-ess-* functions as a perfect aspect marker as well. The analysis so far leads us to the conclusion that *-ess-* conveys a past-tense reading, perfect, a perfective reading, or a hybrid of all three. Generalizing over these functions, I will call it an anteriority marker, following H.-S. Lee (1991). This general label seems to be plausible, given that *-ess-* depicts a

[27] Another interesting fact about *-ess-* is that a sentence containing it is ambiguous, in that it does not specify whether the speaker directly perceived the focal event or not. For instance, when one uttered the sentence in (18), one could mean either that one directly perceived the focal event or that one is simply aware of its occurrence. I will discuss this issue further in my analysis of how readings of evidentiality arise in the verbal complex, later in this study.

situation where a portion of the focal event precedes the ST (past tense), the 'done' phase of the ET (perfective), or the post phase (perfect) – or, as I will discuss in the next subsection, the tense that has already been established in the given context (relative tense).

3.2.1.2.4 Modal and Evidential Meanings

Interestingly, *-ess-* also involves modal and evidential readings. The fact that it has a modal reading can be proven using with a semantic test for epistemic modality, as shown in (25).

(25) **Yenghuy-ka* *amato* *pap-ul* *mek-ess-ta*
Yenghuy-Nom probably meal-Acc eat-Ant-Decl
'Yenghuy probably **had** a meal.'

The sentence in (25) is unacceptable, unless some other evidential or modal ending marker is added. This demonstrates that the use of *-ess-* indicates that the speaker vouches for the validity of the information that is conveyed in the utterance, i.e., that the marker carries epistemic modal semantics on top of all of its tense and aspect complexities. The specifically evidential reading can be tested by defeasing the speaker's direct perceptual access to the focal event, as in (26).

(26) ?*Yenghuy-ka* *pap-ul* *manhi* *mek-ess-ta*
Yenghuy-Nom meal-Acc much eat-Ant-Decl
na-nun *po-cianh-ess-ciman*
I-Top see-Neg-ess-but
'Yenghuy **had** a big meal. But I didn't see her eat it.'

The sentence in (26) is only marginally grammatical, because *-ess-* is usually accompanied by an implicature that the speaker has directly observed the focal event taking place. The evidentiality is not explicitly linguistically encoded, but there exist cases where *-ess-* strongly conveys a firsthand evidentiality meaning.[28] *-Ess-* is therefore another element that needs explaining in terms of the multilayer approach, because it conveys multiple functions – tense, aspect, modality, and evidentiality – simultaneously.

3.2.1.2.5 A Unified Account Within the Multilayer Approach

Let us model the constructions that contain the anteriority marker in terms of the multilayer framework. As noted above, versatile markers like *-nun-* and *-ess-* cannot be given a proper explanation without analyzing their functions from the point of view of multiple domains. For the sake of convenience, I will repeat the relevant examples that represent the various functions of *-ess-* here.

(18') *ku-ka* *pap-han-kki-lul* *mek-ess-ta*
he-Nom meal-one-Cnt-Acc eat-Ant-Decl

[28] Sentences such as that in (26) can be licensed in contexts where the speaker is sure of the event, even if she is not necessarily directly experiencing it. This functional duality between strong positive epistemic modality and direct firsthand evidentiality motivates the concept of a secondary viewpoint time that can be instantiated as either perception time or by assessment time. (See Chapter 2 for a more detailed discussion of SVT).

'He had a meal.'

(23') *ku-ka* *pap-han-kki-lul* *cikum-kkaci* *mek-ess-ta*
he-Nom meal-one-Cnt-Acc now-till eat-Ant-Decl
'He's just eaten a meal.'

The sentence in (18') is ambiguous in that it could convey a past tense-reading or a perfective reading, whereas (23') encodes only a perfect reading. I will focus on the past-tense reading of (18') and on the perfect meaning of (23'). Figures 7 and 8 give schematic representations of these two situations in terms of temporal reference points.

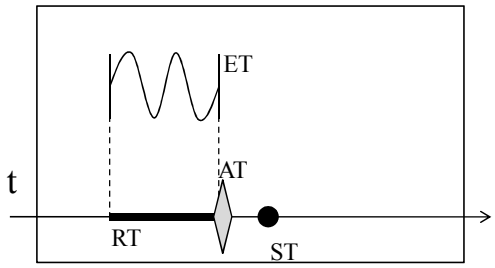

Figure 7. The Past-Tense Use of *-Ess-,* as in (18')

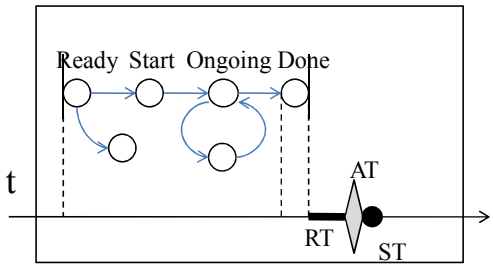

Figure 8. The Perfect-Aspect Use of *-Ess-*, as in (23')

In Figure 7, the telic event is bounded, and the RT covers the ET as a whole. The bounded event is located prior to the ST, resulting in a plain past tense. Note that the speaker formulates an utterance with *-ess-* by default, when she assesses the likelihood that the focal event took place and views it as a bounded event, i.e. without considering its internal structure. (This is why Figure 7 does not include an X-schema representation of the internal structure of the focal event.) What is highlighted is that the bounded event as a whole took place prior to the ST. Here, the SVT is instantiated as an AT (in this case, making an assessment that the focal event definitely took place); however, whether the PT or the AT is given depends in general on context. (When the PT is active, the construction conveys a semantics of evidentiality.)

In Figure 8, the RT covers the 'Done' state of the event and the subsequent time, representing the perfect aspect. For these purposes, I have extended Narayanan's X-schema notation for representing the inherent aspect of a predicate to represent viewpoint aspect. The final logical phase of the focal event, the Done stage, and the post-event are profiled (i.e., encompassed in the RT), and the profiled period immediately precedes the ST. This immediate precedence represents the relevance to the ST that is conveyed by the present perfect construction. The representations show that *-ess-* indicates that the RT precedes the ST. The assessment time is concurrent with or immediately before the ST, because utterances with *-ess-* are licensed when the speaker is sure that the event took place (or when the speaker strongly believes that the event took place; future perfect) when she is making the utterance.

3.2.1.2.6 Interactions With Situation Types

Now, let us explore how *-ess-* interacts with different kinds of inherent verbal aspect. The example sentences in (27), (28), and (29) contain an accomplishment verb (telic, dynamic), an adjectival predicate that can denote either a state or a process, and a stative adjective (atelic,

stative), respectively.

(27) *Inho-nun* *wuntongcang-ul* *han-pakhwuy* *talli-ess-ta*
Inho-Top playground-Acc one-round run-Ant-Decl
a. 'Inho ran one lap around the playground'
b. 'Inho has run one lap around the playground.'

-Ess- focuses on the bounded aspect of a focal event, whether it is telic or atelic event. For example, the sentence in (27) concerns the telic event of running one lap, and can be interpreted as either past tense or perfective. *-Ess-* functions in essentially the same way to produce both of the interpretations; the completed process as a whole or the completion (end state) of the focal event is attended to by the viewpoint from outside of the process and this bounded process is construed as anterior to the ST.

(28) *Inho-nun* *nulk-ess-ta*
Inho-Top be.old-Ant-Decl
a. 'Inho **is** old'
b. 'Inho became/got old.'

(29) *Yenghuy-nun* *yeppu-ess-ta*
Yenghuy-Top be.pretty-Ant-Decl
'Yenghuy was pretty'
(≠ 'Yenghuy became pretty/ got pretty.')

On the other hand, when *-ess-* combines with adjectives, as in the examples in (28) and (29), the combination of the predicates' own semantics and the semantics of the marker can convey either perfective aspect (as in (28a) and (28b)) or a past-tense reading (as in (29)). It should be noted that a sentence such as that in (28) can convey present-tense reference, while a sentence such as that in (29) cannot; if (29) were used with adverbial *cikum* 'now,' it would be considered ungrammatical because of the temporal mismatch between what the present adverbial encoded and what *-ess-* could encode in that context. The difference between (28) and (29) is that the adjective in (28) is inherently incremental in nature, evoking an aging process that involves dynamic changes of state, while the adjective used in (29) is not. *-Ess-* as it is used in (28) focuses on the resultant state of Inho's being old, which holds at the ST, and the utterance cannot have a past-tense reading.[29] In contrast, because the state referred to by the adjective in (29) is not incremental, there is no conceptual room for perfectivity to kick in. As a result, *-ess-* can only play the role of marking the temporal ground for the utterance, i.e., its past tense.

E.-H. Lee (2007:7) argues that *-ess-* as it is used in (28) is not a prototypical perfective marker, but rather a resultative marker, because perfective markers in general are not compatible with stative predicates, which denote constant states. Rather, *-ess-* marks resultativity in that it profiles the post time of a process encoded by stative predicate such as *nulk-* 'be.old.' My account does not have to stipulate the marker's resultativity separately from its function of marking perfectivity; to my understanding, resultativity and perfectivity are generally difficult to tease apart. Under my account, *-ess-* can still be labeled perfective, because the adjective *nulk-* 'be.old'

[29] In order for it to have a past-tense reading, the reduplicated form of *-ess-*, *-essess-*, would have to be used. This reduplicated form is discussed later in this section.

evokes the incremental process of getting old. At any rate, it is clear that *-ess-* draws attention to the final 'Done' phase of the ET. This is related to the marker's historical origin. *-Ess-* historically came from a periphrastic expression *-e iss-*, where *-e* is a connective marker and *iss-* is existential 'be': this expression highlights a resultant state.

The two readings of *-ess-* as it is used in (27) are represented schematically in Figures 9 and 10.

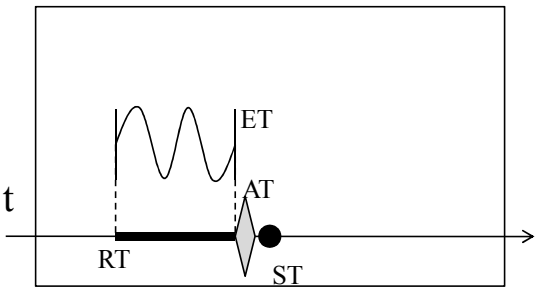

Figure 9. The Past-Tense Use of *-Ess-* as in (27a)

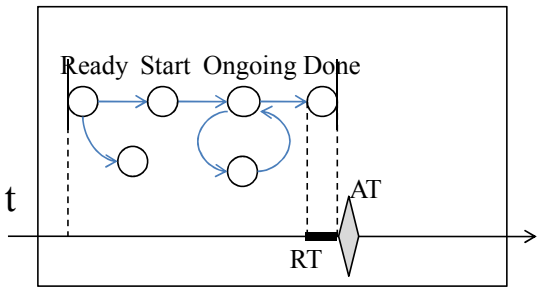

Figure 10. The Perfective-Aspect Use of *-Ess-* with a Telic Dynamic Predicate as in (27b)

The use of *-ess-* in (27) can have two readings. One is that the RT precedes the ST, which means that the tense is past and that the bounded event as a whole is temporally located prior to the speech event; this is represented in Figure 9. Note that the SVT (instantiated as AT) immediately follows the RT, because *-ess-* usually carries the implicature that the speaker has certainty about the focal information via an assessment process. The assessment time can either coincide with the ST or immediately precede it, because the speaker's certainty motivates the utterance as a means of conveying a fact to the addressee.

Figure 10 represents the perfective-aspect use of *-ess-*; the Done phase of the focal event (the telic event of Inho's running a lap) is covered by the RT, and the RT is prior to the SVT (instantiated as an AT) where the speaker assesses that it is a fact. It should be noted that, by default, the SVT precedes or overlaps with the ST, where the speaker remembers that she observed the focal event in the (recent) past. In other words, a reading of epistemic modality (or evidentiality, in which case, the SVT is instantiated as PT) can arise here, indicating that the speaker perceived that Inho was running one lap, in the past-tense reading, or that Inho completed his running activity, in the perfective-aspect reading.

The sentence in (28) can be represented as in Figure 11.

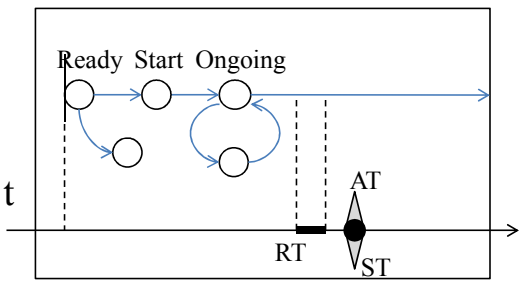

Figure 11. The Use of *-Ess-* With an Incremental Adjective, as in (28)

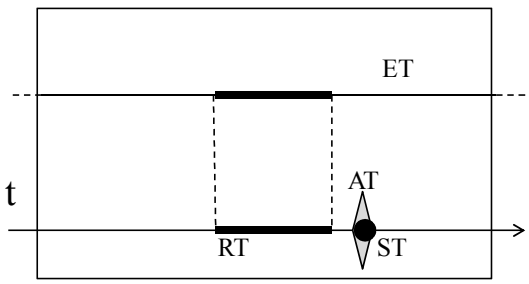

Figure 12. The Use of *-Ess-* With a Homogenous Adjective, as in (29)

Figure 11 represents the fact that what the adjective *nulk-* evokes is an aging process that has an

internal structure and that has not terminated yet. What has occurred at the speech-act time is the experiencing origo's assessment that the grammatical subject is quite old. Putting it differently, at some point in the ET, the assessment that the agent is above a certain age is made. The process that is evoked by the adjective therefore presumably has starting and ongoing phases. In this view, it is not a homogeneous stative predicate that refers to a conceptually monotonous state, but rather refers to a unidirectional, incremental process; this conceptualization is represented in Figure 11.

In contrast, the predicate *yeppu-* in (29) refers to a prototypical homogenous state that does not have any conceptual boundaries to demarcate starting, ongoing, and done phases; this homogeneity is represented in Figure 12. The sentence in (29) does not have a perfective-aspect reading because the constant, homogenous, atelic state of being pretty does not have an end state and therefore does not have demarcated boundaries such as a beginning and an end. In other words, because the predicate encodes a homogenous state that does not have any distinct phases, a Done phase cannot be profiled.

In (28) and (29), the AT plays a crucial role. The state of Inho's being old and the state of Yenghuy's being pretty are true in the world even before the speaker comes to know about them. The focal process is recognized in our assessment of the state and is covered by the RT, which profiles that focal portion of the event. Therefore, the RT must precede the AT. Making such an utterance is possible only after the speaker has recognized and assessed the situation; this fact is represented by the temporal ordering RT > AT = ST.

Generalizing over the examples above, the morpheme *-ess-* can encode either that the RT is simply located prior to the ST (past tense) or that the end state of the focal event and/or the time subsequent to it is profiled (perfective aspect). What these uses of *-ess-* share in common is that, whether the focal event is viewed as a bounded event or whether its resultant state is profiled, it occurs prior to the ST. In other words, the major functions of *-ess-* are to indicate either that the RT is prior to the SVT and the ST or that the ET is prior to the RT; which supports the general label 'anterior marker' for *-ess-*. The RT must come before the SVT, which coincides with (or immediately precedes) the ST, because the speaker's assessment based on her perception of the profiled portion of the focal event motivates the statement that contains *-ess-*.

This generalization holds for the other types of verbs, such as the achievement verb *tochakha-* 'arrive' in (30) and the semelfactive verb *caychaykiha-* 'cough' in (31). These processes, including their resultant states, are attended to as a bounded whole and conceptualized in terms of ET, ST, RT, and SVT.

(30) *Chelswu-ka* *tutie* *tochakha-ess-ta*
Chelswu-Nom finally arrive-Ant-Decl
'Chelswu finally arrived.'

(31) *Yenghuy-ka* *kapcaki* *caychaykiha-ess-ta*
Yenghuy-Nom suddenly cough-Ant-Decl
'Yenghuy coughed suddenly.'

3.2.1.2.7 The Epistemic-Perfective Use

According to our discussion so far, the marker *-ess-* can convey a past-tense reading, a perfect or perfective-aspect reading, or a hybrid thereof – anteriority – as well as a strong-positive

epistemic-modal or a direct evidential reading. In the discussion above, I employed the notion of an SVT to accommodate the semantics of epistemic modality and evidentiality. There is further supporting evidence for the need for these temporal reference points in that *-ess-* is licensed with a future-tense adverbial in contexts where the speaker's epistemic world is involved. That is, *-ess-* can indicate that a focal event has been completed in the speaker's epistemic world, which is not restricted by any tense. The perfective-aspect reading stemming from the speaker's belief enables *-ess-* to be used with a future-tense adverbial, as in the example in (32).

(32) *ne-nun* *nayil* *cwuk-ess-ta*
you-Top tomorrow die-Ant-Decl
'Tomorrow, you're dead.' (T-W. Han 1996:11)

If *-ess-* only marked anteriority of the RT to the ST, the sentence in (32) would not be grammatical because *-ess-* would not be compatible with a future adverbial. However, in this use, it is a perfective-aspect marker: because the focal event – the addressee's dying – is construed as a bounded one and its internal structure is not in focus. *-Ess-* in (32) is licensed because it conveys the origo's judgment regarding the likelihood of the addressee's punishment, not the actual future event of the addressee's being punished. In other words, the speaker's subjective judgment of the certainty of the event leads her to employ the perfective marker *-ess-* to the profile completion of the focal event in her epistemic mental space. If *-ess-* were a simple past-tense marker, (32) would not be licensed, because past tense merely indicates that the RT precedes the ST in a nonepistemic domain, and this would be incompatible with the context of (32). In the nonepistemic domain, the speaker's judgmentat the assessment time, coincides with or immediately precedes the speech-act time. In the domain of the speaker's epistemic world, the RT is anterior to the AT; this is the relationship that is marked by the anteriority marker.

3.2.1.2.8 Reduplication of *-Ess-*: The Past Perfect

It is even more interesting to see how Korean expresses past perfect tense with this particular marker; it uses *-essess-*, a reduplicated form of the perfect-aspect marker *-ess-*. For example, the past-perfect aspect is expressed by *-essess-* in the sentence in (33).

(33) *Inho-nun* *cam-ul* *ca-essess-ta*
Inho-Nom sleep.n-Acc sleep.v-Pst.Perf-Decl
'Inho had slept.'

In (33), the time period that *-essess-* attends to is only the time after the completion of the sleeping, excluding the entire time period of the focal event, including its end state. In addition, the implicature conveyed by (33) is that Inho slept a while ago and that the speaker is not concerned with the Done stage, and thus, that it is very likely Inho is no longer asleep at the speech-act time. Note that the past-perfect tense morpheme shows some compositionality, in that the RT, which covers the Done stage of the focal event, is located before the ST. *-Essess-* profiles the anteriority of the RT, in which the final phase of the focal event is profiled, to the ST. This past-perfect use is schematized in Figure 13.

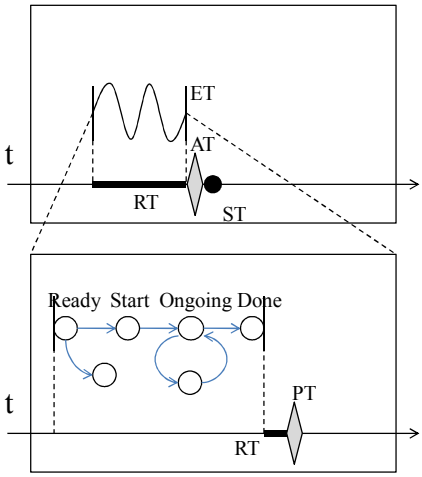

Figure 13. Representation of *-Essess-*

As shown in Figure 13, when *-ess-* is doubled, its function of profiling the post time of a focal event is coupled with another function marking past-tense, and as a result, it marks the farther-distanced past, encoding a past-perfect reading. In Figure 13, the embedded diagram that does not include the ST represents the perfect aspect, while the embedding diagram represents the past tense. The perfect aspect reference in the embedded diagram shows that the bounded event is viewed as a whole. The combination of the two yields past-perfect semantics. The AT is involved in the embedding diagram and the PT is involved in the embedded one because the utterance indicates that the information that the speaker perceived was assessed by the speaker prior to the ST.

It can be further demonstrated that *-essess-* is a past-perfect marker by trying to combine it with a future-tense adverbial, as in the sentence (34).

(34) **Inho-nun* *nayil* *cenyek-kkaci*
Inho-Top tomorrow night-till
ca-essess-lkes-i-ta
sleep-Pst.Perf-Fut-Cop-Decl
'Inho will have slept till tomorrow night.'

As shown by the ungrammaticality of (34), *-essess-* is not licensed in a future-tense utterance: this demonstrates that it functions as a past-perfect marker (For a detailed discussion of the distribution of *-essess-*, see E.-H. Lee 2007).

The discussion so far has covered most of the points that have been made in the literature and accounted for the functions of *-ess-* and *-essess-*, which have been contested enormously, in a more motivated way. The main functions that have been discussed in the literature are:

-Ess-

- Past-tense marking (Martin 1954, S.-H. Kim 1967, S.-C. Song 1967, Cook 1971, J.-S. Na 1971, H.-B. Choe 1977, Hwang 1975. D.-H. An 1980, C. Lee 1987)
- Marking completion or the resultant state of a completed situation (Huh 1983)
- Perfective-aspect marking, i.e., completion of a situation (Sohn 1975, K.-S. Nam 1978)
- Past-tense marking and perfective-aspect marking (two functions) (H.-B. Choe 1977, D.-H.

An 1980, S.-O. Shin (1988).
- Remote-tense (K.-D. Lee 1981)
- Context-dependent marking of either past tense, completion, current relevance, or resultant state (S.-H. Choi 1987)

-*Essess*-
- Reference to the past of the past ("more remote or more definitely complete than that of past -*ess*-") (Martin 1954)
- Past tense with "experiential-contrastive" aspect (Lee 2007)
- Past tense with discontinuity of a result state (C. Lee 1987)
- Pluperfect (Sohn 1995) (all cited in E.-H. Lee 2007:9)

The descriptions of -*ess*- and -*essess*- in previous work are not incompatible with my analysis. Perfectivity and past-tense readings are normally compatible with -*ess*- because the end state is by default viewed from a perspective posterior to the bounded state, which is anterior to the utterance time. The fact that the marker can convey a past-tense reading is not surprising because there is a typological tendency for the perfective aspect with the past tense to be unmarked (Comrie 1976:121). In addition, when the marker is reduplicated, it indicates a past-perfect reading; it intuitively makes sense in that the doubling of -*ess*- should give rise to an interpretation of past of past. Accordingly, -*essess*- can indicate the past-perfect reading, which involves remote-past tense, and yields an implicature that the state resulting from the focal event does not hold any more at the time of the utterance (E.-H. Lee 2007:9).

This study argues that the appropriate cover term for -*ess*- is an 'anteriority' marker because its multiple functions, including marking past tense, perfect, perfective, and epistemic completion, are all conceptually based on anteriority. This study also points out that the marker's modal and evidential implications should not be ignored and that, in fact, the semantics of epistemic modality and evidentiality are the underpinnings for construing the discontinuity reading conveyed by the past-perfect marker -*essess*-.

3.2.1.3 The Presumptive/ Volitive Modal -*Keyss*-

-*Keyss*- is another temporal suffix whose identity has been contested. It has been described as a future-tense marker, a volitive marker, a presumptive-modal marker, a volitive-modal marker, and an epistemic-modal marker. Rather than settling on one description over the others, I argue that -*keyss*- should be analyzed as another versatile marker with a variety of functions, and that its core function is to mark the experiential origo's presumption of an irrealis event. Its functions – presumptive-modal marking, volitive-modal marking, futurity marking, and epistemic-modal marking – are thus in need of a unified multilayer account.

3.2.1.3.1 Modality Marking: Volition and Presumption

-*Keyss*- conveys a variety of modal semantic properties. First, it often encodes the speaker's willingness to take a future course of action. Just as the futurity reading evoked by the English auxiliary *will* came historically from the semantics of volition, -*keyss*- can depict a situation in which the experiencing origo has the will to do some action in the future. Note that the experiencing origo does not have to be identical to the protagonist of the utterance for the marker

to be licensed; the origo can either be the speaker of the utterance or the grammatical subject of the linguistic construction. However, each of these cases conveys a different meaning. The examples in (35)-(37) illustrate this phenomenon.

(35) *nay-ka* *ku-il-ul* *ha-keyss-ta*
I-Nom the-work-Acc do-Mod-Decl
'I am willing to do the work.'

(36) ?*nay-ka* *nulk-keyss-ta*
I-Nom be.old-Mod-Decl
'I am willing to get old.'

(37) *Chelswu-ka* *ku-il-ul* *ha-keyss-ta*
Chelswu-Nom the-work-Acc do-Mod-Decl
'Chelswu will do the job.'
(≠ 'Chelswu has a will to do the job.')

In utterances like (35), where a first-person subject is used with *-keyss-*, the marker yields a volitional reading (cf. *-ul* kes- for a volitive sense with a third-person subject (see footnote 30)). That the reading is volitional is confirmed by the infelicity of (36); a verb like *nulk-* 'be.old' has nothing to do with the speaker's volition, as one cannot control aging in a normal context. When a non-first-person subject is used, as in (37), the utterance cannot convey a volitional reading.

3.2.1.3.2 Future-Tense Reference

As shown in (36) and (37) above, *-keyss-*'s volitive modal semantics naturally convey an implicature of future tense and further, the marker marks the future tense reference when it is used with a third-person subject. The contrast between (38) and (39) shows that *-keyss-* is a tense marker.

(38) **nay-ka* *pap-ul* *mek-ta*
I-Nom meal-Acc eat-Decl

(39) *nay-ka* *pap-ul* *mek-keyss-ta*
I-Nom meal-Acc eat-Mod-Decl
'I am willing to have a meal.'

The sentence in (38) is ungrammatical because there must be at least one non-terminal TAME suffix; *-keyss-* is one of the markers that can be used to complete the sentence and make it grammatical. In this case, it indicates that the focal event of having a meal will take place after the speech-act time. The marker's futurity seems to be inferred from the marker's volitive; (40) is unacceptable because it would be infelicitous if the speaker expresses the semantics of volition toward the past event.

(40) *nay-ka* *nayil/ onul/ *ecey* *pap-ul* *mek-keyss-ta*
I-Nom tomorrow/today/yesterday meal-Acc eat-Mod-Decl

'I will have a meal tomorrow/ today/ yesterday*.'

The fact that the sentence with *-keyss-* and the adverbial *ecey* 'yesterday' is not acceptable indicates that the marker conveys a futurity reading, i.e., that it is compatible with future-tense reference.

3.2.1.3.3 Marking Deductive Reasoning: Presumptive/Epistemic Modality

The sentence in (39) can, however, yield an interpretation of deductive reasoning. That is, (39) can mean that the speaker is inferring from what information she has obtained that Chelswu will do the job. In other words, *-keyss-* can encode that information has been deduced from the speaker's experience, including the experience of judgment; this type of function has been called a presumptive modal or an "experiential" (Pitkin 1984:134, cited in Aikhenvald 2004:36) or an "assumed" evidential (Aikhenvald 2004:63-64).[30] The deductive-reasoning reading of *-keyss-* is not usually conveyed by utterances containing a first-person subject, but by those containing non-first-person subjects (cf. *-napo-*, discussed in Chapter 4).[31] The example in (41) also shows the deductive reasoning encoded by *-keyss-*.

(41) *nal-i* *kencoha-ese* *ppallay-ka* *cal* *malu-keyss-ta*
day-Nom be.dry-Caus laundry-Nom well dry.v-Mod-Decl
'Since the weather's dry, the laundry should dry well.'

What I mean in this thesis when I refer to 'deductive reasoning' is an origo's process of drawing a conclusion about what effect(s) will occur based on her observation of a causing event. In (41), the day's weather being dry is the causing event and the laundry's drying thoroughly is the predicted effect. *-Keyss-* is licensed in contexts where speakers draw conclusions from causes, rather than the other way around; in other words, it marks a deductive reasoning process.[32] In

[30] The typological literature refers to the kind of evidentiality marker that involves logical reasoning, assumption, or simply general knowledge as an "assumed evidential." However, I do not see any difference between assumed evidentiality and presumptive epistemic modality, as both evoke a domain in which the assessing origo takes an epistemic stance towards the likeliness of a conjectured event's occurrence. In addition, because *-keyss-* can also be construed as having other volitive, presumptive, and futurity semantics, from which the semantics of epistemicity can be derived, I believe that the function of *-keyss-* is to mark the function of presumptive epistemic modality. I will discuss the types of evidentiality involved in the KVC in further detail in Chapter 4.

[31] This type of subject asymmetry, so-called conjunct/ disjunct phenomena (Aikhenvald 2004), is a typical characteristic of constructions carrying a semantics of evidentiality and/or epistemic modality. The reason for this is straightforward: Because evidentiality and epistemic-modality constructions involve multiple events, including the focal event, the event of the origo's perception of the focal event, and the event of the origo's assessment of the event based on that perception. Each of these events is structured by a semantic frame that has frame elements such as protagonist, patient, stimulus, setting, and time, and the protagonists of the events might not be identical. It is therefore natural that the surface grammatical subject might be different from the semantic subject, the experiential origo. Consequently, evidentiality and epistemic modality constructions have asymmetries between their first-person and non-first-person subject usages. These asymmetry effects are discussed in more detail later in this chapter and in Chapter 4.

[32] I believe that *-keyss-*'s function of encoding deductive reasoning qualifies it as a presumptive epistemic-modal marker or, arguably, an assumed evidentiality marker, in that it utilizes the speaker's experiences and knowledge. On the one hand, the evidence that the speaker's reasoning is based on is a trigger for her assumptions about a future event: this causal structure is an epistemic relation, which qualifies the marker as an epistemic-modal marker. On the other hand, it could also be called an assumed evidential marker because it involves the experiencing origo's

addition, the speaker makes an epistemic assessment that some event is likely to take place, relying on her stored knowledge about causal relationships between similar caused events and their causes. This knowledge enables the speaker to make a presumptive judgment on the likeliness of the conjectured event's occurrence, so another major semantic property of *-keyss-* is presumptive epistemic modality marking.

The marker's function of marking a deductive-reasoning process can also be distinguished from its futurity reading in that the past tense marker *-ess-* can be coupled with *-keyss-* in some presumptive-epistemicity contexts, as it is in (42).

(42) *ecey* *Chelswu-ka* *ku-il-ul* *ha-ess-keyss-ta*
yesterday Chelswu-Nom the-work-Acc do-Ant-Mod-Decl
'Chelswu **must** have done the work yesterday.'

The sentence in (42) has the past tense adverbial *ecey* 'yesterday' and the anterior marker *-ess-* is licensed with *-keyss-*. This shows that the utterance has nothing to do with futurity, but is rather related to an event that is inferred by the speaker in the speaker's epistemic mental space. In (42), the speaker is making an epistemic assumption based on her stored knowledge. This deductive-reasoning process in an epistemic domain based on the speaker's knowledge demonstrates that *-keyss-* is an epistemic-modal marker.

3.2.1.3.4 A Unified Account Within the Multilayer Approach

The phenomena examined thus far show that *-keyss-* plays a role in the marking of futurity (future-tense reference), the origo's volition (volitional modality), and deductive reasoning (presumptive epistemic modality). Based on these observations, this subsection models the semantics of *-keyss-* using the multilayer approach. First, let us consider the case where a first-person subject is coupled with *-keyss-* as it is in (35). If *-keyss-* is used with a first-person pronoun, it marks the speaker's intention to carry out some future action. The temporal profiling of this use of *-keyss-* is schematized in Figure 14.

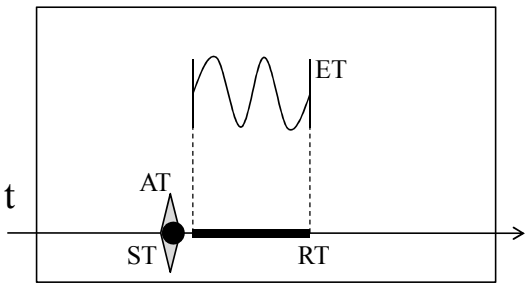

Figure 14. Future-Tense Use of *-Keyss-*, as in (39)

In Figure 14, the ET (which is the same as the RT) is located after the ST, giving rise to the volitive-future reading of (39). The AT precedes the ET, which violates the ordering constraint on ET and AT that was discussed in Chapter 2. However, it is nonetheless possible for the AT to

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inference based on her knowledge. I will come back to this issue in Chapter 4 in my comparison of *-keyss-* with *-napo-*, which I believe plays the role of an inferential evidential marker in the contemporary Korean.

precede the ET because the target of the assessment is not the ET, but the information about the potential future occurrence of the ET that the origo gleans based on her observation of evidence given in the context. The schematic representation in Figure 14 is, in fact, a superimposed representation of two events: a focal event (the assessed event) and an assessing event. The timeframe of the assessed event is after the AT and the ST, i.e. in the future. Note that the PT is not explicitly encoded in this use because the speaker is making an assessment of her own future course of action, which has nothing to do with her actual perceptions at the speech-act time.

Next, let us turn to an example where a presumptive epistemic-modal reading is conveyed, such as (43).

(43) *Inho-ka* *cikum-ccum* *pap-ul* *mek-keyss-ta*
Inho-Nom now-around meal-Acc eat-Mod-Decl
'He'**s having** a meal around now.'

The use of *-keyss-* in this utterance is not concerned with temporal sequence nor aspectual setting, but with the speaker's assumption, assessment, or expectation about a likely effect based on deductive inference in her epistemic world, based usually on her knowledge. For this reason, the epistemic domain is evoked, as shown in Figure 15.

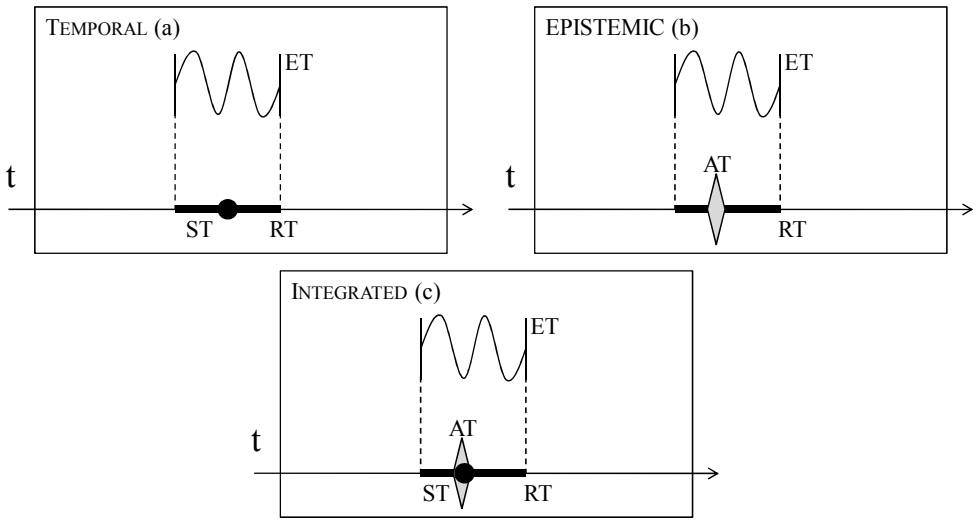

Figure 15. Epistemic Modal Use of *-Keyss-*, as in (43)

The representation of the conceptual structure evoked by the utterance in (43) consists of two layers in different domains as shown in Figure 15c. The representation in Figure 15b shows that (43) does not indicate that the AT precedes the RT; because the speaker is making a guess that Inho is having a meal at the speech-act time. However, note that the representation in Figure 15b does not include an ST, because what the presumptive-modal marker *-keyss-* actually marks is not the temporal relationship between the ST and the RT but the indexical relationship between the RT and the AT. In principle, the location of the ST could be anywhere on the time line, because in the epistemic domain, temporal constraints do not work as they do in the non-epistemic (i.e., realis) domain. However, the ST is always coupled with the AT, and therefore it is implied that the ST is near the AT as shown in Figure 15a. The AT's involvement in (43) is supported by the fact that a first-person subject would not be licensed in such a sentence

(??*nayka cikumccum papul mekkeyssta* 'I guess I'm having a meal around now'). This observation naturally accommodates *-keyss-*'s function of marking the speaker's assumptions and knowledge. In addition, by analyzing the marker in terms of the multilayer approach, we can accommodate its temporal meaning as well as its modal semantics. In sum, *-keyss-*'s major role is as a modal/ evidential marker rather than a tense marker, because it encodes the relationship between the experiencing origo's assessment and the event, not a fixed temporal relationship between the ST and the RT.

The sentence in (42) (repeated here as (42')) employs the anterior marker *-ess-* and *-keyss-* simultaneously. The grammaticality of (42') indicates that *-keyss-* can be licensed in nonfuture contexts.

(42') *ecey* *Chelswu-ka* *ku-il-ul* *ha-ess-keyss-ta*
yesterday Chelswu-Nom the-work-Acc do-Ant-Mod-Decl
'Chelswu **must** have done work yesterday.'

When *-keyss-* follows the anterior marker *-ess-*, the dominant tense reading for (42') is not future. *-Keyss-* cannot be a future marker, because if it were, it would not be possible to explain how it was compatible with the past event in (42'). The combined effects of the TAME markers in (42') are schematically represented in Figure 16.

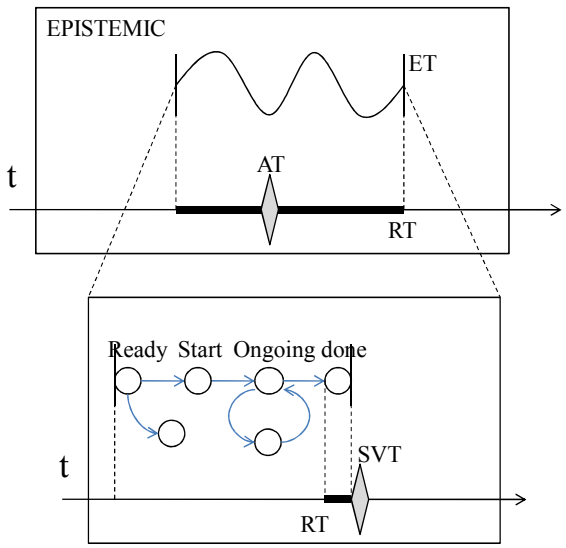

Figure 16. Combined Use of *-Ess-Keyss-*, as in (42')

The focal event of the subject's working is viewed as a completed and bounded event, and can therefore be marked by the anteriority marker *-ess-*. It should be noted that this completion of the focal event encoded by *-ess-* is processed by an unspecified SVT in the embedded domain (represented by the lower diagram in Figure 16). This is because the embedding construction encodes presumptive-epistemic modality and the utterance as a whole therefore cannot indicate whether the speaker directly perceived or assessed the focal event, but indicates that her assumptions about the completion of the event are a consequence of her reasoning. The SVT in the embedded domain cannot be valued specifically as a PT or an AT, but remains underspecified until the embedding construction, i.e., the *-ess-*, is processed.

The embedded construction, then, is recapitulated and viewed as a bounded event as a whole,

and this recapped process belongs within the speaker's epistemic domain, where any portion of it can coincide with the AT. Although the ST is not explicitly marked in the figure because the assessment is usually made at the ST, the default construal is that the ST is located where the AT is anchored.

Taking this use into account, we can generalize that *-keyss-* indicates that the RT is located after the ST (the futurity reading) or that there is an SVT (either AT or PT) that evokes an epistemic domain where the speaker's assessment can be made as the focal event is happening (the presumptive reading).

3.2.1.3.5 Interaction With Situation Types

Because *-keyss-* is more a modal and future tense marker than an aspect marker, it does not have the kinds of situation aspect restrictions that we saw while explicating other temporal elements. As a result, *-keyss-* can be used naturally with almost any situation type as shown examples (44)-(47). However, the interpretation is affected by whether a first-person subject is used. When a first-person subject is used, the volitive modal reading kicks in, whereas when a non-first person subject is used, the presumptive-epistemic reading is obtained.

(44) *Chelswu-ka* *talli-keyss-ta*
Chelswu-Nom run-Mod-Decl
'Chelswu **will** run.'

(45) *Yenghuy-ka* *chak han-kwen-ul* *ilk-keyss-ta*
Yenghuy-Nom book one-volume-Acc read-Mod-Decl
'Yenghuy **will** read a book.'

(46) *Chelswu-ka* *kot* *tochakha-keyss-ta*
Chelswu-Nom soon arrive-Mod-Decl
'Chelswu **will** arrive soon.'

(47) *Yenghuy-ka* *simhakey* *kichimha-keyss-ta*
Yenghuy-Nom severely cough-Mod-Decl
'Yenghuy **will** cough severely.'

These examples show that, when the various situation types are coupled with *-keyss-*, they yield a presumptive modal reading with non-first-person subjects. If they had been used with first-person subjects, they would instead convey volitive semantics.

The stative predicates are interesting in that they tend to have semantic restrictions that are derived from their meanings; stative predicates like that in (48) normally do not convey volitive meanings.

(48) *Chelswu-ka* *ku* *sasil-ul* *al-keyss-ta*
Chelswu-Nom the fact-Acc know-Mod-Decl
'Chelswu **will** be aware of the fact.'

As expected, the sentence in (48) has a presumptive-modal reading, as the other types do above.

However, if we replaced the subject with the first-person subject *nay-ka* 'I,' the utterance would be construed as meaning something like 'It'll come to me;' i.e., it would convey an immediate-future reading. Conceptually, an utterance with a first-person subject would not normally convey a presumptive-modal reading because the experiencer of the experiential predicate *al-* 'know' would be the speaker, and people do not usually have to make indirect guesses about their own internal states. However, the version of the utterance with the first-person subject would not convey a volitive reading either, because the entailments of the predicate *al-* 'know' have nothing to do with an agent's ability, but with an experiencer's mental state.

Turning to adjectives, we can compare the examples in (49) and (50).

(49) ?*Chelswu-ka* *nulk-keyss-ta*
Chelswu-Nom be.old-Mod-Decl
'Chelswu **will get** old'

(50) *Yenghuy-ka* *yeppu-keyss-ta*
Yenghuy-Nom be.pretty-Mod-Decl
'Yenghuy **will be** pretty.'

The incremental-process adjective *nulk-* in (49) cannot be used with *-keyss-* to simply refer to an aging process. Because it is common knowledge that people get old, it cannot convey a presumptive modal reading in most situations.[33] If we replaced the subject with a first-person subject, it would not convey a volitive reading, because the aging process is uncontrollable. In contrast, the sentence in (50) naturally conveys a presumptive reading. However, if the subject were replaced with a first-person subject, it would not convey a volitive reading either, because, as common sense tells us, the state of being pretty is not controllable.

In sum, *-keyss-* conveys a volitive reading by default when coupled with first-person subjects and a presumptive epistemic-modal reading when coupled with non-first-person subjects. Verbs of any situation type except for statives show the asymmetric patterns when they are coupled with *-keyss-*. The marker's distribution with stative predicates such as stative verbs, incremental adjectives, and stative adjectives, is based on the inherent semantics of each of those subtypes of predicate.

The functions of *-keyss-* that have been identified in the literature are similar to those we have discussed so far. The main identified functions are to mark futurity, a "designed" future tense, procrastination, volitive modality, ability, and deduction, as summarized below.

- Marking speaker-oriented intersubjective modality (Suh and Kim 2000)
- Future-tense and modality marking (S-J. Kang 2009)

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[33] Such a combination can be licensed in some contexts such as that where *nulk-* figuratively depicts a situation where someone is aging faster than the normal rate.

(ii) *ay-tul-i* *malsseng-ul* *pwulye-se* *Chelswu-ka* *ppalli* *nulk-keyss-ta*
Child-Pl-Nom trouble-Acc make-Caus Chelswu-Nom quickly be.old-Mod-Decl
'Because his children make (so much) troubles, Chelswu will get older quickly.'

In this example, *-keyss-* can convey a presumptive-modal reading based on a deduction from the explicit cause in the first clause. I will discuss the issue of conceptual distancing with respect to conjunct/ disjunct phenomena in further detail in Chapter 5.

- Designed-future-tense marking (M-J. Kim 2008, K.-M. Ko 2002, S.-J. Kang 2009, T.-H. Im 2001)
- Marking inference (K.-Y. Lee 1978, K.-H. Chang 1985, K.-M. Ko 2002)
- Marking ability (K.-M. Ko 2002, S.-J. Kang 2009)
- Marking deductive reasoning (H.-S. Lee 1991, 2011)

All of the possible distributions of the marker seem to have been captured by previous research and I have shown how the functions are related (Traugott 1989). One notable thing about the literature on *-keyss-* is that one cannot analyze its polysemy without examining its diachronic development. All of these analyses acknowledge that *-keyss-* is a grammaticalized combination of the causative expression *-keyha-* and the anterior marker *-ess-*. The causer's intention results in the volitive reading, the causer's expectation of the caused event results in futurity, and temporal configuration provided by the anteriority marker maximizes the inferential semantics. (In other words, the speaker maximizes the inferential reading by not making the result explicit and by only referring to the past causation event marked with the anteriority marker. For detailed analyses, see M.-J. Kim (2008), K.-M. Ko (2002).

This study argues that *-keyss-* cannot to be simply assigned to a single grammatical category; it plays multiple roles as a presumptive-modal marker, a volitive-modal marker, a future-tense marker, and even an epistemic-modal marker. [34]

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[34] There is a presumptive expression very similar to *-keyss-* that functions as either a future-tense marker or a presumptive-inferential marker, the periphrastic element *-ulkes-*. It is, however, syntactically different, in that it must be followed by the copula verb *-i-* 'be.' *-Ulkes-* consists of two parts; *-ul* is a relativizer that encodes non-past tense or imperfective aspect and *kes-* is a nominalizer. The two grammatical elements have been grammaticalized into a marker that indicates either future tense or the speaker's inference. An example is given in (iii).

(iii) *pi-ka* *o-lkes-i-ta*
rain-Nom come-Fut-be-Decl
'It will rain.'

In (iii), the speaker expects that the focal event of raining will take place after the ST in her epistemic domain and so the expression marks the future tense, i.e., that the focal event will follow the speech event. Nevertheless, (iii) has another interpretation that the speaker has some expectation or is making some assumption or inference based on some available evidence in the context. To highlight this inferential character, (iv) includes a clause that provides the evidence:

(iv) *hanul-ul* *po-ni* *pi-ka* *o-lkes-i-ta*
sky-Acc see-Caus rain-Nom come-Fut-be-Decl
'Looking at the sky, it**'ll rain**.'

In (iv), *-lkes-* indicates that the proposition in question is put forward based on the speaker's assumption or guess based on the evidence cited in the first clause; in this case, *-ulkes-* functions as a modal marker rather than a tense marker. Its modal reading is even more salient if there is another tense/aspect marker in the construction, as in (v).

(v) *thaca-ka* *kong-ul* *chi-ess-ulkes-i-ta*
hitter-Nom ball-Acc hit-ess-Fut-be-Decl
'The hitter **hit** a ball.'

In (v), where the anterior marker *-ess-* is coupled with *-ulkes-*, the futurity meaning disappears. Instead, *-ulkes-* encodes the speaker's guess or assumption based on some evidence, in this case, about an event that could have taken place in the past.

-Ulkes- functions similarly to the presumptive marker *-keyss-*. In examples (iv)-(v), the two markers could actually be used interchangeably. However, they differ in that when *-keyss-* conveys futurity, it is licensed only with a first-person subject; this combination is construed as concerning the subject's volitive future action or commitment. In contrast, *-ulkes-* does not have such semantic restrictions; *-ulkes-* is compatible with any personal pronoun and simply indicates the speaker's expectation regarding the proposition in question. This contrast is exemplified in (vi)

3.2.1.4 The Retrospective Firsthand Evidential Marker -*Te*-

The last element in this inventory of nonterminal temporal suffixes is -*te*-. This marker also plays multiple roles, such as marking past-tense reference, referring to an imperfective event, marking a firsthand mode of access to the focal information, and indicating strongly positive epistemic modality. The interesting thing is that the various functions are not encoded independently, but are entangled. For this reason, -*te*- also needs a multilayer analysis to receive a proper treatment. The remainder of this section examines each of the functions of -*te*- one by one.

3.2.1.4.1 Firsthand Evidential Semantics

-*Te*- encodes the speaker's direct, firsthand access to the focal information. In order to use this marker, the speaker must have directly perceived the evidence relevant in the context. The sentence in (51) is a typical example of the -*te*- construction, which might translate explicitly into English as something like 'I remember that I directly perceived that…':

(51) *ku-ka* *pap-ul* *mek-te-la*
he-Nom rice-Acc eat-Ev.Fh-Decl
'He **was having** a meal.'

In the sentence in (51), the focal event has occurred prior to the speech-act time. (51) is not a simple past-tense sentence, but a so-called retrospective utterance, which I will argue is a firsthand evidential utterance with reference to an event in the past. That is, the speaker is narrating an event that took place in the past. -*Te*- is not a past-tense marker, but an evidential marker with past reference, because what it encodes is not that the focal event took place before the speech-act time, but that the speaker's perception of the focal event is located before the speech-act time on the time line in her epistemic world. This is demonstrated by the example in (52).

(52) *ku-ka* *nayil* *Yenghuy-wa* *pap-ul* *mek-te-la*

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and (vii).

(vi) *nay/*ku-ka* *ka-keyss-ta*
I/*he-Nom go-Mod-Decl
'I/he'll go.'

(vii) *nay/ku-ka* *ka-lkes-i-ta*
I/he-Nom go-Fut-be-Decl
'I/he'll go.'

In (vi), a third-person pronoun is not licensed with a future interpretation, whereas *nay* 'I' is licensed, meaning that the subject is willing to go in the future. In contrast, the grammaticality of (vii) shows that there is no such restriction on the use of -*lkes*- with any person pronoun. This suggests that -*keyss*- conveys more modal properties – i.e. subjectivity – and is more sensitive to assessing the origo's viewpoint, while -*lkes*- is not. This observation conforms with what other linguists have mentioned; for example, C. Seo (1978), K. Sung (1979), and K. Chang (1984) have pointed out that the difference between the two lies in different degrees of subjectivity or of the immediacy of the origo's experiences. This study will not further discuss this periphrastic expression as a grammatical element, because the copula verb that it accompanies requires that -*ulkes*- be in the same position in the KVC as the main verb stem in the KVC.

he-Nom tomorrow Yenghuy-with rice-Acc eat-Ev.Fh-Decl
'He **will be having** a meal with Yenghuy tomorrow.'

If *-te-* were a simple past-tense marker, (52) would not be grammatical, because the adverbial *nayil* 'tomorrow' would conflict with the past-tense semantics. However, what *-te-* is encoding in this case is that the speaker herself directly obtained the information that the subject will have a meal with Yenghuy tomorrow (for example, by having seen it written in his appointment book) prior to the speech-act time. The past-tense reference is only a consequence of construing the evidentiality with reference to the evidence-perceiving event in the past.

It is noted that when only *-te-* is used in an utterance, the participating events are imperfective. In (51) above, the speaker has seen the subject having a meal, i.e., has witnessed the ongoing phase of the event of his having a meal. The aspectual information delivered by *-te-* thus seems to be imperfective by default. However, when we look into (53), we can see that *-te-* is also compatible with the anteriority marker; the sentence in (53) could be used in a situation where the speaker had seen that the subject's rice bowl was empty.

(53) *ku-ka* *pap-ul* *mek-ess-te-la*
He-Nom rice-Acc eat-Ant-Ev.Fh-Decl
'he **had** a meal.'

In contrast, (51) merely depicts a situation in which the speaker saw the subject in the middle of his meal, so *-te-* therefore has semantics of imperfective aspect by default.

Unlike a past sentence that only uses the anteriority marker, one that only contains *-te-* presupposes that the speaker perceived the focal event in the past and focuses on the ongoing stage of it. The marker's firsthand evidentiality marking is not pragmatically defeasible; this inherent property can be tested using a semantic test for evidentiality, as shown in (54).

(54) **Chelswu-ka* *kong-ul* *cha-te-la,* *kulentey* *Chelswu-lul*
Chelswu-Nom ball-Acc kick-Ev.Fh-Decl but Chelswu-Acc
po-ci-mos-ha-ess-ta
see-Conn-Neg-do-Ant-Decl
'Chelswu **was kicking** the ball, but I didn't see him do it.'

The second clause (*Chelswu-lul po-ci-mos-ha-ess-ta*) contradicts the evidential marking on the first clause (*Chelswu-ka kong-ul cha-te-la*); the ungrammaticality of this indicates that *-te-* indefeasibly encodes the speaker's firsthand perception of the focal event.

3.2.1.4.2 Strong Epistemic Modality

-Te- also signals that the speaker vouches for the truth of the information, in addition to signaling that she obtained the information in a firsthand, direct manner. The strongly positive epistemic modality that arises from the processing of the focal information at the PT and the AT is also not pragmatically defeasible, as shown by the ungrammaticality of the sentence in (55).

(55) **amato* *Chelswu-ka* *kong-ul* *cha-te-la*
probably Chelswu-Nom ball-Acc kick-Ev.Fh-Decl

"Chelswu probably **was kicking** a ball."

Because the adverbial *amato* 'probably' encodes that the speaker does not fully vouch for the validity of the information being conveyed, it contradicts what *-te-* conveys. The ungrammaticality of this combination demonstrates that *-te-* inherently functions as a strongly positive epistemic-modal marker as well as a firsthand evidential marker.

3.2.1.4.3 A Unified Account of *-Te-* Within the Multilayer Approach

The discussion so far has enabled us to conclude that *-te-* serves multiple functions simultaneously. These functions are all demonstrated in the utterance in (56).

(56) *Chelswu-ka* *nonmwun-ul* *ssu-te-la*
Chelswu-Nom dissertation-Acc write-Ev.Fh-Decl
'Chelswu **was writing** his dissertation.'

The addressee can immediately understand that the speaker has obtained the information that is conveyed on her own, in a firsthand and direct manner, that the speaker saw the on-going process of Chelswu's writing the dissertation, that the speaker is sure that what she saw did occur, and of course that the focal event took place in the past. This study argues that *-te-* is a firsthand evidential marker that makes reference to an unbounded event in the past and that linguistically encodes strong positive epistemic modality. This marker therefore cannot be defined as belonging to any single functional category, and should be analyzed in terms of the multilayer perspective. This subsection models what the marker depicts in terms of this multilayer approach.

Let us revisit example (56). The target event in (56) comes from the speaker's memory based on her direct experience, suggesting that a secondary viewpoint time is involved. Because the construction evokes readings of both evidentiality and epistemic modality, we need to represent it in terms of both perception time and assessment time. What *-te-* encodes is different from what the anteriority marker *-ess-* encodes; although the target event is construed as having happened in the past, what *-te-* encodes is not past tense *per se*; rather, it indicates that the event of the speaker's perception of the focal event happened in the past.In other words, what happened prior to the ST was not the focal event itself, but the event of the speaker's perception of it. That is, the RT is prior to the speaker's perception time, which is prior to the ST. The relevance of the PT is crucial in differentiating *-te-* from the anteriority marker *-ess-*.

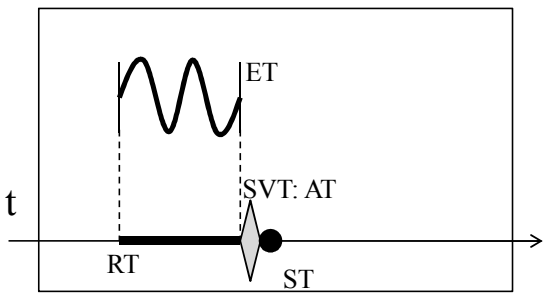

Figure 17. Schematization of *-Ess-*

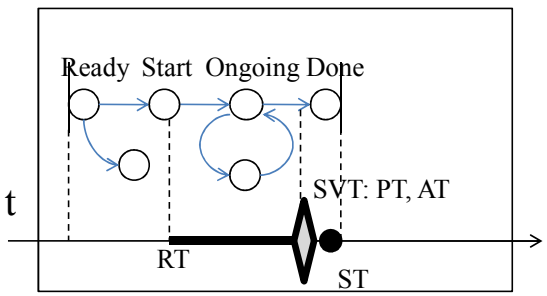

Figure 18. Schematization of *-Te-*

As shown in Figure 17, the anterior marker (at least in its past-tense use) indicates that the RT, which covers the whole bounded event, is prior to the ST and the AT. In contrast, as represented in Figure 18, *-te-* indicates that the RT, which coincides with some middle portion of the ET, is prior to the PT and the AT, and that, crucially, the PT is prior to the ST. Note that *-te-* only profiles some middle portion of the ET, because it has imperfective aspect, while *-ess-* profiles the focal event as a whole.[35] The past-tense reading automatically arises from the PT's anteriority to the ST, because the RT is prior to the PT. What *-te-* encodes is unique. In general, the PT and the AT interact with the RT in an epistemic domain. However, what *-te-* encodes, as shown in Figure 18, is that the PT and the AT interact with the RT and the ST in a non-epistemic domain. The blending of the domains of the PT and AT and the ST explains why there has been so much confusion about the grammatical category of this marker. Using a multilayer approach, however, we can integrate the multiple functions of *-te-*, as shown in Figure 18.

Note that the secondary viewpoint time is instantiated as both PT and AT in this case. The diagram represents the fact that the speaker perceived the profiled portion of the event in the past (at the PT) and strongly vouches for the validity of the occurrence of the focal event (at the AT). The SVT is profiledin that the function of marking firsthand evidentiality and epistemic modality is linguistically encoded and pragmatically defeasible. The relevance of the PT, which is related to the speaker's mode of access to the focal information, i.e., her firsthand experience, is evoked and encoded by *-te-*, which makes it distinct from the anterior marker *-ess-*. The concept of the PT captures the different construals evoked by the two markers.

-Te- involves the viewpoint of not only the speaker but the protagonist, and those viewpoints must be different. There is solid evidence of *-te-*'s evidential and modal characteristics in that its construal involves the viewpoints of the experiencing origo and of the protagonist. As a result, a meaning can be construed only when we simulate and empathize with the speaker's subjective experience. This is shown by the minimal contrast with examples like (57a) and (57b).

(57) a.?*nay-ka* *kong-ul* *cha-te-la*
I-Nom ball-Acc kick-Ev.Fh-Decl
'I **was kicking** the ball.'

b.*ku-ka* *kong-ul* *cha-te-la*
he-Nom ball-Acc kick-Ev.Fh-Decl
'He **was kicking** the ball.'

The degree to which the speaker's subjectivity is brought to bear varied depending on whether the experiencing origo and the agent of the focal event are coreferenced or not. If a first-person subject is used, as in (57a), the sentence is anomalous in most contexts (for exceptions, see Kwon (2009) and the discussion in Chapter 5 of this thesis). This is because it is normally not the case that the experiencing origo, i.e. the speaker, perceives herself as separate from the first-subject. In contrast, if a third-person subject is used, as in (57b), the sentence is good.

3.2.1.4.4 Interaction With Situation Types

[35] This may be why some scholars have argued that *-te-* simply belongs to the imperfective category (S.-B. Park 1935:34-38, J.-S. Na 1971:24). However, this study argues that imperfectivity is not a sufficient description of the marker, because it has other functions arising from the interaction between the imperfectivity and other temporal parameters.

The marker *-te-* does not have any restrictions in combining with any type of predicate. It shows the typical entailment patterns of an imperfective element, as shown by the examples in (58) – (61).

(58) *Chelswu-ka talli-te-la*
Chelswu-Nom run-Ev.Fh-Decl
'CS **was running**.'

(59) *Yenghuy-ka chak han-kwen-ul ilk-te-la*
Yenghuy-Nom book one-volume-Acc read-Ev.Fh-Decl
'Yenghuy **was reading** a book.'

(60) *ku-ttay Chelswu-ka tochakha-te-la*
the-time Chelswu-Nom arrive-Ev.Fh-Decl
'Chelswy **was arriving** at that time.'

(61) *Yenghuy-ka kichimha-te-la*
Yenghuy-Nom cough-Ev.Fh-Decl
'Yenghuy **was coughing**.'

Because they are atelic, imperfective activity predicates entail a previous phase of activity. For example, the utterance in (58) entails that Chelswu was running. Next, Imperfective achievement predicates focus on the preliminary stage of the event in our construal of constructions that contain them. For example, in (60), it is very likely that the speaker saw the initial phase of Chelswu's arrival. These facts verify that *-te-* conveys imperfective semantics.

There are no distributional restrictions on how *-te-* combines with statives and adjectives, as in (62) – (64).

(62) *Chelswu-ka ku sasil-ul al-te-la*
Chelswu-Nom the fact-Acc know-Ev.Fh-Decl
'Chelswu **knew** the fact.'

(63) *Chelswu-ka nulk-te-la*
Chelswu-Nom get.old-Ev.Fh-Decl
'Chelswu **got** old.'

(64) *Yenghuy-ka yeppu-te-la*
Yenghuy-Nom be.pretty-Ev.Fh-Decl
'Yenghuy **was** pretty.'

The use of *-te-* in (62) indicates that the speaker has obtained the focal information (Chelswu's knowing the fact in question) via her firsthand experience, for example, by having conversed with him about it. The sentence in (63) is licensed because the speaker recognizes that Chelswu's process of aging has kicked in and, lastly, (64) conveys the speaker's firsthand observation about Yenghuy's appearance.

With all of its complexities in terms of grammatical description, what *-te-* encodes is a simple and commonplace experience, that of remembering acquiring knowledge about an event via direct perception. Multiple events are evoked in constructions that contain this marker, including the event of the origo's perceiving the evidence and that of the agent's focal action or state. The question is which grammatical category *-te-* fits into in Korean. Examining previous analyses in the literature, we find that the identity of the marker is contested because of its multiple functions. The major positions on its function are summarized below.

- Recalling and retrospection (H.-B. Choe 1977, C.-K. Gim 1980, Y.-K. Ko 1981, Huh 1983)
- Retrospection (Martin 1954, Cook 1971, I.-S. Yang 1972, H.-M. Sohn 1975)
- Tense marking (H.-B. Choe 1977, Cook 1971, J.-S. Na 1971)
- Aspect marking (Martin 1954, K.-D. Lee 1981, D.-J. Choi 1988)
- Mood marking (I.-S. Yang 1972, K.-S. Nam 1978, S.-O. Shin 1988)
- Imperfective-aspect marking (S.-B. Park 1935:34-38, J.-S. Na 1971:24)
- Durative marking (I.-S. Yang 1972)
- Imperfective-aspect marking (K.-D. Lee 1981, D.-J. Choi 1981)
- Distance marking (H.-S. Shin 1980)
- Marking non-responsibility (Y.-H. Kim 1981:71)
- Marking non-volitionality (D.-S. Yu 1981, S.-J. Chang 1973, Huh 1975:900)
- Marking Spatial-deictic tense (K.-S. Chung 2005, 2006, 2007)

This study argues that *-te-* cannot be fit into a single grammatical category, especially as the repertoire of categories was formulated mostly by studying Indo-European languages. As I have shown, *-te-* is very versatile in that it can signal that the SVT, which usually interacts with RT in an epistemic domain, interacts with the ST in a non-epistemic domain. The description of *-te-* should therefore not be oversimplified as either a tense marker or a modal marker; rather, it should be understood using a multilayer approach. The functions that are conveyed by the marker are numerous, including uses as a retrospective and imperfective aspect marker, a firsthand evidential marker, and a positive epistemic-modality marker. These functions can be pragmatically extended to distance marking, non-responsibility marking, and so forth (to be further discussed in Chapter 5).

In sum, *-te-* has multiple functional properties, but the multiple functions are derived from its core function of profiling some portion (the RT) of the ET and indicating that the RT is prior to the PT and the PT precedes the ST. The meaning of firsthand evidentiality arises because the marker centrally conveys that the speaker's perception is prior to the ST. The past-tense meaning arises from a chain of inferences: *-te-* indicates that the PT precedes the ST, but the target of the perception is the RT, which is some portion of the ET, thus, the RT must precede the PT, and thus the RT must precede the ST. The meaning of strong positive epistemic modality arises because the speaker's assessment is naturally preceded by her perception, and that perception forms the basis for her certainty of the focal information or her strong commitment to vouching for truth of the information at the ST. For these reasons, this study classifies *-te-* as a retrospective evidential marker denoting the occurrence of an imperfective event in the past. The marker *-te-* will be discussed in further detail, in the discussion of the evidentiality system of Korean in Chapter 4.

3.2.2 Other Aspectual Elements

So far, we have looked into four major temporal non-terminal suffixes such as *-nun-*, *-ess-*, *-keyss-*, and *-te-*. The KVC is, however, more complicated than what we have explored so far. Korean has more aspectual elements. Specifically, this section explores two durative markers that have received much attention from numerous Korean linguists, which are progressive marker *-ko iss-*, and resultative marker *-e iss-*. They belong to the second group of non-terminal elements, which undergoes or underwent grammaticalization processes.

3.2.2.1 Durative Marker I: *-Koiss-*

There is no monomorphemic item indicating the progressive aspect in Korean, nor has there been diachronically. The imperfective aspect marker *-nun-* is the single grammatical device that comes closest to expressing the concept.[36] However, it is not the case that the Korean language cannot express progressivity. The progressive aspect has been encoded periphrastically with *-ko iss-,* which is composed of *-ko* 'and' and *iss-*, the existential copula. The marker's semantics can be explained in terms of its constructional compositionality. The conjunction *-ko-* implies that the speaker's depiction is still in process, and that there is something more to follow. Therefore, when a punctual telic event is coupled with the construction, the post time of the event is profiled, and when it is used with a durative telic event, a particular portion of the event is profiled. (This will be discussed in further detail below.) The existential predicate *iss-* takes the incomplete phase of the depicted event under its scope, and consequently, the expression marks that the state or process introduced by the conjunction holds.[37]

In brief, the conjunction (*-ko*) implies that the speaker's depiction is still in process and the existential predicate (*iss-*) encodes that the ongoingness of the focal event or process holds. I believe that the expression has been grammaticalized as a durative aspect marker and functions as a single unit as in (65).

(65)	*ku-ka*	*pap-ul*	*mek-koiss-ta*
	he-Nom	meal-Acc	eat-Prog-Decl

---

[36] Contemporary Korean has also come to have a periphrastic expression '*-nun-cwung-i-*' 'Imprf + middle + be' that functions as a progressive marker. This expression is, strictly speaking, the closest element to the prototypical progressive, given that it is not compatible with stative predicates such as *know*, *love*, and *have*, while *-nun-* and *-koiss-* are compatible with them, as shown in (viii) and (ix).

(viii)	**Chelswu-nun*	*ku-sasil-ul*	*al-nun-cwung-i-ta*
	Chelswu-Top	the-fact-Acc	know-Imprf-middle-Cop-Decl
	'Chelswu is knowing the fact.'		

(ix)	*Chelswu-nun*	*ku-sasil-ul*	*al-koiss-ta* / *al-nun-ta*
	Chelswu-Top	the-fact-Acc	know-Prog-Decl / know-Imprf-Decl
	'Chelswu knows the fact.'		

Nevertheless, this study argues that the periphrastic progressive expression should be analyzed on a different level, because it is a periphrastic construction, not a grammatical marker; the nonpast imperfective marker *-nun-* can be replaced with other major non-terminal suffixes, and it can combine with other elements recursively. For this reason, this study excludes the expression, focusing on elements that function as grammatical markers.

[37] This explains why *-koiss-* can play the role of either progressive marking or resultative marking; this will be discussed further later in this section.

'He's having a meal.'

In (65), *-koiss-* indicates that the perceiving origo's viewpoint zooms in on the ongoing stage of the event of the subject's having a meal.

3.2.2.1.1 Progressive Aspect

-Koiss- serves as a progressive marker. It does not have any tense specification because it can combine with various tense markers, as in (66) – (68).

(66) *ku-ka* *cikum* *pap-ul* *mek-koiss-ta*
he-Nom now meal-Acc eat-Prog-Decl
'He's having a meal now.'

(67) *ku-ka* *ecey* *pap-ul* *mek-koiss-ess-ta*
he-Nom yesterday meal-Acc eat-Prog-Ant-Decl
'He was having a meal yesterday.'

(68) *ku-ka* *nayil* *pap-ul* *mek-koiss-keyss-ta*
he-Nom tomorrow meal-Acc eat-Prog-Presum-Decl
'He'll be having a meal tomorrow.'

In (66), the marker is used as a progressive aspect marker in the present tense, coupled with a present tense adverb. Note that it alone constitutes full temporal grounding; by default, without any other marker, it depicts a present-time event. In (67), *-koiss-* is licensed with the anterior marker in a past-tense reference. In (68), when *-koiss-* is coupled with presumptive marker *-keyss-*, the utterance delivers a future-progressive reading. The data considered thus far show that *-koiss-* primarily conveys a progressive-aspect meaning.

3.2.2.1.2 Marking Imperfective Perfectivity

Although it conveys progressive semantics and thus might be considered to belong to the grammatical category of imperfective markers, *-koiss-* would be a very atypical imperfective marker, because, in a sense, it also conveys a semantics of perfectivity. This characteristic is revealed by the *when*-clause test in (69) and (70).

(69) *Yenghuy-ka* *nolay-lul* *pwulu-koiss-ul-ttay* *Chelswu-ka*
Yenghuy-Nom song-Acc sing-Prog-Rltvzr-when Chelswu-Nom
tuleo-ess-ta
enter-Ant-Decl
'Chelswu came in when Yenghuy was singing a song.'

(70) **Yenghuy-ka* *nolay-lul* *pwulu-nun-ul-ttay* *Chelswu-ka*
Yenghuy-Nom song-Acc sing-Imprf-Rltvzr-when Chelswu-Nom
tuleo-ess-ta
enter-Ant-Decl

'Chelswu came in when Yenghuy was singing a song.'

These examples are identical except in that (69) contains *-koiss-* and (70) contains the non-past imperfective marker *-nun-*. Because a *when*-clause marks a temporal point, not a temporal interval, it requires its embedding event to be punctual. It is close to being characteristic of perfective marking in that a marker's compatibility with punctuality in the *-ttay* clause indicates that the embedded event or process is conceptualized as bounded. This is related to the boundedness that perfectivity conveys. I argue that this unique characteristic of *-koiss-* can also be captured and conceptually motivated within the multilayer approach.

3.2.2.1.3 Is *-Koiss-* a Progressive or a Resultative Aspectual Marker?

-Koiss- has the semantic restriction thatit only goes with dynamic, nonadjectival predicates. Descriptive predicates, i.e., stative adjectives, belong to the stative situation type. Adjectives denote processes whose internal structure is homogeneous and constant, and thus, there is no need to demarcate an initial phase, an on-going phase, and an end phase, because they would be identical and therefore, redundant. For this conceptual reason, it would be redundant to mark the constantness what descriptive predicates denoted using a progressive marker. Consequently, *-koiss-* is licensed only with nondescriptive predicates. The redundancy is shown in (71).

(71) **kunye-nun* *yeppu-koiss-ta*
she-Top be.pretty-Prog-Decl
'She is being pretty.'

Some nondescriptive telic adjectives are of interest here in that when they are coupled with *-koiss-*, the utterance is ambiguous. When a nondescriptive predicate that has more than one interpretation, i.e., that is lexically ambiguous in terms of telicity and durativity, is coupled with *-koiss-*, the marker profiles different phases of the events or processes they evoke, and as a result, the utterance has multiple interpretations. For instance, the predicate *yel-* 'open' has two potential interpretations in Korean, a durative reading as an accomplishment predicate and a punctual reading as an achievement predicate. When *-koiss-* is understood as a single grammatical unit that marks durative aspect for a focal event and is used with such ambiguous predicates, it yields different meanings depending on how the predicate is construed. For instance, *open a window* has three stages in its internal event structure: an unopened-window stage, a stage of on-going window-opening action, and an open-window stage. Depending on which stage is profiled in the context, *yel-* is either an accomplishment or an achievement, so the utterance containing *yel-* and *-koiss-* allows multiple interpretations, as shown in (72). In cases like (72b), *-koiss-* can therefore mark a resultative state.

(72)a.*ku-ka* *changmwun-lul* *yel-koiss-ta*
he-Nom window-Acc open-Prog-Decl
'He is opening a window.'

b. *ku-ka* *changmwun-lul* *yel-ko-iss-ta*
he-Nom window-Acc open-Prog-Decl
'He's opened a window.'

The semantic ambiguity is also affected by the degree of grammaticalization of *-koiss-*. A predicate with punctual semantics goes well with the less-grammaticalized construction *-ko-iss-*, while durative semantics go well with the fully grammaticalized construction *-koiss-*, which functions as a single marker. In (72a), *-koiss-* functions as a single functional unit, while in (72b), it is used as a periphrastic expression whose parts 'and' and 'is' compositionally play their roles in the construal. This can be shown in the following adverb-insertion test:

(73)	*ku-ka*	*changmwun-lul*	*yel-ko*	*kamanhi*	*iss-ta*
	he-Nom	window-Acc	open-and	still	be-Decl
	'He opens a window and stays still.'				

When achievement predicates are used with *-koiss-*, the adverb *kamanhi* 'still' can be inserted between *-ko* 'and' and *iss-* 'be' ; the fact that this obligatorily yields a resultative reading means that the grammatical status of *-koiss-* for the resultative reading is different from that for the progressive reading. The resultative meaning is very likely when we consider the interaction between the telic predicate and the conjunction *-ko* 'and' in use. Because an achievement predicate usually indicates that a punctual event has terminated, *yel-* 'open' in (72b) depicts the result state of the event by itself in the clause with *-ko*. The rest of the utterance then stipulates that the resultant state holds afterwards. This resultative reading cannot come from the single functional unit *-koiss-*, but only from its parts *-ko* and *iss-*, which each have their own functions, that can be compositionally used different kinds of predicates.[38]

3.2.2.1.4 Modality and/or Evidentiality Semantics

Does *-koiss-* involve modal and/or evidential semantics as well? The answer to this question is yes – this is what differentiates *-koiss-* from the nonpast imperfective marker *-nun-*. First of all, when *-koiss-* is used, the utterance that contains it indicates that the conveyed information is based on the speaker's perception.

(74)	?*Chelswu-nun*	*ca-koiss-ta*	*nay-ka*	*po-ci-nun*
	Chelswu-Top	sleep-Prog-Decl	I-Top	see-Conn-Top
	mos-ha-ess-ciman			
	Neg-do-Ant-but			
	'Chelswu **is sleeping**, but I didn't see it.'			

Most speakers would reject a sentence like (74) unless it contained another evidentiality device that indicated that the information source was indirect. The unacceptability of (74) suggests that *-koiss-* conveys an evidential reading. In other words, *-koiss-* indicates a situation where the speaker has just observed an event and is reporting it based on that observation. In terms of temporal reference points, the SVT, in this case the PT, is immediately followed by the ST, both of are covered by the RT.

Furthermore, the weak epistemic modal adverb *amato* 'probably' is not licensed with *-koiss-*, as shown in (75).

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[38] The account of *-koiss-* and *-ko-iss-* based on the degree of grammaticalization, which is presented in this thesis, is speculative rather than conclusive. This calls for further research.

(75) ?*Yenghuy-nun* *amato* *chayk-ul* *ilk-koiss-ta*
Yenghuy-Top probably book-Acc read-Prog-Decl
'Yenghuy **is** probably **reading** a book.'

The fact that (75) is unacceptable shows that *-koiss-* is not compatible with a weak epistemic modal reading, but conveys a strongly positive epistemic modality by default, even when there are no additional modal elements in the utterance.

Because of its evidential and/or epistemic-modal characteristics, *-koiss-* also shows asymmetric usages with first-person and non-first person subjects. For instance, the utterance in (76) could not be used to indicate that the speaker was literally asleep.

(76) ?*nay-ka* *ca-koiss-ta*
I-Nom sleep-Prog-Decl
'I'**m sleeping**.'

Our common sense tells us that no one is able to say anything while they are asleep (under normal circumstances). (However, (76) could be licensed as a description of a video clip, where the speaker could observe herself from a third person point of view.) In contrast, if the third-person subject *Chelswu* were used, this type of sentence would be licensed without a problem. When the experiencing origo and the subject of the sentence are different, the origo is free to observe or assess the event the subject is participating in. These facts show that *-koiss-* conveys evidential and epistemic modal readings.

3.2.2.1.5 A Unified Account Within the Multilayer Approach

Now, let us model what *-koiss-* depicts in terms of the multilayer approach. I will begin with the examples discussed above of the use of *-koiss-* with ambiguous predicates. I argue that this framework enables us to represent the contrast clearly. The difference in the construals is schematized in the following diagrams.

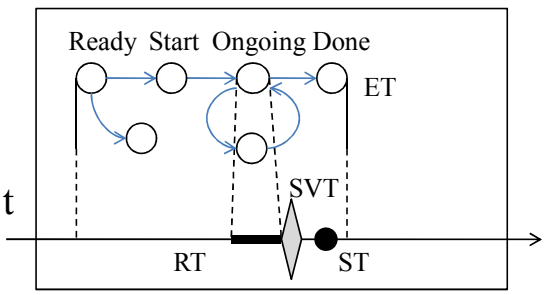

Figure 19. *-Koiss-* Marking On-going Phase

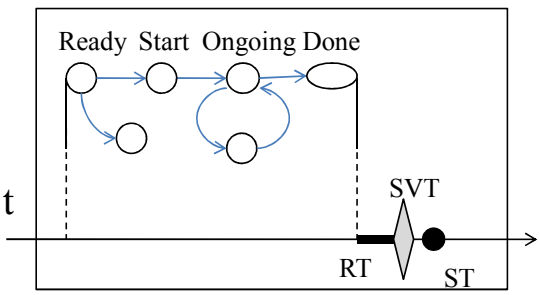

Figure 20. *-Ko-Iss-* Marking Resultant Phase

Figures 19 and 20 depict what (72a) and (72b) convey, respectively. Both figures represent a particular temporal interval being attended to in the same way: the RT is scanned at the SVT and the SVT precedes the ST, representing the marker's anteriority. The semantic ambiguity arises from the RT covering different temporal intervals in each of the figures; it is the ongoing phase

that is profiled in Figure 19, whereas it is the post-time phase that is profiled in Figure 20. As I argued above, I believe that the core function of *-koiss-* is to mark the durativity of the focal event or process, and in both of the cases represented, the RT covers some portion of, not a point within, the overall event. Because *-koiss-* involves a semantics of evidentiality and/or epistemic modality, an SVT is involved, as is shown in the figures; it is immediately followed by the ST. However, resultative semantics can be conveyed in addition by the construction, as determined by the inherent lexical ambiguity of predicates and by the compositionality of the semantics of the expression's parts, *-ko* 'and' and *iss-* 'be.' In sum, *-koiss-* typically acts as a durative aspect marker, but can also deliver a resultative reading when the parts that form the functional unit are functionally transparent in the construal and when it is coupled with a predicate that conveys a semantics of punctuality.

3.2.2.1.6 Interaction With Situation Types

To generalize, *-koiss-* denotes that some portion in the middle of the ET is being attended to and that the focal RT contains the SVT, because *-koiss-* is licensed when the speaker has perceived the occurrence of the focal event and when her assessment based on that perception coincides with RT. This generalization holds for all four situation types, exemplified in (77) – (80).

(77) *Chelswu-ka* *talli-koiss-ta*
Chelswu-Nom run-Prog-Decl
'Chelswu is running.'

(78) *Yenghuy-ka* *chak* *han-kwen-ul* *ilk-koiss-ta*
Yenghuy-Nom book one-volume-Acc read-Prog-Decl
'Yenghuy is reading a book.'

When *-koiss-* is used, the utterance has a progressive reading in activity and accomplishment predicates. However, nondurative predicates such as achievements and semelfactives do not yield a progressive reading when they are coupled with *-koiss-*.

(79) *Chelswu-ka* *tochakha-koiss-ta*
Chelswu-Nom arrive-Prog-Decl
'Chelswu is arriving momentarily.'

(80) *Inho-ka* *nwun-ul* *kkamppaki-koiss-ta*
Inho-Nom eye-Acc blink-Prog-Decl
'Inho keeps blinking his eyes.'

The sentence in (79) does not have a progressive interpretation, but rather conveys an inchoative reading. This suggests that *-koiss-* has an imperfective characteristic, because imperfective achievement predicates are usually inchoative due to their nondurativity. The sentence in (80) would not normally indicate that Inho was in the process of blinking at the speech time, but rather conveys an iterative reading. Because achievement and semelfactive predicates are not durative in nature, the fact that *-koiss-* does not yield the expected reading with those predicate

types indicates that *-koiss-* is a durative/ progressive marker.

Stative predicates are usually not compatible with progressive semantics (e.g., ?*He is knowing the fact* in English). As shown in (80), however, *-koiss-* is licensed with stative predicates.

(81) *Chelswu-ka ku sasil-ul al-koiss-ta*
Chelswu-Nom the fact-Acc know-Prog-Decl
'Chelswu recognizes the fact.'

When we look at the example in detail, we see that (81) is not a progressive statement, but a resultative statement in Korean. Because the verb *al-* 'know' is sometimes construed as a telic verb (like *recognize* in English), it is compatible with a resultative reading. As shown in (71) above, descriptive adjectival predicates are not licensed with *-koiss-*. However, processual adjectives such as *nulk-* 'be.old' are naturally coupled with *-koiss-*, as shown by the grammaticality of (82).

(82) *Chelswu-ka nulk-koiss-ta*
Chelswu-Nom be.old-Prog-Decl
'Chelswu is getting old.'

-Koiss- cannot be used to convey a generic meaning or a permanent-truth meaning. For example, the sentence in (83) could be used by someone currently observing a sunrise, but not to state a permanent truth about where the sun rises.

(83) *thayyang-i tongccok-eyse tteolu-koiss-ta*
sun-Nom east.side-Loc rise-Prog-Decl
'The sun is rising in the east.'

If *-nun-* were used in a similar sentence, it would have conveyed a permanent-truth reading; the kind of ongoing habitual situation described using *-nun-* does not refer to any particular point in time, but rather refers to a permanent truth.

The discussion thus far regarding *-koiss-*'s progressive-aspect-marking function when coupled with durative predicates is similar to Smith's definition of progressive viewpoint (1983:493). Progressives evoke an overall structure for a particular event that consists of a beginning, successive stages, and an eventual end point, and the progressive viewpoint construes that event from within a stage that is neither initial nor final. Denoting an event that has yet to reach its end point gives a meaning of temporariness and dynamicity to what is expressed with the progressive construction. The semantic range that *-koiss-* covers in the KVC is wider than that of a mere progressive marker, but it definitely marks progressive aspect.

Previous studies on *-koiss-* have not given any unified accounts of the marker's functional role in the KVC. The main prior ideas about its nature are summarized below.

- A progressive marker (H.-B. Choe 1977, Kim 1986)
- A progressive or resultative marker that combines with certain telic transitive verbs (Y.-J. Ahn 1995)
- A durative marker that involves states or events consciously and volitionally initiated and maintained by an agent (K.-D. Lee 1993)

- A durative and resultative marker whose states are dynamic (H.-S. Lee 1991)
- An imperfective marker that combines with transitive and unergative verbs (E.-H. Lee 2008)

The studies listed have examined the durative, progressive, and/or imperfective characteristics of *-koiss-* that I have discussed in this section. In addition, some of them tried to figure out what kinds of predicates it is used with. For instance, E.-H. Lee's outstanding (2008) work focused on the argument structure and event structure of predicates that can be used in the *-koiss-* construction to figure out when the marker is used as a progressive and when it is used as a resultative. However, she does not seem to have considered the differences between the statuses of the *-koiss-* and *-ko-iss-* constructions in terms of grammaticalization. As I mentioned above, before *-ko* 'and' and *iss-* 'be' form a single functional unit, a punctual event within the scope of *-ko* is naturally construed as completed, and the existential verb holds the final phase of the event. This juxtaposition gives rise to resultative semantics. This study argues that the compositional *-ko-iss-* is a progressive marker and that its resultative reading arises from its periphrastic construction with telic events and its combination with punctual predicates. In addition, most of these prior studies have not considered the potential involvement of epistemic modal and evidential characteristics in the function of *-koiss-*, which distinguishes it from a prototypical imperfective marker. (This will be discussed further in the following subsection).

To sum up, the periphrastic expression consisting of *-ko* 'and' (the temporal/causal connective) and *iss-* 'be' indicates that the portion of a focal process that is not its beginning or its end is ongoing. In addition, *-koiss-* conveys durativity and imperfectivity. A resultative reading arises only when the parts of the expression do not work as a single functional unit and when it is combined with punctual predicates. Furthermore, *-koiss-* conveys evidential/ epistemic modal semantics. This subsection has provided a unified account of its functions within the multilayer approach.

3.2.2.1.7 Differences between *-Koiss-* and *-Nun-*

The subtle differences between *-koiss-* and *-nun-* can be explained conceptually as follows. In the construal of *-koiss-* constructions, the SVT does not coincide with the RT, unlike in the construal of the imperfective *-nun-*. The two linguistic items overlap functionally and semantically. For instance, they are both licensed in progressive contexts like those in (84).

(84)a. *ku-ka* *talli-<u>n</u>-ta*
he-Nom run-Imprf-Decl
'He runs' or 'He's running'

b. *ku-ka* *talli-<u>koiss</u>-ta*
he-Nom run-Prog-Decl
'He is running.'

The sentences in (84a) and (84b) are both licensed in contexts where the speaker is describing an ongoing action of someone running. It seems at first glance that the two utterances can be used interchangeably in most contexts. They are, however, very subtly different from each other, in that (84a) would be licensed in a context where the narrator's viewpoint tightly coincided with

the event time, for example, if a broadcaster were vividly describing an athlete's current actions. In contrast, (84b) would not likely be used in such contexts. (The equivalent contrast in English would be between *He runs! He scores!* and *He is running! He is scoring!*[39]).

The contrast can be explained in terms of the difference in the positioning of the SVT. In both (84a) and (84b), the RT is included in the ET. In addition, the PT of both utterances is within the RT, because the speaker is perceiving the target event and claiming that the situation holds at the same time. This captures the vivid-description function in terms of the PT's coincidence with the speech-act time.

On the other hand, (84b) indicates that the narrator is conveying information about the phase that is still ongoing right after she recognizes that the phase has just happened. The sentence in (84b) therefore has more of a narrative rather than a descriptive interpretation, compared to (84a). In terms of the temporal structure, (83b) indicates that within the RT, the ST immediately follows the SVT (PT). This is represented in the diagrams in Figures 21 and 22.

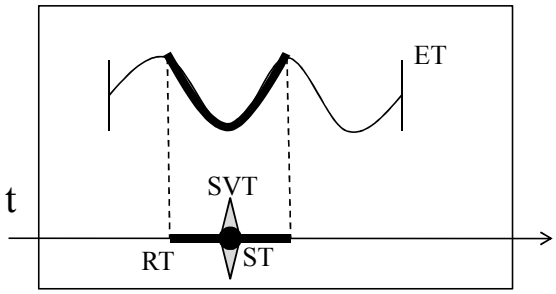

Figure 21. Schematic Representation of *-Nun-*

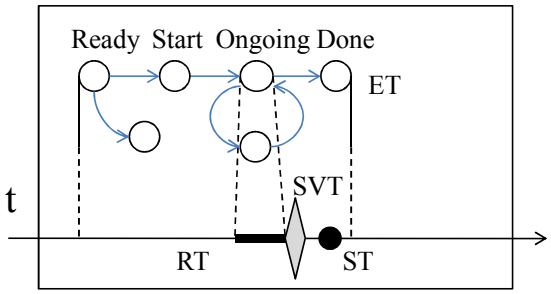

Figure 22. Schematic Representation of *-Koiss-*

As shown in the figures, *-koiss-* is different from *-nun-* in two major respects. First, regardless of which of the possible logical phases of the focal event is profiled, *-nun-* indicates simply that the ET encompasses the RT. The RT can cover any internal phase (For example, *-nun-* sometimes indicates that the event is in the process of moving towards the ongoing stage). This freedom gives more room for utterances containing the marker to be construed as generic statements. In contrast, *-koiss-* draws the construer's attention exclusively to the ongoing phase. This ongoingness keeps the *-koiss-* construction from conveying a generic reading.

Second, *-nun-* indicates that the SVT coincides with the ST; this is represented in terms of the overlap between the SVT and the ST in Figure 21. In contrast, in the *-koiss-* construction, the SVT is prior to the ST (Figure 22). That is, the occurrence of one of the numerous iterations that make up the focal event (whatever is within the RT) enters the origo's cognition, and the origo makes an utterance right after processing it. This contrast can be captured by adding the durative adverbial phrase *samsip-pwun-tongan* 'for thirty minutes.' When it is used with *-nun-*, the utterance usually means that the subject makes it a rule to run for 30 minutes everyday, and hence, the utterance is not likely to convey a progressive reading. This is because the speech-act

[39] This is called the commentary use of the present tense (Comrie 1976:77) because it is commonly used in providing simultaneous narration for a film or for a sports event such as a football match or a horserace. Comrie adds "[T]his characteristic structure is reflected in the possibility of using the non-Progressive Present to refer to *complete* actions…" (1976:77; italics mine). *-Koiss-* can mark completion to some degree, possibly because it can also indicate the resulting state of an event.

time is a temporal point; it cannot last for a period of time while the ST keeps coinciding with the SVT. In contrast, when *samsip-pwun-tongan* is used with *-koiss-*, it always conveys a progressive reading. The speech act is made right after the speaker's assessment of some portion of the on-going eventhas brought the whole focal event to her attention. In this vein, it would not be totally implausible to say that *-koiss-* involves some kind of perfective semantics, in that the processing of some portion in focus has just occurred (as in (84b), which has a reading of the completion of the speaker's perception).

As I pointed out above, the progressive aspect conveyed by *-koiss-* is not conceptually incompatible with a certain degree of perfective semantics, as in Comrie's observation (1975:31) of the 'perfective imperfect': According to Comrie, such a construction can be used to describe a situation that is iterative and where each of the individual occurrences would itself be referred to in the perfective. When *-nun-* and *-koiss-* are coupled with a semelfactive predicate such as *kkamppaki* 'blink,' we can observe a contrast in this regard, as in (85).

(85)a. *ku-ka* *nwun-ul* *kkamppaki-n-ta*
he-Nom eye-Acc blink-Imprf-Decl
'He blinks his eyes once.'

b. *ku-ka* *nwun-ul* *kkamppaki-koiss-ta*
he-Nom eye-Acc blink-Prog-Decl
'He keeps blinking.'

The default meaning of (85a) is likely that, at the ST, the subject is currently in the process of blinking, whereas in (85b), it is possible that, at the ST, he has already blinked several times. This shows that *-koiss-* is likely to encode that the speaker's perception or assessment of a particular completed phase of an event occurred prior to the ST. This is conceptually parallel to Comrie's perfective imperfect in that each individual iteration of the focal event is referred to by *-koiss-*, which marks the speaker's assessment.

The following examples also support the claim that *-koiss-* indicates that the RT, which is contained within the ET, should precede the SVT so that the narrator can narrate what has just happened vividly. *-Koiss-* is not licensed in immediate future examples like (86); however, the imperfective-aspect marker *-nun-* is licensed.

(86)a.**nayil* *ku-ka* *pap-ul* *mek-koiss-ta*
tomorrow he-Nom meal-Acc eat-Prog-Decl
'He's having a meal tomorrow.'

b. *nayil* *ku-ka* *pap-ul* *mek-nun-ta*
tomorrow he-Nom meal-Acc eat-Imperf-Decl
'He has a meal tomorrow.'

Because the SVT has to follow the RT in the ET, if the focal event were anchored in the future by means of the future adverbial *nayil* 'tomorrow,' it would not be licensed, as shown by the ungrammaticality of (86). In this vein, it is also predictable that *-koiss-* and *-nun-* cannot be used together, as shown by the ungrammaticality of (87).

(87) **ku-ka* *pap-ul* *mek-koiss-nun-ta*
he-Nom meal-Acc eat-Prog-Imprf-Decl
'He's having a meal.'

In addition, note that *-koiss-* can sometimes convey a habitual reading, as in the sentence in (88).

(88)a.*ku-nun* *Berkeley-ey* *tani-koiss-ta*
he-Top Berkeley-Loc attend-Prog-Decl
'He goes to Berkeley/ He's in class, at Berkeley.'

b. *ku-nun* *Berkeley-ey* *tani-n-ta*
he-Top Berkeley-Loc attend-Imprf-Decl
'He goes to Berkeley.'

As shown in (88a), a sentence containing *-koiss-* can convey either a progressive or a habitual meaning, whereas (88b) only conveys a habitual meaning. Given this meaning distribution, I believe that *-koiss-* is not a prototypical progressive marker, because in general, progressives tend not to be able to convey a habitual meaning. However, this does not overrule our characterization of this marker's central function as marking progressive aspect, because it seems to be normal for certain types of predicates to impose a habitual reading if they are coupled with progressive semantics. For instance, according to Comrie (1976:37), "[t]he English Progressive can refer to a habitual situation that holds for a relatively limited period, as in *we're going to the opera a lot these days,*[or] *at that time I was working the night shift.*"

In sum, *-koiss-* generally functions as a durative aspect marker, and in particular as a progressive aspect marker when it is coupled with durative predicates (*-Koiss-* is analyzed similarly by in H.-B. Choe 1977, K.-D. Lee 1978, E.-J. Baek 1986, N.-K. Kim 1986). However, it can convey a semantics of resultativity when coupled with punctual predicates. It basically profiles the middle, ongoing stage of a durative event or process; it does not itself specify tense relations. It is different from the imperfective in that *-koiss-* indicates that the SVT immediately follows a chunk of the RT within the ET, while the nonpast imperfective marker *-nun-* requires that the SVT coincide with the RT as a whole. This claim is supported by the fact that the two markers cannot occur together.

3.2.2.2 Durative Marker II: The Resultative Aspect Marker *-Eiss-*

The other durative marker *-eiss-* indicates that the speaker is attending to the final phase of an event. The phase is construed as internally homogeneous and usually belongs within the type of event structure that is evoked by atelic nondynamic predicates. It is crucial to note, however, that it is not simply the case that only nondynamic predicates are compatible with *-eiss-*. Rather, *-eiss-* can be used to mark ingressive predicates that refer to an event that has an initial boundary and continues after that (Bickel 1996, 1997, See Section 2.6.2.2). Such predicates, for example *se-* 'stand' in (89), express situations in which a theme argument is located or put in a certain state (E.-H. Lee 2008).

(89) *Inho-ka* *mwun-aph-ey* *se-eiss-ta*
Inho-Nom door-front-Loc stand-Rslt-Decl

'Inho is standing in front of the door.'

The focal phase of the event that the ingressive predicate *se-* refers to in (89) is nondynamic and stative; it might involve action in some cases (for example, in English *Now he stands up in front of the audience*), but prototypically, the situation that is depicted by *se-* is nondynamic, atelic, and durative. This is why it can combine with *-eiss-*. *-Eiss-* is etymologically derived from two morphemes; *-e* is a connective particle and *iss-* is the existential copula 'be.' The two morphemes have been amalgamated and grammaticalized into a single functional unit that now conveys a resultative meaning. The sentence in (90) is another example of *-eiss-*.

(90) *Yenghuy-ka* *patak-ey* *nwup-eiss-ta*
Yenghuy-Nom ground-Loc lie-Rslt-Decl
'Yenghuy is lying on the ground.'

In (90), another ingressive predicate *nwup-* 'lie' cannot be construed dynamically. Because it denotes a stative scene where the agent is lying still, *-eiss-* is licensed but *-koiss-* is not. This example shows that the *-eiss-* construction requires the target process to be stative and that it delivers a resultative reading.

3.2.2.2.1 The Perfective-Aspect Meaning

In addition, *-eiss-* does not seem to function as an imperfective marker, because it is not licensed with a punctual predicate *caychaykiha-* 'sneeze' as shown in (91).

(91)**Chelswu-ka* *caychakiha-eiss-ta*
Chelswu-Nom sneeze-eiss-Decl
'Chelswu sneezed.'

Considering that *-eiss-* is not licensed in (91), it does not convey a semantics of imperfectivity; this is conceptually related to its resultativity.

-Eiss- does not serve to mark tense; if it is coupled with a past-tense adverbial without any temporal suffix, as it is in (92), the utterance is not acceptable.

(92) **caknyen-ey* *pisek-i* *yeki-ey* *seywu-eci-eiss-ta*
last.year-Loc tombstone-Nom here-Loc erect-Pass-Rslt-Decl
'Since last year, the tombstone has been erected here.'

If the anteriority marker *-ess-* were used together with *-eiss-* in the sentence in (92), the utterance would be licensed and have the intended meaning. This contrast demonstrates that *-eiss-* does not itself carry tense, but rather refers to part of the internal temporal contour of the focal event, specifically, the resultant stage of the event.

3.2.2.2.2 Homogeneity of the Internal Structure of the Target Process

To model what *-eiss-* depicts, we must first look into what kind of predicates are licensed with it. The resultative *-eiss-* is licensed only when the homogeneity of the internal event structure is

guaranteed by the predicate used. This semantic constraint excludes atelic dynamic predicates, i.e. activity predicates, such as that in (93) from being used with *-eiss-*.

(93) **Yenghuy-ka* *talli-eiss-ta*
Yenghuy-Nom run-Rslt-Decl
'Yenghuy has just run.'

Because the dynamic predicate indicates that the internal contour of the target process in question is not homogenous – it involves initiation, an ongoing process, iterative movements, etc. – it cannot be used with *-eiss-*, which requires homogeneity. Combinations of *-eiss-* with the other situation types are shown in (94) – (96).

(94) **Chelswu-ka* *chak* *han-kwuen-ul* *ilk-eiss-ta*
Chelswu-Nom book one-cnt-Acc read-Rslt-Decl
'Chelswu is has read a book.'

(95) *Yenghuy-ka* *cengsang-ey* *tochakha-eiss-ta*
Yenghuy-Nom top-Loc arrive-Rslt-Decl
'Yenghuy has reached the top.'

(96) **Chelswu-ka* *caychaykiha-eiss-ta*
Chelswu-Nom cough-Rslt-Decl
'Chelswu has just coughed.'

Achievement predicates, such as that in (95), are licensed within *-eiss-* constructions, but the other two types are not. Dynamic events are not compatible with *-eiss-*, because dynamicity contradicts the condition *-eiss-* imposes that the focal event's internal structure be homogenous. Semelfactive predicates like that in (96) are therefore not licensed. In addition, the durative character of accomplishment predicates like that in (94) focuses on the middle stage of the event in question, rather than on the starting or finishing points, so they are not compatible with the resultative semantics of *-eiss-*.

3.2.2.2.3 *-Eiss-* With Incremental Predicates

In spite of the homogeneity of the internal structure, stative predicates such as *know*, *believe*, and *think* also seem to not be licensed in *-eiss-* constructions.

(97) **Yenghuy-ka* *ku* *sasil-ul* *al-eiss-ta*
Yenghuy-Nom the fact-Acc know-Rslt-Decl
'Yenghuy has known the fact.'

(98) **Yenghuy-ka* *yeppu-eiss-ta*
Yenghuy-Nom be.pretty-Rslt-Decl
'Yenghuy has been pretty'

The processes depicted by the predicates in (97) and (98) satisfy the marker's semantic

restriction of homogeneity. However, for events or processes to convey resultative semantics, it seems that they must be incremental, so that they can be conceptualized as having a peak that demarcates an ending phase. The stative predicates mentioned above do not involve such a peak, and thus, they are not licensed.

Nevertheless, it is not the case that no stative predicates are licensed in *-eiss-* constructions. Posture verbs such as *stand*, *sit*, *crouch*, *lean*, and *lie* are licensed in this construction, even though they belong to the stative situation type[40]:

(99) *Chelswu-ka* *na-eykey* *kitay-eiss-ta*
Chelswu-Nom I-Dat lean.on-Rslt-Decl
'Chelswu is leaning against me.'

The posture verb in (99) is licensed with *-eiss-* because it depicts a situation where a posture is reached and maintained. In other words, the state that is depicted in (99) is incremental, and therefore the situation involves a peak. Furthermore, once the posture is reached, its post-state is homogeneous. Therefore, the stative predicate *kitay-* is licensed with *-eiss-*.

3.2.2.2.4 Another Factor: Nonagentivity

There is another factor that affects the distribution of *-eiss-*: agentivity. An event that is depicted in the *-eiss-*construction may be agentive, but the homogenous stage of the event that *-eiss-* focuses on cannot be agentively affected by the subject. That is, all of the agentive action must be completed before the demarcated peak that is highlighted by *-eiss-*. For instance, the sentence in (99) conveys a nonagentive reading, whereas the sentence in (100), with the progressive marker *-koiss-*, does not.

(100) *Chelswu-ka* *na-eykey* *kitay-koiss-ta*
Chelswu-Nom I-Dat lean.on-Prog-Decl
'Chelswu is leaning against me.'

The two examples are different in that (99) indicates that Chelswu's movement that results in him leaning on the speaker, as well as his agentivity, has been completed, whereas (100) indicates that the movement is on the ongoing stage. That is why (99) conveys a resultative reading.

Putting this differently, this is possible because the type of the predicate *kitay-* 'lean.on' is ingressive. The internal structure of the predicate includes both agentive and non-agentive phases; when *kitay-* is used with *-koiss-*, the dynamic phase before the demarcated peak is attended; when it is used with *-eiss-*, the static phase after the peak is attended. As a result, the predicate is licensed with both *-koiss-* and *-eiss-*.

---

[40] The peculiarity of posture verbs has been discussed by Talmy (2000b,79). In English, predicates such as *lie, sit, stand, lean, kneel, squat, crouch,* and *bend* are of a 'being-in-a-state' type. Some other languages, such as Japanese generally lexicalize posture verbs in the 'getting-into-a-state' type. I believe that the distinction between the 'being-in-a-state' type and the 'getting-into-a-state' type is also relevant in Korean; because the predicates encode the latter type, they are licensed in *-koiss-* constructions, not in *-eiss-* constructions. I also believe that the posture verbs belong to the ingressive situation type (Bickel 1996, 1997, see Section 2.6.2.2) that refers to an event that has an initial boundary and continues after that.

The relevance of agentivity can be shown by examining passive constructions such as those in (101) and (102).

(101)**aktang-tul-i* *Chelswu-lul* *cap-eiss-ta*
villain-Pl-Nom Chelswu-Acc capture-Rslt-Decl
*'The villains have captured Chelswu.'

(101)*Chelswu-ka* *aktang-tul-eykey* *cap-hi-eiss-ta*
Chelswu-Nom villain-Pl-Dat capture-Pass-Rslt-Decl
'Chelswu has been captured by the villains.'

-Eiss- is not licensed with an agentive (or even a volitional) predicate such as that in (101), whereas it is licensed with a passivized predicate such as *cap-hi* 'being caught' in (102). This contrast shows that *-eiss-* requires that its focal process is not agentive.

The discussion thus far has defined *-eiss-* as follows. Firstly, it conveys resultativity. This resultativity requires that the internal contour of the event in question be homogeneous, which excludes most activity verbs. The predicates that *-eiss-* can be used with are achievement predicates and posture verbs (ingressive predicates, Bickel 1996, 1997), as they depict situations where some activity has been done incrementally and completed, which is compatible with a result state that holds at the speech time. Other statives are not licensed, because they are not incremental events that have a peak at which the focal event is construed as terminated. In addition, *-eiss-* focuses on a homogenous state that is not affected by the subject's agentivity. The resultativity of *-eiss-* is, therefore, not licensed when the final phase depicted by the predicate in the construction involves the subject's agentivity.

3.2.2.2.5 A Unified Account of *-Eiss-* Within the Multilayer Approach

Now, let us model *-eiss-* in terms of the multilayer approach. *-Eiss-* mainly conveys aspectual semantics and does not convey tense meaning by itself. This is illustrated in the diagram in Figure 23.

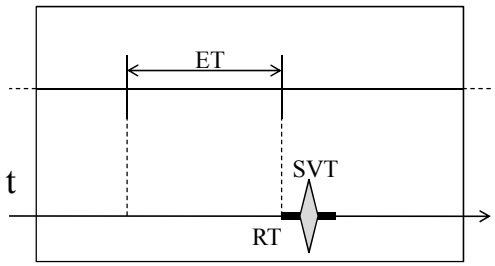

Figure 23. Schematization of *-Eiss-*

Because the expression itself does not convey tense, the figure does not include the ST. Rather, it focuses on the post-time of the stative event, which is profiled by the RT. This expression marks the resultativity of the process in question and indicates that the process in question is durative. The RT includes an underspecified SVT because the utterance can indicate either the origo's perception or assessment.

As briefly noted in the discussion on the anteriority marker *-ess-*, its perfective function is

inherited from its ancestor conveying resultantativity (K.-D. Lee 1978, E.-J. Baek 1986). This is not surprising, given that this grammaticalization pattern from perfective construction to past-tense reading is crosslinguistically very common (Bybee 1987, Bybee and Dahl 1989, cited in H.-S. Lee 1991).

In sum, *-eiss-* plays the role of a resultative marker that denotes a homogenous state where an incremental action has terminated and its result holds at the time of utterance. The functions of *-eiss-* have been discussed in previous work on *-koiss-* and *-eiss-*, summarized here.

- A resultative marker (K.-D. Lee 1993, Y.-J. Ahn 1995)
- A static durative marker (H.-S. Lee 1991)
- An imperfective marker that combines with predicates that have an internal argument (unaccusative or passive) (E.-H. Lee 2008)

What they share in common is that the marker focuses on the final phase of an event and that the internal structure of the event must be homogenous and nonagentive.

3.2.2.2.6 The Complementary Distribution of *-Koiss-* and *-Eiss-*

The element *-eiss-* stands in complementary distribution with *-koiss-* in that *-eiss-* is used when the target process has a homogenous internal state, while *-koiss-* is licensed only when the target process denotes a dynamic action or event. This contrast is demonstrated in the examples in (103).

(103) a.*cwuy-ka* *cwuk-<u>eiss</u>-ta*
rat-Nom die-Rslt-Decl
'The rat is dead.'

b.*cwuy-ka* *cwuk-<u>koiss</u>-ta*
rat-Nom die-Prog-Decl
'The rat is dying.'

In (103a), *-eiss-* focuses on the continuing state of the rat's being dead. In other words, it profiles the resultant state or post-time of the rat's death. In contrast, *-koiss-* in (103b) profiles the ongoing stage of the rat's dying.

In sum, *-eiss-* profiles a durative temporal interval that is the resultant portion of a focal event or the posttime of a focal event; this stage comprises a homogenous state. *-Koiss-* also profiles a durative temporal interval, but it is the ongoing stage of a durative event or the post-state of a punctual event. The *-eiss-* construction expresses nonagentive stative durative situations, and the *-koiss-* construction expresses dynamic durative situations; because of this contrast, they complement each other in the same grammatical paradigm.

3.3 Combinations of the TAME Markers

I have discussed a variety of tense, aspect, modality, and evidentiality markers in the previous sections, including four temporal suffixes, the nonpast imperfective marker *-nun-*, the anteriority *-ess-*, the presumptive-modal *-keyss-*, and the retrospective firsthand evidential marker *-te-*, as

well as the grammaticalized durative suffix *-koiss-* and the grammaticalized resultative suffix *-eiss-*. I have described the functions of each marker independently, showing how they function when they are employed alone in an utterance. Now, let us look into the more complex distributions and interactions of multiple markers.

First, let us take another look at the overall picture of the verbal complex that accommodates the morphemes discussed above. The template is repeated in Figure 24.

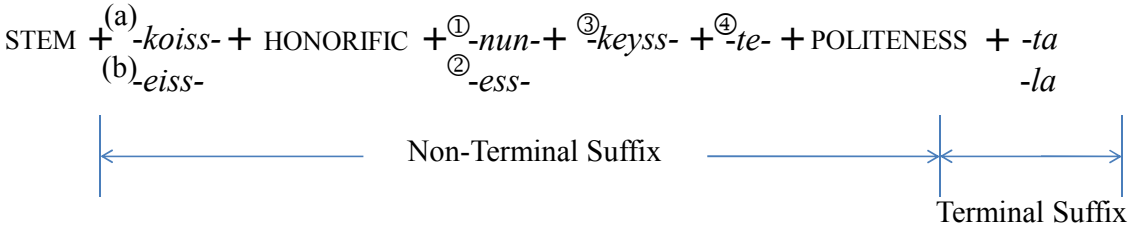

Figure 24. The Configuration of the Korean Verbal Complex

As I noted above, the suffixes labeled ① through ④ can each singly be coupled with the terminal suffixes *-ta* and *-la,* which indicate that the sentence type is declarative. Uses of each of the nonterminal suffixes are exemplified in (104).

(104)a. *thaca-ka* *kong-ul* *chi-ess-ta*
hitter-Nom ball-Acc hit-Ant-Decl
'The hitter hit a ball.'

b. *thaca-ka* *kong-ul* *chi-n-ta*
hitter-Nom ball-Acc hit-Imprf-Decl
'The hitter is hitting a ball' or 'The hitter hits a ball.'

c. *thaca-ka* *kong-ul* *chi-keyss-ta*
hitter-Nom ball-Acc hit-Presum-Decl
'The hitter **will hit** a ball.'

d. *thaca-ka* *kong-ul* *chi-te-la*
hitter-Nom ball-Acc hit-Ev.Fh-Decl
'The hitter **hit** a ball.'

-Ess- in (104a) indicates either that the RT is prior to the ST or that the RT is profiling the "Done" stage of the ET. *-Nun-* in (104b) marks imperfective aspect, either as a description of the current situation or in a habitual reading. *-Keyss-* in (104c) conveys the speaker's expectation or assessment based on her assumption. (As I mentioned above, if a first-person subject had been used, it would have indicated that the speaker's volition to hit a ball.) Lastly, *-te-* in (104d) indicates that the speaker has seen the hitter hitting the ball in the past and frames it as an imperfective event.

Now let us think about possible combinations of the four major temporal elements. Because *-ess-* denotes that the time when the focal event takes place is prior to the ST, it is not compatible with *-nun-*, which encodes that the RT coincides with the ST. Hence, ① (*-nun-*) is not compatible with ② (*-ess-*) because the focal event cannot occur both before the ST and simultaneously with the ST, and also because it cannot be viewed as both bounded and unbounded at the same time. *-Nun-*'s other possible combinations, with ③ and ④, are also not licensed. *-Keyss-* indicates that the RT is posterior to the ST or that the RT and the AT interact with each other in the epistemic

domain, while *-nun-* simply indicates that SVT, the RT, and the ST overlap. *-Te-* indicates that the SVT precedes the ST, which also contradicts what *-nun-* encodes.

In contrast, ② (*-ess-*) does not have any restrictions on its use with the other two markers. The examples in (105) support this claim:

(105)a. *thaca-ka* *kong-ul* *chi-ess-keyss-ta*
hitter-Nom ball-Acc hit-Ant-Presum-Decl
'He **will have hit** a ball.'
b. *thaca-ka* *kong-ul* *chi-ess-te-la*
hitter-Nom ball-Acc hit-Ant-Ev.Fh-Decl
'He **had hit** the ball.'

As shown in (105a) and (105b), *-ess-* can be coupled with both *-keyss-* and *-te-*. Because (105a) contains *-ess-*, which marks that the final phase of the ET is profiled, and *-keyss-*, which indicates that the speaker has inferred from some evidence the occurrence of the focal event, the sentence comes to convey the speaker's inference of a past event. In (105b), *-te-* indicates that the speaker had some experience of obtaining some information in the past and that, based on that information, the speaker vouches for the occurrence of the focal event in the past.

What about the combination of ③ (*-keyss-*) and ④ (*-te-*)? Suffix ③, in general, indicates the speaker's assumption or inference based on some available evidence in the context. Suffix ④ indicates that the SVT is prior to the ST, which in turn presupposes that the focal event occurred prior to the SVT. *-Keyss-* and *-te-* seem at first glance to be incompatible with each other, because the function of one is to encode that the speaker's judgment is based on inference and the function of the other is to encode that her judgment is based on her direct perception. Interestingly, however, they are compatible, in a compositional way.

(106)*hanul-ul* *po-ni* *pi-ka* *o-keyss-te-la*
sky-Acc look-Caus rain-Nom come-Presum-Ev.Fh-Decl
'Having looked at the sky, it**'ll** rain.'

In the example in (106), *-keyss-* is employed to indicate the origo is making a prediction and an epistemic judgment based on her observation of the sky in the past. By adding *-te-*, the speaker conveys that she fully vouches for the certainty of the guess she made in the past. In other words, the whole situation of her guessing is in the scope of *-te-*. Technically, the information coded by *-keyss-* and *-te-* is of different kinds. The marker *-keyss-* relies on the speaker's assumption, while the source of the information encoded by *-te-* is her direct experience of judging, not her inference.

The compositional nature of this combination is restricted by a common-sense hierarchy of reliability for sources of information. This is exemplified by the ungrammaticality of (107).

(107)**hanul-ul* *po-ni* *pi-ka* *o-te-keyss-ta*
sky-Acc look-Caus rain-Nom come-Ev.Fh-Presum-Decl

When the firsthand evidential marker *-te-* precedes *-keyss-*, the sentence is not licensed. Because firsthand direct experience is a more reliable source of information than an assumption, the information source of the origo's direct experience is not an appropriate object for the kind of assumption indicated by *-keyss-*. In other words, it would be normal to vouch for the validity of

my having made a guess, but it would be strange to guess that an event occurred that I had directly experienced. (Cases where different modes of access are encoded simultaneously are discussed in further detail in the next chapter.)

Now, is it possible to have the morphemes in slots ②, ③, and ④ occur all at the same time? The answer is yes. Since the anteriority marker only cares about the RT being prior to the other temporal parameters, there is no reason for it not to be coupled with either *-keyss-* or *-te-*.

(108) *cwuchacang-i* *pelsse* *ta* *cha-ess-keyss-te-la*
parking.lot already all be.full-Ant-Presum-EV.Fh-Decl
'The parking lot**'ll** already **be full**.'

The sentence in (108) would be licensed, when, for example, the speaker remembered that she had seen a long line of cars waiting to get into the parking lot. The anteriority marker *-ess-* construes the focal state (the parking lot's being full) as bounded and completed (perfective), and *-keyss-* marks that the construal of this bounded event is the result of the speaker's assumption made on the basis of the long line in front of the parking lot. Since the speaker herself is the origo who made the guess, her direct access to the experience of guessing is coded by *-te-*. If the past perfect marker *-essess-* (section 3.1.1.2) were used in place of *-ess-* in (108), it would change the meaning only in that it would convey that the parking lot must already have been full for a while.

Let us turn our attention to the periphrastic durative markers listed above. As shown in Figure 24, they always precede the temporal suffixes (①-④) and they are positioned before the position for the honorific marker (*-si-*). The fact that *-koiss-* precedes all of the other suffixes is shown in the following example, which employs an honorific marker.

(109) *sensayngnim-kkeyse* *keleka-koiss-usi-ess-ta*
teacher-Nom.Hon walk-Prog-Hon-Ant-Decl
'The teacher was walking.'

In an honorific statement like (109), *-koiss-* is located prior to the honorific marker *-(u)si-*, while the perfective *-ess-* is located after it.

The periphrastic durative markers are compatible with one another. I have already pointed out that (a) and (b) never co-occur because the types of predicates the two items can go with differ; (a) goes with a dynamic, durative action event, and (b) goes with a durative, homogeneous state. As I noted in Section 3.2.1.1, (a) *-koiss-* is also not compatible with ① (*-nun-*), except in cases where the utterance containing them is used as an imperative or a performative (see the example in (9) in 3.2.1.1.2). Other than this constraint, however, the periphrastic durative markers can be freely combined with the temporal nonterminal suffixes.

3.4 Summary

This chapter has explored the temporal suffixes in the Korean verbal complex and provided multilayer accounts of them in terms of the temporal apparatuses that I proposed in the previous chapter. The chapter covered two major sets of nonterminal verbal suffixes, the temporal suffixes and the durative aspectual markers. The first group consists of four suffixes, the nonpast imperfective marker *-nun-*, the anteriority marker *-ess-*, the presumptive epistemic-modal marker

-keyss-, and the retrospective firsthand evidential marker *-te-*. The other group contains two durative markers, the progressive marker *-koiss-* and the resultative marker *-eiss*. I have explored their functions and distributions and have shown that they function as more than mere tense or aspect markers, but that they rather involve semantics of modality and evidentiality, by applying to them the semantic tests that I described in Chapter 2. Based on the results, I have argued that tense, aspect, modality, and evidentiality are entangled in Korean morphology, and provided multilayer accounts in which a secondary viewpoint time is always involved in the construal of each marker, because modality and/or evidentiality semantics seem to always be involved whenever tense and aspect information is included in the KVC.

As discussed above, none of the four major non-terminal temporal suffixes, *-nun-*, *-ess-*, *-keyss-*, and *-te-*, nor either of the two periphrastic aspectual markers, *-koiss-* and *-eiss-*, convey purely tense or purely aspect. Rather, each of them involves some combination of tense, aspect, modality, and/or evidentiality at the same time. Putting it differently, the conceptual schema of each marker includes a secondary viewpoint time, which is instantiated as an assessment time or a perception time, and therefore semantics of epistemic modality or evidentiality can be expressed. The major schemas of each of the four temporal suffixes are summarized in Figure 25.

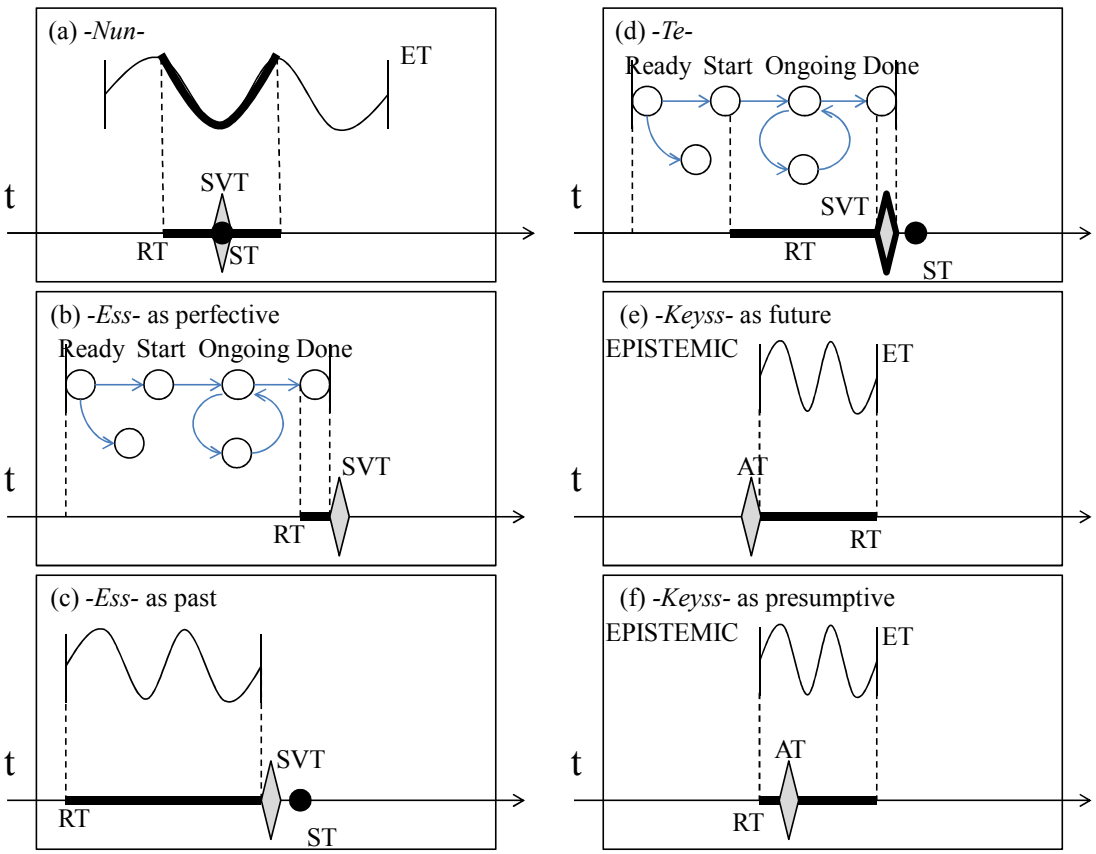

Figure 25. Schematizations of Central Senses of the Major Nonterminal Suffixes

As shown in Figure 25, *-nun-*, which is a nonpast imperfective marker, indicates that the SVT coincides with the RT within the ET. (It can also indicate that the RT immediately follows the ST, in an immediate-future example.) *-Ess-* is a perfective marker that indicates that the RT that

profiles the 'Done' stage precedes the SVT (b) or a past-tense marker that indicates that the RT as a bounded event precedes the ST (c). *-Te-*, which is a retrospective firsthand evidential marker, indicates that the SVT precedes the ST and that the RT is prior to the SVT. Lastly, *-keyss-* indicates either that the RT will take place after the AT (e) or that the RT belongs to an epistemic domain where it interacts with the AT and the ST (f).

The diagrams containing an ST necessarily convey tense readings: (a) nonpast for *-nun-*, (c) past tense for *-ess-*, and (d) past event reference for *-te-*. The other diagrams do not include an ST necessarily because utterances containing these morphemes are not necessarily anchored to a specific time point. It is true that when *-ess-* is employed by itself, it conveys a past-tense reading, but that is because the temporal location of the deictic center is normally 'now.' (As I have already pointed out, *-ess-* cannot be purely a tense marker, because there are more than a few cases where its past-tense reading is overridden.[41] While *-keyss-* seems to be able to convey futurity, it would be more plausible to call it a presumptive-epistemic modal marker indicating that the speaker's assessment of a previous situation belongs to the epistemic domain, where it is relatively free from temporal constraints.

The schemas for the two durative markers are shown in Figure 26.

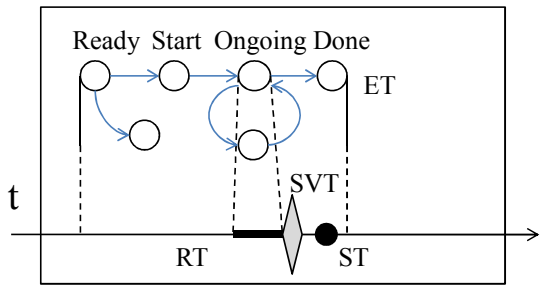

Figure 26. Schematization of *-Koiss-*

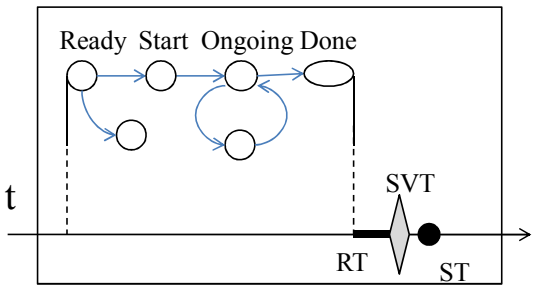

Figure 27. Schematization of *-Eiss-*

Figure 26 depicts what the progressive durative marker *-koiss-* encodes when it is used with a durative, dynamic event. In this schema, the RT, which covers the ongoing phase of a durative event, immediately precedes the SVT, where the experiential origo makes an observation or an assessment of the profiled RT. This represents how the marker conveys a durative-aspect sense and potentially an evidential or an epistemic-modal sense. Figure 27 depicts what the resultative marker *-eiss-* encodes when it is used with an internally homogeneous process. The placement of the SVT here also depicts the point at which the experiencing origo attends to the profiled RT, indicating that the experiential origo's perception or assessment may be made at any temporal point in the post time of the target process.

Note that there is an SVT, which can be instantiated as either an AT or a PT, in both of these schemas. I contend that these nonterminal suffixes, which have been described in the literature as only conveying tense and aspect, actually carry modality and evidentiality information as well. If they were concerned only with tense and aspect, their schemas would make reference only to relationships between the RT, the ET, and the ST. The schemas above, however, represent the fact that they also seem to be concerned with relationships between the SVTs and the RTs, which indicates that they involve modal and/or evidential properties. In other words, how the reference time is scanned by the origo's senses – whether that RT coincides with the SVT or immediately

[41] Comrie (1976:78) pointed out that perfectives without overt specification of time reference tend to be interpreted with past meaning in languages such as Arabic.

precedes the SVT – is another crucial factor that affects the construal of the utterance.

Based on these observations, this study argues that tense and aspect are not easily separable from modality and evidentiality in the Korean verbal complex. This is especially true because there are not even pure tense or aspect categories, as all of the temporal inventories that I have examined are versatile in their functionality, in that all involve various combinations of tense, aspect, modality, and evidentiality properties.

These findings show that Korean belongs to a language category that shows combined tense/aspect oppositions (Comrie 1976:78), where tense and aspect information are entangled in each temporal morpheme, and where, furthermore, modal and evidential properties support their interpretation. The entangled semantics of the tense, aspect, modality, and evidentiality categories in Korean is not surprising in a typological context. Aksu-Koç (1995) reports that, in Turkish, a number of morphemes serve to express both aspectual and modal functions, and Cover (2010) argues that the tense and aspect system in Badiaranke cannot be properly understood without reference to modality. I argue that, in the multilayer approach, processing any of the four layers (tense, aspect, modality, and evidentiality) requires simultaneous access to all of the layers, and that which portion of the overall temporal schema is profiled determines the function of the target element.

The next question that arises, then, is if modal properties such as PT and AT are deeply involved in the construal of tense and aspect, what does the modality and evidentiality system *per se* look like in Korean? In the following chapter, I systematically explore the terminal modal suffixes and evidential elements, which involve a variety of ways of encoding the speakers' attitudes towards the information being conveyed, the information sources backing up the proposition, and/or the speakers' assessment of the truth of the information.

Chapter 4
The Modality and Evidentiality Elements in the Korean Verbal Complex

4.1 Introduction

Human beings are egocentric. No utterance is ever free of the subjective beliefs, knowledge, and thoughts of the speaker, because every utterance results from that speaker's egocentric conceptualizations. In other words, in our use of language, we cannot but view the world through the window of our own perspective. Based on our access to entities or events in the world, language users produce new information, adding our beliefs about or attitudes toward the focal entity or event to what we say. It is therefore natural for languages to be equipped with linguistic devices for marking the accessibility and sources of information and the shadings of the speaker's attitudes toward it. Indeed, languages in general have categories for just such functional devices: epistemic modality (EM) markers, which encode the experiential origo's assessment of the information in question, and evidentiality markers, which encode the source of information and sometimes imply the speaker's attitude towards the focal event (Aikhenvald 2004).

Although the grammar of Korean, particularly of its modality system, has been studied extensively, there have been very few thorough systematic accounts of its evidential system (with the exception of K.-A. Song 2009). It is likely that this is because it is difficult to separate its evidentiality system from its tense, aspect, and modality systems because of their complex functional overlaps and interactions. This lack of attention to the evidential system has resulted in a failure in previous literature to document what obviously seems to be an evidential marker. This chapter aims to address this gap by shedding light on the modality and evidentiality systems.

The elements explored in this chapter can be divided into two categories: terminal modal suffixes and non-terminal evidential elements. Terminal suffixes are linguistic items that are located at the end of a verbal complex; they can specify various experiential and performative aspects of the situations referred to by the utterance, including epistemic modalities, illocutionary forces, and levels of politeness (H-S. Lee 1991:96). Within that group, Section 4.2 of this chapter focuses on the epistemic-modal terminal suffixes. I then provide a systematic account of the evidentiality system within the Korean verbal complex (KVC) in Section 4.3; I argue that it is a three-term system whose modes of access are firsthand, inferential, and quotative/reportive. Section 4.4 addresses the typological significance of Korean, discussing the conceptual relationship between epistemic modality and evidentiality, the licensing of multiple evidential elements in a clause, and the contested identity of the modal suffixes *-ney-* and *-kwun-*.

4.2 The Modality System: The Terminal Modal Suffixes

A variety of terminal suffixes are employed in the KVC. They mostly function to mark sentence types, levels of politeness, and modality[42] semantics. This section focuses on the

[42] It is noteworthy that the term 'modality' in this thesis is mostly concerned with the speaker's evaluation of the situations (Following H.-S. Lee 1991: 60), although it covers a wide range of components on situations in the literature. For instance, the term in this thesis also covers the distinction among declarative, imperative, hortative,

suffixes that involve the semantics of modality. However, to provide some context on how these elements fit into the verbal complex, I will briefly describe the other two kinds of terminal suffixes.

There are four terminal suffixes for the four basic sentence types. For instance, the declarative ending *-ta-* (discussed in more detail in previous chapters) is used in formal styles, including broadcasting and various written styles, to indicate that the utterance is declarative. There are three other possible endings for the other basic sentence types: *-nya/-ni* for interrogatives, *-ca* for hortatives, and *-la* for imperatives. The use of the terminal suffixes in these basic sentence types is shown in the examples in (1):[43]

(1) a.*hakkyo-ey* *ka -n-ta*
school-Loc go-nun-Decl
'I'm going to school'

b. *hakkyo-ey* *ka-ni*?
school-Loc go-Inter
'Are you going to school?'

c. *hakkyo-ey* *ka-ca*
school-Loc go-Hort
'Let's go to school.'

d. *hakkyo-ey* *ka-la*
school-Loc go-Imper
'Go to school!'

There is another type of terminal suffix that marks the level of politeness. For instance, *-key* is an imperative terminal suffix that is used when the addressee is equal to or lower than the speaker in social rank and age, but is generally respected according to social norms; this is called the formal downward style (H.-S. Lee 1991:100).

(2) *i* *chayk-ul* *ilk-key*
this book-Acc read-Imp.Pol
'**Read** this book.'

In (2), the usages of *-key* depicts a situation where the speaker wants to show respect to the addressee even though the addressee is located lower in the social hierarchy. In contrast, the utterance in (1d), where the blunt-downward-style marker *-la* is used, does not show respect for the addressee. The use of these and other politeness suffixes is determined by horizontal or vertical social relationships between the speaker and the addressee, in an elaborate system for

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and interrogative as shown in (1). This chapter's main interest is, however, the epistemic modal suffixes that encode the speaker's epistemic stance. For detailed discussion of the other kinds of modality, see H.-S. Lee (1991).

[43] As briefly mentioned in the discussion of the nonpast imperfective *-nun-* in Chapter 3, the declarative terminal suffix *-ta* is always accompanied by the imperfective marker, and is thus distinguished from other sentence-type suffixes that do not require that they be used with any specific temporal element. For this reason, some linguists argue that *-nun-* also constitutes an indicative marker; I argue against this position in Chapter 3.

showing solidarity and power (Brown and Gilman 1960).

The sentence-type and politeness terminal suffixes are quite significant in that speakers use them to convey the level of formality and the type of utterance they are making. They are, however, beyond the scope of this study. (For more detail, see H.-S. Lee 1991.) The remainder of this section discusses four of the epistemic-modality suffixes, which are used to express the intentions of the speaker, such as her degree of commitment to the truth of a proposition (her certainty or belief), her state of knowledge, other assumptions about the addressee's state of knowledge (H.-S. Lee 1991:97). These epistemic-modality suffixes are used in informal styles of speech, unlike the basic declarative marker *-ta* used in (1a).

4.2.1 The Indicative Marker *-E*

The first item on our list is the indicative marker *-e*. The core use of the terminal suffix *-e* is for informal[44] indicative speech. It is used in various kinds of sentence types such as declarations and narrations in informal styles. An example is given in (3):

(3) *ku-ka* *cikum* *pap-ul* *mek-e*
he-Nom now meal-Acc eat-Indic
'Now he's eating a meal.'

The sentence (3) might be licensed in a context in which the speaker was talking on the phone to her best friend and describing a handsome guy who was sitting near her (i.e., where her friend did not have visual access to the person being described). The marker *-e* indicates that the speaker wants to convey some information to the addressee and that the information comes from the speaker's knowledge arising from previous or concurrent perceptual access to the situation being described (H.-S. Lee 1991:98).

Interestingly, the imperfective marker *-nun-* is not licensed with *-e*, while the perfective anteriority marker *-ess-* is, as shown in the examples in (4) and (5).

(4) **ku-ka* *cikum* *pap-ul* *mek-nun-e*
he-Nom now meal-Acc eat-Imprf-Indic

(5) *ku-ka* *cikum* *pap-ul* *mek-ess-e*
he-Nom now meal-Acc eat-Ant-Indic

The terminal suffix *-e* is not compatible with the imperfective marker because *-e* indicates that the speaker is narrating (rather than describing) the focal event, whereas *-nun-* indicates that the speaker is describing what is going on at the encoding time. The narrative characteristic of the terminal suffix is also shown by the fact that it is compatible with the progressive durative marker *-koiss-*, which also requires that the speaker be narrating, rather than describing, the focal event or process. It is brought to my attention (Lev Michael, p.c.) that the imperfective and the indicative are certinaly compatible in most cases in languages. In this regard, this language-specific functional clash between the indicative and the imperfective suffixes is intriguing; the 'narrating' semantics of the imperfective in Korean entails that the viewpoint is located outside

[44] The Korean terminal suffixes are sensitive to formality; if the utterance in (3) were used in a formal/written register, the utterance would have had the terminal suffix *-ta*. (for more information, see H.-S. Lee (1991)

the reference time, whereas the 'describing' semantics of the indicative marker -e indicates that the viewpoint is located inside the reference time that is attended to. Hence, the indicative marker is not compatible with the imperfective marker in Korean.

-E is licensed in interrogative and imperative sentences as well as declaratives; the difference in sentence type is indicated by pitch contour.[45] For instance, uttering the sentence in (3) with rising intonation would mean 'He's having a meal now, right?' Uttering (3) with the second-person nominative-case pronoun *ney-ka* 'you' and a forceful intonation would mean 'You eat now!' In these cases, the suffix's fundamental function is still to convey to the addressee information that the speaker has; however, the illocutionary force of the sentence may not be declarative. Using *-e* in a sentence with rising intonation indicates that the speaker is seeking to confirm whether what she is conveying is true, like a tag question in English. Using *-e* with a forceful tone assigns the utterance a performative force, fitting the shape of the world that the speaker conveys to the contents of the utterance by telling the addressee to do something.

To summarize, *-e* is used as an indicative terminal suffix in informal styles, generally in declarative sentences. It encodes the fact that the information about the event in question comes from the speaker's knowledge and that the speaker intends to share this knowledge with the addressee. *-E* can also be used in interrogative and imperative sentences, with the difference in illocutionary force being indicated by pitch contour, but it maintains its indicative characteristic.

4.2.2 The Mirative Marker *-Kwun*

The terminal suffix *-kwun* seems to be similar to *-e* in that it is used in indicative utterances in general. However, their major functions are distinct. While *-e* indicates that the focal information comes from the speaker's knowledge and that the intended recipient is the addressee, *-kwun* indicates that the focal information has just entered the speaker's cognition; the sentence is therefore not necessarily being uttered for the purpose of making the addressee aware of the focal information. *-Kwun* simply evokes and makes the addressee aware of the speaker's immediate recognition of the focal information. That is to say, although *-kwun* has an interactive function – letting the addressee know that the speaker is surprised by the unprocessed information – its core function is simply to reveal the speaker's surprise. The utterance in (6) is an example of this use.

(6) *pi-ka* *o-nun-kwun*
rain-Nom come-Imprf-Mir
'Oh! It is raining.'

The focal event in (6) is the rain; the sentence would be licensed in a situation in which the speaker had just recognized that it was raining. Note that the imperfective *-nun-* is coupled with the terminal suffix *-kwun-* in (6). Since the imperfective suffix requires that the reference time (RT) coincide with the perception time (PT), it is naturally licensed with a suffix encoding the speaker's immediate surprise. (This function is usually marked with the exclamative discourse marker *oh* in English (Schiffrin 1999).) Following DeLancey (1997, 1999), this paper uses the

[45] Lev Michael pointed out that the fact that *-e* is also licensed in interrogatives and imperatives indicates that the suffix might not be considred an indicative. Presumably, H.-S. Lee (1991) argues that *-e* is an informal sentential ending in the same vein. However, I believe that *-e* is an informal indicative by default, because it is licensed in the other types only when the pitch contour is manipulated in certain ways as specified below.

term *mirative* for this functional category. (This element has also been called a marker of *unassimilated information* (H.-S. Lee 1991:381), *exclamatory statements* (H.-B. Choe 1977, W. Huh 1983), and *new perception* (D.-K. Noh 1981, 1983, K.-H. Chang 1985, K.-D. Lee 1986)). Mirativity is described by DeLancey as "the linguistic marking of an utterance as conveying information which is new or unexpected to the speaker" (2001: 369-370).

When *-kwun* is coupled with the perfective anteriority marker *-ess*, the focal event is packaged as a bounded process, and the bounded event becomes the target of the speaker's immediate judgment based on her perception. The combination of the perfective marker with *-kwun* can carry the semantics of inferential epistemic modality. That is, it indicates that the conveyed information comes from the speaker's inference from her perceptual access to evidence. For instance, the sentence in (7) might be used when the speaker had just noticed that the ground was wet, and this discovery had let her to conclude that it had rained.

(7) *pi-ka* *o-ass-kwun*
rain-Nom come-Ant-Mir
'Oh! It's rained.'

In (7), *-kwun* marks the speaker's immediate realization of the fact that it has rained based on her assessment of the evidence available in the context. In other words, in (7), the information that comes into the speaker's unprepared mind is her subjective assessment of the fact that it must have rained, while in (6), the information that comes into her mind is the focal event that she is accessing perceptually at the time of speech.

The difference is clearly shown in the utterances in (8), which have a punctual predicate *caychaykiha-* 'sneeze.'

(8) a. *Chelswu-ka* *caychaykiha-nun-kwun*
Chelswu-Nom sneeze-Imprf-Mir
'Oh, Chelswu sneezed.'

b. *Chelswu-ka* *caychaykiha-ess-kwun*
Chelswu-Nom sneeze-Ant-Mir
'Oh, Chelswu must have sneezed.'

The utterance in (8a), in which the imperfective marker *-nun-* and *-kwun* are used, clearly conveys a mirative sense; the speaker has just witnessed Chelswu's sneezing at the speech act time. In contrast, the utterance in (8b), which has the anteriority marker *-ess-*, conveys the semantics of inferential epistemic modality; the speaker has witnessed circumstantial evidence that triggers the speaker's inference; the speaker conjectures the event of Chelswu's sneezing. In this vein, *-kwun* can carry the semantics of inferential epistemic modality when it is combined with the perfective marker *-ess-*.

-Kwun can mark any information that has just come to the speaker's attention, whether it is something that she has directly observed or something that she has inferred based on something she observed. This claim is supported by the example in (9), which would be licensed in a situation similar to that described for (7).

(9) *ttang-i* *cec-ess-kwun*

ground-Nom be.wet-Ant-Mir
'Oh! The ground is wet.'

The utterance in (9) is licensed; here, *-kwun* indicates that the focal information has just been directly observed by the speaker.

It is often case that the indicative marker *-e* is paired with *-kwun*. The combination encodes that the speaker intends to convey information that has just come into her consciousness. This meaning is compositional, based on the meanings of the indicative marker *-e* and the mirative marker *-kwun* encode. The marker *-a* in (10) is a variant of *-e*.

(10) *ttang-i* *cec-ess-kwun-a*
ground-Nom be.wet-Ant-Mir-Indic
'Oh! The ground **is wet**.'

The anteriority marker *-ess-* indicates that the ground's having gotten wet is a bounded and completed process. *-Kwun* indicates that this bounded process has just come into the speaker's unprepared mind. The mirativity can be shown in the utterance in (11).

(11)?*han* *sikan* *cen-ey* *al-ass-ciman* *ttang-i* *cec-ess-kwun-a*
one hour before-Loc know-Ant-but ground-Nom be.wet-Ant-Mir-Indic
'Although I knew it an hour ago, the ground **is wet**.'

The utterance in (11) is not licensed because the adverbial used in (11) *han-sikan cen-ey all-ass-ciman* 'although I knew it an hour ago' semantically conflicts with the mirative semantics of *–kwun*. *-A* indicates that the information being conveyed is from the speaker's knowledge, as it has just entered her cognition. The sentence in (10) is therefore interpreted as meaning that the speaker intends to convey information that she has just obtained to the addressee. The utterances in (9) and (10) are subtly different in their discourse functions; (10) usually presupposes the existence of an addressee in the context, whereas (9) does not necessarily presuppose an addressee. The sentence in (10) is therefore not licensed as a soliloquy as naturally as that in (9), which suggests that the use of *-e* and *-kwun* together requires a more interactive context.

To summarize, the mirative marker *-kwun* indicates that the information in question has just entered the speaker's recognition; it marks the speaker's unprepared mind with respect to the information. The mirative-marked information can come from either the speaker's direct observation or the speaker' subjective judgment based on her observation.

4.2.3 The Factive-Modal Marker *-Ney*

The third modality suffix I would like to discuss is *-ney*, which encodes the speaker's assertion[46] that the focal information is a fact based on solid direct evidence available at the time of speech. For this reason, some linguists argue that *-ney* is another firsthand evidential marker. However, *-ney* can play multiple roles, including marking the speaker's assertive attitude, marking the temporal relation between the PT and the RT, and marking firsthand evidentiality. I claim that *-ney* is a factive-modal marker rather than an evidential marker because conveying

[46] In this thesis, the term 'factive' is interchangeable with the term 'assertive,' which indicates the speaker's certainty and strong belief of the fact in question.

evidential semantics is not necessarily a sufficient condition for describing an element as an evidential marker *per se*, as it may have other, more significant functions as well. (for further discussion, see Section 4.4.4.) An example is given in (12).

(12) *pi-ka* *o-ney*
rain-Nom come-Fctv
'It'**s** raining.'

The sentence in (12) would be appropriate in a situation in which, for example, the speaker was watching it rain at the time of the utterance. Without physically seeing it raining, the speaker would not be able to use *-ney* by itself. Hence the following utterance is not licensed:

(13)?*pi-ka* *o-ney*, *na-nun* *mos* *po-ass-ciman*
rain-Nom come-Fctv I-Top Neg see-Ant-although
'It'**s** raining. I didn't see it, though'

In (12), the focal information that it is raining is asserted and fully vouched for by the speaker based on her firsthand perception of it at the time of speech; the dubitative adverbial *amato* 'probably' would not be appropriate in (12).

Similarly to *-kwun*, *-ney* indicates that the focal information has just been obtained (or, unlike *-kwun*, just remembered) and that it is based on solid evidence.

(14)?*han* *sikan* *cen-ey* *al-ass-ciman* *pi-ka* *o-ney*
One hour before-Loc know-Ant-although rain-Nom come-Fctv
'It'**s** raining. I knew it an hour ago, though'

The utterance in (14) is not licensed because the adverbial *han sikan cen-ey al-ass-ciman* 'Although I knew it an hour ago' conflicts with the mirativity conveyed by the marker *-ney*.

Also similarly to *-kwun*, when it is paired with the perfective anteriority marker *-ess-*, it can indicate that there has been a mediating inference process involving the speaker's subjective judgment based on some piece of firsthand evidence. For example, the sentence in (15) might be licensed when the speaker had seen that the ground was wet.

(15) *pi-ka* *o-ass-ney*
rain-Nom come-Ant-Fctv
'It **rained**.'

In this case, the information that has just been obtained is that the ground is wet, and *-ney* is encoding the speaker's consequent strong belief or assertion of the fact that it has rained in the past. In other words, the focal information that is linguistically encoded is a result of the speaker's subjective judgment, which is, in turn, based on her observation. Both *-ney* and *-kwun* make reference to the SVT, and in both cases, it can be instantiated either as the time of the origo's perception and apprehension of the information (PT) or the time of the origo's assessment based on her initial sensory perception (AT). Both can also indicate mirativity, i.e., that the information has been newly obtained. An example of the use of *-ney* with the perfective marker *-ess-* to indicate immediate sensory perception is shown in (16):

(16) *ttang-i* *cec-ess-ney*
ground-Nom be.wet-Ant-Fctv
'The ground **is wet**.'

In (16), *-ney* encodes that the speaker had perceived and understood that the ground was wet at the time of speech. Notice that in (15) and (16), *-kwun* could be used in place of *-ney* without yielding a significant difference in meaning.

-Ney is, however, different from *-kwun* in that, firstly, *-ney* can only express that the speaker has just perceptually accessed the focal information at the moment of the speech act if it is being used to express that the information is unexpected, while *-kwun* can express either that the speaker is perceiving the focal information at the present moment or that she initially accessed it (in terms of receiving the sensory information) in the past (K.-H. Chang 1985, H.-S. Lee 1993). This claim is supported by the fact that only *-kwun* can be used with the retrospective firsthand evidential marker *-te-*, which entails that the speaker's perception time was prior to the speech-act time; this is shown by the contrast between the sentences in (17).

(17)a.*pi-ka* *o-te-kwun*
rain-Nom come-EV.Fh-Mir
'It **was raining**.'

b. **pi-ka* *o-te-ney*
rain-Nom come-EV.Fh-Fctv
'It **was raining**.'

In (17), where *-te-* evokes the speaker's memory, *-ney* is not licensed, because *-ney* requires the speaker's recognition to immediately follow the target event. In contrast, *-kwun* is licensed. This contrast shows that *-ney* is more strictly restricted with regard to the time of occurrence of the focal event.

Secondly, the indicative terminal suffix *-e* cannot follow *-ney*, because *-ney* indicates that the focal information is being asserted by the speaker. Since *-ney* indicates that the utterance carries assertive illocutionary force, which is stronger than simply conveying information to the addressee, there is no need to add *-e* to *-ney*. These assertive characteristics of *-ney* are shown by the comparison between the pair of sentences in (18).

(18)a.*ney-ka* *thul-li-ess-ney*
you-Nom be.wrong-Pass-Ant-Fctv
'you're **wrong**.'

b. ?*thul-li-ess-kwun*
be.wrong-Pass-Ant-Fctv
'Oh! You're wrong.'
≠'you're **wrong**.'

Because the proposition in (18) involves the speaker's assertive attitude and strong belief, *-ney* fits better than *-kwun* does. In addition, the assertive characteristic of *-ney* suggests that, when -

ney is used, it is likely that there is an addressee. In contrast, when *-kwun* is used, the stance evoked is too weak to be compatible with an assertion like 'You're wrong.' In fact, the sentence in (18b) could be a soliloquy; it does not necessarily presuppose the presence of an addressee. The assertiveness of *-ney* enables it to encode more factuality and definiteness than *-kwun* does (K.-H. Chang 1985, H.-S. Lee 1993). These characteristics of *-ney*, marking immediacy and the speaker's assertive attitude, distinguish it from *-kwun*.[47]

4.2.4 The Committal Modal Marker *-Ci*

The last terminal suffix I will discuss in this section is the committal marker *-ci*. When it occupies the sentence-terminal slot, it encodes the speaker's commitment to vouching for the truth of the proposition being put forward. In other words, it marks strongly positive epistemic modality. An example of the use of *-ci* is given in (19).

(19) *ku-ka* *nayil* *hankwuk-ey* *ka-ci*
he-Nom tomorrow Korea-to go-Cmt
'He **leaves** for Korea tomorrow.'

The speaker who utters (19) must strongly believe that the person under discussion will go to Korea the next day; this licenses the use of *-ci*. Because of the strong epistiemic modality of the committal marker, it is not compatible with the dubitative adverbial.

(20)?*amato* *ku-ka* *nayil* *hankwuk-ey* *ka-ci*
probably he-Nom tomorrow Korea-to go-Cmt
'Probably, he **leaves** for Korea tomorrow.'

Its committal characteristic yields an ambiguity when *-ci* is combined with a first-person subject.

(21) *nay-ka* *nayil* *hankwuk-ey* *ka-ci*
I-Nom tomorrow Korea-to go-Cmt
a. 'I **leave** for Korea tomorrow'
b. 'I shall leave for Korea tomorrow.'

The utterance in (21) is ambiguous between the two readings (a) and (b). Meaning (a) indicates that the speaker is conveying the information in question, whereas meaning (b) signals that the speaker intends to perform a course of action indicated in the utterance.

Its committal characteristic is also clearly demonstrated by the meaning evoked when it is used with rising intonation. When *-ci* is used in an interrogative sentence like (22), which is identical to (19) save for intonation, the utterance seeks to elicit confirmation of something that the speaker believes to be true; the speaker's effort to seek confirmation is based on the speaker's committed belief of the truth of the information.

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[47] In addition, Strauss (2005:442) argues that *-kwun* signals a simple, point-like connection or realization, while *-ney* signals, a more elaborate processual realization involving the speaker's realization of having just drawn a particular conclusion. This observation seems to be a reasonable one, because it metaphorically construes the mirativity of the marker *-kwun* as a point-like realization and the factivity or assertiveness of the marker *-ney* as a processual realization.

(22) *ku-nun* *nayil* *hankwuk-ey* *ka-ci*?
he-Top tomorrow Korea-to go-Cmt
'He **leaves** for Korea tomorrow, doesn't he?'

The sentence in (22) is interpreted as a confirmation-seeking question, similar to a tag question in English. It would be licensed when the speaker believed that the proposition in question was true and was asking for confirmation. If the speaker had used the indicative marker *-e*, the utterance would have been interpreted as a simple question. In contrast with *-e*, *-ci* conveys that the speaker vouches for the truth of the proposition in question.

To summarize, *-ci* encodes the speaker's commitment to vouching for the truth of the focal information. Its specific interpretation varies depending on the context. It can be used in declaratives or in interrogatives; in the latter, it indicates that the speaker strongly believes the information presented is true, and is trying to prompt the addressee to agree (This use is discussed in further by in S.-J. Chang 1973:127-131, Y.-K. Ko 1976, K.-H. Chang 1985:117-124, and K.-D. Lee 1986:49-54).

4.2.5 The Distributions and Combinations of the Terminal Suffixes

Based on the above discussion of the terminal suffixes, let us look into how they are distributed and paired with non-terminal suffixes. Figure 1 shows a final, more elaborated version of the verbal complex template this dissertation is proposing.

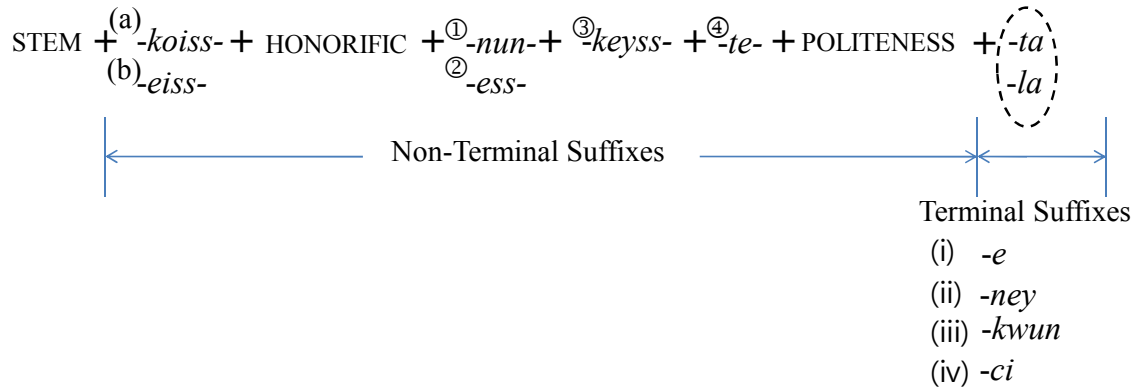

Figure 1. A Template for the Korean Verbal Complex

I have discussed the four major terminal epistemic-modality suffixes that are listed at the right of the template in Figure 1. The dotted oval at the right represents the position for terminal suffixes, including the suffixes discussed in the previous sections, (i) through (iv).

Now let us look at whether the terminal suffixes are compatible with the core elements of the tense, aspect, and modality system, namely, the four temporal non-terminal suffixes, ① the non-past imperfective marker *-nun-*, ② the anteriority marker *-ess-*, ③ the presumptive-modal marker *-keyss-*, and ④ the retrospective firsthand evidentiality marker *-te-*. Note that *-Nun-* (①) is not compatible with any of the epistemic-modal terminal suffixes except for *-kwun* (iii).

(23) a. *thaca-ka* *kong-ul* *chi-e*

hitter-Nom ball-Acc hit-Indic
'The hitter's hitting the ball' or 'The hitter hits the ball.'
b. *thaca-ka* *kong-ul* *chi-ney*
hitter-Nom ball-Acc hit-Cmt
'Oh! The hitter'**s hiting** a ball.'
c. *thaca-ka* *kong-ul* *chi-nun-kwun*
hitter-Nom ball-Acc hit-Imprf-Mir
'Oh! The hitter's hitting a ball.'
d. *thaca-ka* *kong-ul* *chi-ci*
hitter-Nom ball-Acc hit-Fctv
'The hitter'**s hitting** a ball.'

The sentence in (23a) conveys a simple indicative reading with imperfective aspect. *-Ci* in (23d) indicates that the speaker intends to express her commitment, which is expressed in the English gloss as 'I'm telling you,' and it conveys the speaker's commitment along with the informational content. (23b) and (23c) both indicate more or less that the state of affairs being described is surprising and unexpected, but (23b) is more assertive than (23c). (23b) is more likely to be coupled with solid evidence available in the context at the speech act time.

-Ess- (②) and *-keyss-* (③), on the other hand, can freely be combined with all four of the epistemic-modal terminal suffixes. The example in (24) contains both of these temporal non-terminal suffixes and the terminal suffix *-kwun* (iii).

(24) *Yisungyep-i* *kong-ul* *chi-ess-keyss-kwun*
S.-Y. Lee-Nom ball-Acc hit-Ant-Mod-Mir
'Oh! Sung-Yep Lee must have hit a ball.'

The sentence (24) could be licensed in a context such as the following: A has been trying to give B a hint, while explaining to B how a baseball team turned a baseball match around at the last moment. At first, A tells B that one baseball team was leading the game over the other team. A names a certain player (Sung-Yep Lee) on the trailing team, and continues to say that he was the last player right before the end of the match. When B catches on and realizes that this player was the one who hit the home run that won the game. B can say (24). The speaker has used A's hint to reason that the player in question was the one who turned the game around, and has recognized this at the very moment before the speech act. These contextual factors license the mirative marker *-kwun*, the deductive reasoning marker *-keyss-*, and the anterior marker *-ess-*, which are combined in a compositional way.

However, *-te-* (④) has more restrictions on its combinations with the epistemic-modal terminal suffixes; it can only be used with *-kwun* (iii). Since *-e* and *-ci* indicate that the speaker's assessment is anchored at the speech time, they conflict with *-te-*, which encodes that the reference time is prior to the speech act time. Nor is *-ney* (ii) licensed, because it requires that the evidence on which the speaker's epistemic assessment is based be available at the ST. Since *-te-* encodes that the perception time is significantly prior to the ST, *-te-* and *-ney* are never compatible.

It is interesting that *-te-* and *-kwun* are conceptually compatible with each other, given that *-kwun* encodes mirativity, which usually entails that the speaker's initial sensory perception immediately follows the focal-event time, whereas *-te-* requires that the speaker be looking back

into her memory to remember evidence that may not be available anymore at the speech time. This combination is licensed when the speaker is using the pragmatic tactic of speaking as though she has just obtained the focal information, even though it has been a while since she obtained it. This is exemplified in (25).

(25) *kunye-ka* *ne-lul* *chac-te-kwun*
she-Nom you-Acc look.for-Ev.Fh-Mir
'Oh! She **was looking for** you.'

In (25), *-te-* still conveys a retrospective meaning, which might have conflicted with the meaning of *-kwun*. However, the combination is licensed because the speaker is trying to maximize dramatic effect by pretending to have just obtained the information.

The possible combinations discussed so far are summarized in (26).

(26) a. *(①) + (i)
b. *(①) + (iv)
c. ① + (iii)
d. *(①) + (ii)

e. ② + (i), ② + ③ + (i)
f. ② + (ii), ② + ③ + (ii)
g. ② + (iii), ② + ③ + (iii)
h. ② + (iv), ② + ③ + (iv)

i. *④ + (i)
j. *④ + (ii)
k. #?④ + (iii)
l. *④ + (iv)

4.3 The Evidentiality System: The Non-terminal Elements

Evidentiality in Korean has received little attention in the literature (Strauss 2005:439), generally because most Korean linguists have included it in the category of modality (H.-S. Lee 1991, 1993, S.-O. Sohn 1999, cited in Strauss 2005:441). For example, H.-S. Lee (1991, 2011, p.c.) argues that the tense morphology of Korean is historically derived from its aspect system and that modal and evidential semantics are a consequence of the interactions of tense and aspect elements. The evidential system has also been underanalyzed because Korean has no discernible independent grammatical paradigm for evidential elements. This study claims, however, that present-day Korean has come to have a set of markers that indicate the source of the information being conveyed that together form a three-term system of evidentiality. Some of these evidential elements are diachronically multimorphemic, as they have been grammaticalized from elements of the tense and aspect inventory discussed in the previous chapter.

It is noteworthy that the target construction here is a morphologically conditioned evidential construction, not a periphrastic evidential involving overt predicates of perception or communication. Whenever an evidential morpheme is used in discourse, it imposes the precondition that the speaker has obtained the focal information via a particular mode of access.

These conditions differ from those imposed by periphrastic expressions such as *I saw that…* or *I heard that…* In these periphrastic evidentiality-marking strategies, the event of the speaker's observation or apprehension process (*see*, *infer*, *hear*, etc.) is foregrounded, whereas the focal event that is observed or apprehended by the speaker is foregrounded in the evidential construction (Kwon 2011b). So to speak, in the evidential construction, the mode of access is backgrounded and these are observed in all of the Korean evidential constructions discussed below (for more detailed discussion of foregrounded/ backgrounded information in evidential constructions, see Section 5.3.1.2).

This section explores in detail the distributions and functional properties of the three evidential elements, which each have specialized functions: *-te-* marks firsthand experience, *-napo-* marks inference and *-ay* marks hearsay (with or without an explicit source).

4.3.1 The Firsthand Evidential Marker *-Te-*

4.3.1.1 The Firsthand Evidential Marking of an Imperfective Event in the Past

As I posited in Chapter 3, when *-te-* is used by itself in a clause, it indicates that the focal event was unbounded, that the speaker perceived it directly, and that the speaker is accessing her subjective memory to convey information about it to the addressee. The example in (27) presupposes that the speaker herself observed that it was raining.

(27) *pi-ka* *o-te-la*
rain-Nom come-Ev.Fh-Decl
'It **was raining**.'

As is already evident from earlier chapters, I argue that *-te-* is basically an evidential marker (contra K.-S. Chung 2005 and J.-M. Song 2007). As I noted in the previous chapter, the difference between *-te-* and the anteriority marker *-ess-* is that, with *-te-*, it is not the RT but the PT that precedes the ST. In other words, *-te-* encodes the relationship between the SVT and the ST, whereas *-ess-* encodes the relationship between the RT and the ST. When *-ess-* is used, it indicates that the utterance is evidentially neutral, i.e., that the speaker considers marking an evidentiality distinction inessential and therefore chooses not to do so (Johanson 2003:275, cited in Aikhenvald 2004:40, contra K.-S. Chung 2006, 2007). In contrast, when *-te-* is used, it must be the case that the speaker perceived the focal event directly, with her own senses, and thereby obtained the focal information. The past-tense reading prompted by *-te-* is a consequence of the anteriority of the PT to the ST, because the RT is in turn anterior to the PT.

The source or sources of information referenced by the *-te-* construction can include various kinds of direct experience. *-Te-* may be used with evidence coming from any of the first-hand senses, including vision, taste, tactile sensing, hearing, and smell. This flexibility is demonstrated in the examples in (28)-(30).

(28) *kwuk-i* *cca-te-la*
soup-Nom be.salty-Ev.Fh-Decl
'The soup **was salty**.'

(29) *aki-uy* *pol-i* *pwutulep-te-la*

baby-Gen cheek-Nom be.soft-Ev.Fh-Decl
'The baby's cheek **was soft**.'

(30) *pakk-i* *nemwu* *sikkulep-te-la*
outside-Nom too be.noisy-Ev.Fh-Decl
'It **was** too **noisy** out there.'

In (28), the speaker is remembering that she tasted some salty food; in (29), the speaker is remembering that the baby's cheek felt soft to her; and in (30), the speaker is remembering that she heard too much noise outside. Because the target events in all of these cases were perceived by the speakers firsthand, the *-te-* construction is licensed.

4.3.1.1 Conceptual Distance Marking

-Te- evokes an epistemic discontinuity;[48] when it is used in an utterance, there must be a spatial and temporal discontinuity between the past event described and the temporal and spatial location in which the utterance occurs. This constraint seems natural when we consider that it encodes the semantic primes firsthand evidentiality, past tense, and retrospectivity; cognitive discontinuity is construed where prototypically firsthand and non-prototypically firsthand experiences meet. Putting this differently, the epistemic discontinuity is construed because *-te-* evokes mental spaces of the past event and of the ground or the Base space (the speech event and its participants); it is natural that the cognitive discontinuity is natural that this construal of discontinuity prevails, because the settings of the two spaces are deictically distinct from each other, (for more detailed discussion, see Chapter 5). Unlike other tense markers/nonevidential tense markers, *-te-* makes reference not only to time but also to space, i.e. to the speaker's perceptual field (Chung 2006, 2007), and thereby imposes evidential entailments. For example, a sentence such as that in (31) would never be acceptable, while the sentences in (32) are grammatical.

(31) **cikum* *pi-ka* *manhi* *o-te-la*
now rain-Nom much come-Ev.Fh-Decl
'It**'s raining** hard now.'

(32)a.*ecey* *pi-ka* *manhi* *o-te-la*
yesterday rain-Nom much come-Ev.Fh-Decl
'It **was raining** hard yesterday.'

b.*cikum* *pakk-ey* *pi-ka* *manhi* *o-te-la*
now outside-Loc rain-Nom much come-Ev.Fh-Decl
'It **was raining** hard outside now.'

[48] The term 'epistemic discontinuity' and 'cognitive discontinuity' refers to the fact that *-te-* evokes two different domains whose epistemic statuses differ from each other; in one domain, the utterance is spoken and the experiencing origo experiences or is experiencing a stimulus. In contrast, the other domain contains epistemically (and cognitively) different state of affairs such as recollection and certainty. The construal of the utterance involves the superimposition of the two discrete domains and this conceptual discreteness is referred to by 'epistemic discontinuity' or 'cognitive discontinuity.'

The only difference between (31) and (32a) is whether they contain the time adverbial *cikum* 'now' or the time adverbial *ecey* 'yesterday'; this implies that the semantics of the marker *-te-* requires a separation between the time frame in which the event of raining occurs and is experienced and the time frame in which the speaker describes that event. If, as in (31), those time frames are not separate, the utterance is unacceptable. (32b) remains acceptable, although it contains both the time adverbial *cikum* and *-te-*; this implies that *-te-* is also licensed if there is a deictic separation between the spatial setting in which the event of raining occurs and the spatial setting in which the speaker describes the event.

-Te- can also indicate the speaker's attitude, such as "psychological distance," "weakened reliability" (Shin 1980), or "lack of responsibility" (Kim 1981). It is sometimes used to indicate that the occurrence of the event or situation that the speaker observed is not her responsibility, that she is just reporting it to the addressee. This might seem at first glance to be incompatible with the marker's firsthand evidential function, as firsthand evidentiality involves a speaker's direct experiential "vouching," and a firsthand evidential marker therefore generally conveys that the proposition in question is more reliable and trustworthy (Chung 2006) and that the speaker feels certain about it (Willett 1988); in other words, it conveys a high degree of epistemic certainty (for an extensive discussion of separability of evidentiality and epistemic modality, see Kwon 2011a, Michael 2010).

If we consider that *-te-* also conveys past tense, however, it is not be impossible to explain the distanced attitude of the speaker. In other words, the speaker's perception and assessment occurred prior to the ST, and it is not surprising that subjectivity arising from the temporal relation enhances a distanced interpretation. For example, the sentence in (33) could be licensed in a situation in which the speaker knew the addressee had hung her laundry outside.

(33) *pakk-ey* *pi-ka* *o-te-la*
outside-Loc rain-Nom come-Ev.Fh-Decl
'It **was raining** outside.'

In (33), the speaker is simply reporting what she has perceived with her senses, and is implying that she is not responsible for any consequences of the event. The utterance could be used when the speaker wanted to indicate that she had perceived that it was raining when she was entering the building and that she vouched for what she had perceived, but that she was not sure whether it was still raining outside or not, nor whether this would have any consequences with regard to the addressee's laundry staying wet. The temporal gap between the focal event that the speaker perceived and the speech-act event at the coding time enables the utterance to encode conceptual distance or deictic distance, and therefore makes room for subjectivity-related semantics such as lack of responsibility for the occurrence of the focal event to arise. To summarize, *-te-* can indicate the speaker's distanced stance towards the focal event in addition to firsthand evidentiality. This is possible because the marker conveys a complex semantics composed of firsthand evidentiality, strongly positive epistemic modality, and past-tense reference.

4.3.1.2 *-Te-* as an Inferential Evidential Marker?

As I noted in Chapter 3, an event that is described using the *-te-* construction is construed as imperfective. The experiencing origo must be profiling the ongoing stage rather than the final

Done phase of the event. However, when other linguistic elements are added that impose a perfective reading, as with *-ess-* in (34), the overall interpretation of the *-te*-utterance becomes more complex.

(34) *pi-ka* *o-ass-te-la*
rain-Nom come-Ant-Ev.Fh-Decl
'It **had rained**.'

The utterance in (34) might be used when the speaker had seen that the ground was wet and therefore become certain that it had rained. In this case, the focal event that is under the scope of the firsthand evidentiality marker is the speaker's assessing event, in which she concluded that it had rained from the fact that the ground was wet, not the event of raining. In other words, although the focal event seems on the surface to be the rain, the event the speaker is focusing on in (34) is the event of the experiencing origo's inferential assessment.

Some linguists have argued that *-te-* should be interpreted as indicating inferential evidentiality in such cases (J. Lee 2008, K.-S. Chung 2005, inter alia). Those who claim that (34) is an inferential statement argue that the Korean language does not seem to have any evidential marker other than *-te-*, and that of the evocation of other modes of access arises only from interactions between the firsthand evidential marker and other temporal elements in the verbal complex. For example, J. Lee (2008:18-22) states that "[t]he way that the Korean language construes reading of evidentials is significant from a typological perspective in that an evidential meaning is not necessarily marked by independent morphemes, but it can be expressed by interactions with other temporal categories."

The sentence in (35) is another interesting example; it gives rise to a reportive evidentiality reading.

(35) *pi-ka* *o-ass-ta-te-la*
rain-Nom come-Ant-Decl-Ev.Fh-Decl
'I heard it had rained.'

The sentence in (35) indicates that the speaker's source of evidence for the statement is someone else's words. For this reason, some (e.g., K.-S. Chung 2005) have argued that *-te-* is not a firsthand evidential marker; they contend that the reportive evidentiality reading arises from the interaction between *-te-* and the declarative ending *-ta.* This pattern is typologically significant, according to J. Lee:

> "According to Woodbury (1986), the two expressions *-nok* and *-suŋ* [in Sherpa] are evidentials although they do not indicate a specific source of information conveyed. … Woodbury's work demonstrates that evidence types are not necessarily encoded in the meaning of evidentials, but they can be expressed by interactions between temporal categories and the evidential marker. This is exactly the same pattern as the Korean evidential *-te* exhibits." (2008: 18)

I can see the merits of this argument; however, firstly, in (34), the evocation of the speaker's assessment or inference process stems from the anteriority marker *-ess-*. Since *-ess-* usually involves the SVT, which can be instantiated as either a PT or an AT, it is natural that the speaker's inference should be involved in the construal of the utterance. The event that belongs in the scope of *-te-* is not that of the raining, but that of the speaker's assessment that it rained.

Secondly, (34) can have other meanings than inferentiality. For instance, it could be used if the speaker had seen an article in a newspaper reporting that it had rained heavily in a certain area and was therefore certain of the event because she had directly obtained the information from a newspaper. In other words, the speaker's perception and apprehension of the focal event from solid evidence precedes the ST, and the RT precedes PT. The statement in (34) is based on the speaker's certainty, rather than on inference; I believe this can be explained in terms of the involvement of the SVT, which can be instantiated as either an AT or a PT, depending on context.

Lastly, in (35), the reportive reading arises not because of the interaction between *-te-* and *-la*, but because of the fact that the declarative ending *-ta* can also play the role of a reportive. This is demonstrated by the fact that the meaning of (35) would be preserved if *-ta* were replaced by *-tay*, which is composed of the declarative ending *-ta* plus the reportive/quotative evidential (*-ay*). The firsthand-experience meaning of *-te-* still applies in that (35) indicates that the speaker has directly obtained the focal information from someone. This leads me to the conclusion that *-te-* is, in fact, a firsthand evidential marker, but that when it is combined with another evidential marker, they yield a complex but compositional meaning. I argue that *-te-* does not function as an inferential when used by itself, but it is compatible with inferential semantics.

4.3.2 The Inferential Evidential Marker *-Napo-*

As part of the proposed three-term system of evidentiality in Korean, I argue *-napo-* has come to be an inferential evidentiality marker in present-day Korean. I define inferential evidentiality as a situation in which information has been inferred using inductive logic applied to circumstantial sensory evidence (Aikhenvald 2004:36). The marker *-napo-* is licensed when the experiencing origo has perceptually accessed some evidence available in the context then made an inference based on that perceived sensory evidence. This section begins by exploring the constructional properties of *-napo-* and discussing its function of marking inductive-inferential evidentiality.

4.3.2.1 Inferential Evidential Marking

The function of *-napo-* as an evidential expression has been mentioned briefly by a few linguists (e.g., Strauss 2005:440), but the precise conceptual structures associated with its use have not been thoroughly studied; the present study aims to fill that gap. I would like to argue that in contemporary Korean, *-napo-* indicates that the focal information the speaker is conveying is based on a process of inference.

The original form of the marker is not monomorphemic; *-napo-* is composed of a complementizer *-na* 'whether' and *po-* 'see.' The compositional construction *-na po-* corresponding to the grammaticalized marker *-napo-* is still used in contemporary Korean. In the examples in (36), the *-na po-* construction is used to profile the act of visually determining whether a focal event is happening.

(36) a. *Chelswu-ka* *o-na* *po-n-ta*
Chelswu-Nom come-whether see-Imperf-Decl
'I'm looking to see whether Chelswu is coming.'

b. *Chelswu-ka* *o-na* *po-ala*

Chelswu-Nom come-whether see-Imp
'Look and see whether Chelswu is coming.'

c. *Chelswu-ka* *o-na* *po-ca*
Chelswu-Nom come-whether see-Hort
'Let's look and see whether Chelswu is coming.'

The semantics underlying the *-na po-* construction as it is used in (36) involve the speaker seeking confirmation as to the truth of some conjectured piece of information, either by pursuing a course of action herself, as in (36a), by causing the addressee to pursue a course of action, as in (36b), or by getting the addressee to perform a course of action with her, as in (36c). The common denominator underlying the examples in (36) is that the truth of the information is not yet confirmed at the time of the speech act. The speaker uses the construction to draw the addressee's attention to the conjectured focal event and, potentially, to induce the addressee to confirm whether it is occurring.

I now turn to considering how the grammaticalized form *-napo-* functions as an inferential evidential marker by examining some example utterances in which it appears. *-Napo-* indicates that the speaker has inferred that the described event is occurring (or has occurred or will occur, depending on the relationship between the event time and the speech-act time encoded by other elements in the verbal complex) based on her observation of the consequences that she thinks can be attributed the event. In other words, *-napo-* evokes the experiencing origo's inductive reasoning process about cause-effect relationships; it is generally licensed in contexts in which a speaker infers a cause from her observation of its effects. For example, the sentence in (32) might be licensed in a situation where the speaker saw someone preparing to go out to eat or noted that someone was absent at dinner-time.

(38)a.(*ku-ka*) *pap-mek-ule* *ka-napo-a*
he-Nom rice-eat-in.order.to go-Ev.Infr-Indic
'I guess, he is going to eat.'

b. (*ku-ka*) *pap-mek-ule* *ka-lke-nkapo*[49]*-a*
he-Nom rice-eat-in.order.to go-Fut-Ev.Infr-Indic
'I guess, he will go eat.'

c. (*ku-ka*) *pap-mek-ule* *ka-ess-napo-a*
he-Nom rice-eat-in.order.to go-Ant-Ev.Infr-Indic
'I guess, he went to eat.'

If, for example, the sentence in (38c) had not had *-napo-* in it, it would have been taken as neutral with regard to the source of the evidence, and might have been licensed in contexts in which the speaker had seen the subject entering a restaurant (firsthand evidence) or in which the speaker had been told that the subject had gone out for a meal (hearsay evidence). However, when the marker *-napo-* is used, the source of the focal information must be inference. This can be shown by the fact that the following example is not licensed.

[49] *-Nkapo-* is an allomorph of *-napo-*.

(39)?(*ku-ka*) *pap-mek-ule* *ka-napo-a* *haciman*
he-Nom rice-eat-in.order.to go-Ev.Infr-Indic but
nay-ka *chwulonha-nkes-un* *aniya*
I-Nom infer-nmlzr-Top be.not
'I guess, he is going to eat, but this is not my inference.'

The utterance in (39) is not licensed because the semantics of inferentiality conveyed by *-napo-* conflicts with the content of the second clause 'this is not my inference.' This shows that *-napo-* is an inferential evidential marker.

As a further example, in the sentence in (40) could be used in a situation in which the speaker was using the indirect visual evidence that her newly-arrived addressee's coat was wet.

(40) *pakk-ey* *pi-ka* *o-**napo**-a*
outside-Loc rain-Nom come-Ev.Infr-Indic
'I guess it's raining out there.'

Based on visually observing the effect, that the addressee's coat is wet, the speaker uses inductive reasoning to infer the cause, that it is raining outside. The speaker does not have visual access to the rain, but indirectly infers that it is raining from visual evidence. This example further supports the idea that *-napo-* is an inferential evidential marker.

However, the source of information about the consequence of the inferred cause does not have to be visual, despite the fact that *-napo-* is derived from the vision-related lexical item *po-* 'see.'[50] For example, in the sentences in (41), the speakers are using information obtained via other senses such as taste as evidence; the sentence in (41) could be used in a situation where the speaker had just tasted something very salty.

(41) *yolisa-ka* *sokum-ul* *manhi* *neh-ess-**napo**-a*
cook-Nom salt-Acc much put.in-Ant-Ev.Infr-Indic
'It seems the cook put too much salt in this.'

Because the speaker has experienced the saltiness of the food, she is able to reconstruct by inductive reasoning the event of the cook's having put too much salt in it. These examples show that the evidence on which the speaker's inference is based does not have to have been visually obtained.

Note that, in (38)-(41), the speaker is not absolutely sure of her conclusion; she is seeking confirmation from the addressee about what she is inferring. The weakness of the speaker's belief can be proven by testing its compatibility with a strong epistemic modal adverb such as *pwunmyenghi* 'for sure.' If any of the utterances in (38)-(41) had included *pwunmyenghi*, they would have been only marginally acceptable (It would be equivalent to saying in English *I guess the cook definitely put too much salt in the soup*). In this respect, the confirmation-seeking pragmatic tactics used in the examples in (36) with nongrammaticalized *-na po-* seem to be critical to understanding the semantics of the grammaticalized *-napo-*.

To sum up, the marker *-napo-* is licensed in the following condition; the information about

[50] The lexical origins of *-napo-* seem to have been bleached in the process of grammaticalization (for further discussion of the grammaticalization of *-napo-*, see Rhee (2001)).

the event that is being talked about in an utterance that contains *-napo-* must have been acquired by the speaker through inference. Particularly, the utterance must specifically be based on the speaker's inductive reasoning process; i.e., it must depict a situation where the speaker is inferring a cause (often a generalization) from its effect (often an individual case). Given these properties, I argue that *-napo-* should be described as an inferential evidential marker.

4.3.2.2 Conceptual-Distance Marking

This sub-section discusses the extended functional properties of the marker *-napo-*, namely, its mirative function and its use in politeness strategies. These extended properties are related to the primary inferential marking function of the morpheme and are based on the same cognitive mechanisms: these mechanisms are discussed in depth in Chapter 5.

4.3.2.2.1 Marking Mirative Semantics

-Napo- is sometimes licensed in contexts where a speaker intends to convey the unexpectedness of a focal event, rather than to actually convey inferential semantics. A sentence such as that in (42) might be licensed in a situation in which the speaker had thought the weather was clear, but then looked out the window and seen that it was raining.

(42) *pakk-ey* *pi-ka* *o-napo-a*
outside-Loc rain-Nom come-Ev.Infr-Indic
'Huh. I guess it'**s raining** out.'

The example in (42) is clearly not an example of an inferential use of the marker in the canonical sense, because the speaker has direct visual access to the event; the knowledge that it is raining is not a result of the speaker's inference, but a consequence of her observation of the rain through the window. *-Napo-* is, nevertheless, licensed in this context, in other words, *-napo-* functions as a mirative marker.

Another example in (43) shows both mirativity and inferentiality.

(43) *ney-ka* *sang-ul* *tha-ess-napo-a*
you-Nom prize-Acc get-Ant-Ev.Infr-Indic
'Wow, you got the prize!'

Without *-napo-*, the sentence in (43) would indicate simply that the speaker knew the addressee had gotten the prize in question. However, because it includes the marker *-napo-*, it indicates that the speaker has just inferred it based on some available evidence and that she is surprised by the unexpected news.

The mirative meaning of *-napo-* is linguistically encoded; the marker is not compatible with the adverbial phrase like 'although I knew it an hour ago.'

(44)? *han sikan* *cen-ey* *al-ass-ciman*
one hour before-Loc know-Ant-although
pakk-ey *pi-ka* *o-napo-a*
outside-Loc rain-Nom come-Ev.Infr-Indic

'Huh. I guess it'**s raining** out, although I knew it an hour ago.'

The utterance in (44) is not licensed because the content of the adverbial clause conflicts with the mirative semantics conveyed by *-napo-*.

The mirative function of *-napo-* can be seen clearly by comparing the sentences in (45) and (46), which differ in what they imply about the specificity of the entity referred to in the subject.

(45) *cip-ey* *koyangi-ka* *iss-e*
house-Loc cat-Nom be-Indic
'There's a cat in the house.'

In (45), which does not contain *-napo-*, the cat referred to might be the pet cat or might be an unfamiliar cat. However, in (46), the only available reading is that the cat is unfamiliar.

(46) *cip-ey* *koyangi-ka* *iss-napo-a*
house-Loc cat-Nom be-Ev.Infr-Indic
'Hey, there's a cat in the house!'

The sentence in (46) might, for example, be licensed in a situation in which the speaker had not known there was a cat is in the house until it brushed against her leg. In fact, (46) would not be licensed if the speaker had already known there was a cat in the house before it brushed against her, supporting the idea that *-napo-* is being used in a mirative function.

In sum, the examples in this subsection demonstrate that the marker *-napo-* can encode mirativity as well as simple inferential evidential semantics.

4.3.2.2.2 *-Napo-* in Politeness Strategies

So far, I have demonstrated *-napo-* can be used as an inferential evidential marker, licensed where the speaker has no direct sensory access to the focal event in question, and as a mirative marker. This subsection focuses on another use of the marker, in politeness strategies.

-Napo-'s property of creating conceptual distance between the experiential origo and the focal event allows it to be used as a politeness strategy, especially when the speaker is attempting to avoid a face-threatening act. In other words, *-napo-* can be used to mitigate the strength of the speaker's assertion. For example, the sentence in (47) might be used by a bartender to politely tell a drunken customer who was demanding more drinks that he should instead stop drinking and go home.

(47) *cip-ey ka-si-eya-ci-yo.*
home-Loc go-Hon-Conn-Comm-Hon
manhi chwiha-si-ess-#(napo-)e-yo.
much be.drunk-Hon-Ant-Ev.Infr-Indic-Hon
"You should probably head home, sir. I think you **may have** drunk too much."

The utterance in (47) would have been considered rude without *-napo-*. However, the marker allows the speaker to engage in the pragmatic tactic of hedging: in this case, although the bartender has observed the customer's obvious drunkenness, he pretends not to have seen it

directly, but to have inferred it indirectly from some other evidence.

The pragmatic tactic involved is based partly on the marker's inferential function and partly on its mirative function. In (47), the speaker cannot assert directly that his customer is drunk, as this would threaten the customer's face, so he instead uses the inferential marker to distance himself from the focal event, i.e., to pretend not to have perceived it directly and not to be certain of it. In addition, the mirativity function of *-napo-* allows the speaker to frame the situation as if he has only *just* recognized that his customer is drunk (or might be drunk). The shorter the period of time in which it has been obvious that the customer is drunk, the less face threat is involved in saying something to him about it.

I would like to argue that a common cognitive mechanism underlies all of the functions of *-napo-* described above, encoding inferential evidentiality, encoding mirative semantics, and facilitating politeness strategies: cognitive distancing. Its primary function is to mark inferentiality; indirect cognitive access and the other extended functions are contextual interpretations of the primary function. When a speaker indicates that she has not obtained the stated information via direct perceptual access, this implies a cognitive gap between the evidence and what is inferred from it. This cognitive distancing naturally paves the way for contexts where the marker encodes mirative semantics, because unexpectedness presupposes a cognitive discontinuity between the speaker's previous state of knowledge and the focal information. Cognitive distance also provides a natural explanation for the fact that *-napo-* can be used as a politeness strategy, because it neutralizes speaker assertions that might otherwise threaten an addressee's face. This distancing effect is discussed in further detail in Chapter 5.

4.3.2.3 A Comparison of *-Napo-* and *-Keyss-*

Korean has another linguistic device that involves a specific kind of inference, in this case deductive presumption, namely, *-keyss-*. Because of its functional similarity to *-napo-*, linguists often claim that *-keyss-* constitutes another inferential evidential marker in Korean (e.g., J.-M. Song 2009). This study argues, however, that *-keyss-* is primarily an epistemic modal marker that encodes the speaker's deductive reasoning, prediction, and presumption within an epistemic domain, although the marker's function overlaps with the function of marking assumed evidentiality (Aikhenvald's (2004) term for an element that entails that the information source is a reasoning process based on the speaker's stored knowledge or experience;).[51] In contrast, *-napo-* is a prototypical inferential evidential marker in that the information source it encodes is clearly the speaker's inference based on from the speaker's initial perceptual accessing of some piece of evidence present in the context (Squartini (2008) calls this "circumstantial inference."). In addition, *-napo-* only encodes inferentiality, whereas *-keyss-* also has other functions such as marking volitionality and futurity as well as presumptive modality. In this subsection, I attempt to clarify the functional distributions of the two markers by comparing them with each other.

-Napo- and *-keyss-* seem to be similar in that both of them involve the speaker's inference in their construal. However, they contrast in that the information that is accessed by the experiencing origo in the case of *-keyss-* can be the speaker's stored or assumed knowledge, while in the case of *-napo-*, the speaker must be relying on evidence perceptible in the immediate context. In other words, the information source encoded by both markers is the speaker's

[51] Another term for this kind of inferential evidentiality is "conjectural inferential evidentiality (Squartini 2008). Squartini defines this as "[i]nferential processes in which any external observable evidence is lacking and the speaker only bases his / her reasoning processes (2008: 922).

inference, but only *-napo-* involves an indexical relationship between the origo and the referent (proximal, distal, etc.).[52] *-Keyss-* does not necessarily indicate that the evidence is explicitly available in the context. Rather, the evidence is mentally accessible only to the experiencing origo, since it is conceptualized as 'stored' knowledge. (For further discussion see Squartini 2008; see also Section 6.4 of this dissertation.)

The reason I claim that the marker *-keyss-* is a presumptive epistemic-modal marker is that it obligatorily involves the speaker's epistemic assessment of causation based on her prior knowledge and a deductive reasoning process. In contrast, the evidence referred to by *-napo-* should be accessible to the speaker in the context; it does not necessarily require knowledge involved that was previously stored knowledge in the speaker's memory. The two markers thus form a contrastive paradigm in contemporary Korean, with *-keyss-* evoking deductive reasoning and *-napo-* evoking inductive reasoning.

As I noted in Chapter 3, *-keyss-* encodes the speaker's deductive reasoning when a third-person subject is used in the utterance, as in (48). In (48) the speaker is aware that laundry tends to dry quickly when the weather is dry, and based on this knowledge, she draws the conclusion that the load of laundry in question will dry quickly. Since the judgment is about a future event, posterior to the speech-act time, the utterance also functions as a prediction or presumption with inference acting as a bridge between prior knowledge and prediction.

(48) *nal-i* *kencoha-ni* *ppallay-ka* *cal* *malu-keyss-ta*
day-Nom be.dry-Caus laundry-Nom well dry.v-Presum-Decl
'Since it's is dry out, the laundry **will** dry quickly.'

In (48), the day's being dry is the causing event and the laundry's drying quickly is the resulting event. *-Keyss-* is licensed in contexts where the speaker is drawing a conclusion about an effect based on her knowledge of a cause, and thus can be said to specifically mark a deductive reasoning process; it cannot be used in situations where the speaker is drawing a conclusion about a cause based on an observed effect.

(49) *#ppallay-ka* *cal* *malu-ni* *nal-i* *kencoha-keyss-ta*
laundry-Nom well dry.v-Caus day-Nom be.dry-Presum-Decl
'Since the laundry's drying quickly, it **will be dry** out.'

The sentence in (49) is marginal if it is understood as describing a cause-effect relationship in the content domain (though it is acceptable if it is taken as describing a relationship in the epistemic domain).[53] That is because *-keyss-* entails a situation where the speaker infers the occurrence of an effect in the future based on a cause; in (49), the cause-effect relationship is reversed.

In contrast, the parallel construction with *-napo-*, given in (50) is licensed without any

[52] Squartini (2008) also points out that to fully analyze inferential evidentiality, a distinction should be made between the "source of evidence," the locus where the information is acquired (which may be internal or external with respect to the speaker), and the "mode of knowing," the process leading to the acquisition of the information (such as, visual perception, inference, or report). The origo's indexical access to the source of evidence is involved in the construal of the *-napo-* circumstantial-inferential evidential construction, but not in the construal of the *-keyss-* conjectural-inferential evidential construction.

[53] The sentence in (49) is judged as acceptable when it is construed epistemically. If the effect is construed as a causing event in that it leads the experiencing origo to conclude that the weather is dry, *-keyss-* is licensed. However, (49) is judged marginal if it is interpreted as depicting a cause-effect relation in the content domain.

restrictions.

(50) *ppallay-ka* *cal* *malu-ni* *nal-i* *kencoha-nkapo-ta*
laundry-Nom well dry.v-Caus day-Nom be.dry-Ev.Infr-Decl
'Since the laundry's drying quickly, I guess the weather's dry.'

-Napo- involves the speaker's inductive reasoning process; it is licensed when the speaker infers a cause based on observation of an effect.

Another example that shows that *-keyss-* encodes assumed knowledge is given in (51), which might be licensed in a situation where the speaker had previously consulted a sunrise calendar and was now looking at her watch.

(51) *hay-ka* *got* *ttu-keyss-ta*
sun-Nom soon arise-Presum-Decl
'The sun **will rise** soon.'

In (51), the speaker draws a conclusion (that the sun will rise soon after the speech act) from her given knowledge (the daily sunrise times). This further demonstrates that *-keyss-* is a conjectural-inferential evidential marker (Squartini 2008). In contrast, if *-napo-* were used in a similar sentence, it could only convey a mirative meaning ('Huh. The sun is rising.'), or if it conveyed an inferential reading, it would be interpreted as being based on the speaker's observation of some evidence on the spot. The key is that *-napo-* always entails the origo's immediate sensory access to the evidence.

-Napo- and *-keyss-* differ from each other in another respect. When *-keyss-* is used with a first-person pronoun, as in (52a), the sentence has a volitional reading, conveying that the speaker has the intention to bring about the focal event in the future, while the inferential marker *-napo-* is usually not judged as acceptable when used with a first-person pronoun, as in (52b). This type of conjunct effect has frequently been with evidentiality markers (Aikhenvald 2004).[54]

(52)a.*nay-ka* *kong-ul* *cha-keyss-ta*
I-Nom ball-Acc kick-Vol-Decl
'**I'll kick** a ball.'
b.??*nay-ka* *kong-ul* *cha-napo-ta*
I-Nom ball-Acc kick-Ev.infr-Decl
'**I'll kick** a ball.'

If *-keyss-* is used with a non-first-person subject, it functions as a presumptive marker, as in (53).

(53) *ku-ka* *kong-ul* *cha-keyss-ta*
he-Nom ball-Acc kick-Presum-Decl
a. 'He'll kick a ball.'
b. 'He **is to kick** a ball.'

[54] However, (52b) can be used to convey that the speaker is not sure, but infers that she is likely to kick a ball in the future.

(54) *ku-ka* *kong-ul* *cha-napo-ta*
he-Nom ball-Acc kick-Ev.infr-Decl
'He**'ll kick** a ball.'

In (53a), the speaker is guessing that the subject will kick a ball. The use of *-keyss-* in (53a) does not necessarily require that there be evidence available in the immediate context; it is possible that the speaker is estimating the time of occurrence of the focal event with no reference to immediate evidence, but rather has already obtained the information that the subject is going to kick the ball at a certain time. In this case, the conveyed information is not a consequence of the speaker's inference based on some evidence available in the context, but a consequence of the speaker's inference from her prior knowledge. In contrast, (54) entails that there must be evidence immediately available in the context that has led to the speaker's guess. In other words, (54) has a prototypical inferential meaning. In addition, the modal property of *-keyss-* in (53) enables the utterance to have an additional jussive reading, as in (53b).

This discussion can be summarized as follows. Although *-keyss-* involves the speaker's conjectural inference in its construal based on prior knowledge, it cannot be considered a prototypical inferential evidentiality marker. The inferred state of affairs coded by the conjectural usage of the marker is based on the speaker's prior knowledge rather than on her immediate perception. Therefore, *-keyss-* should therefore be classified not as an evidential marker but as an epistemic-modal marker; it indicates that some premises have led the experiencing origo to draw a conclusion based on her "stored" knowledge and a process of assessment. In short, when a premise enables the speaker to conclude that a certain event will take place, whether or not she obtains additional evidence from the current context, *-keyss-* is licensed. In contrast, *-napo-* is licensed when the speaker accesses available evidence in the context and draws an inference from that observation.

I thus claim that, within the Korean evidentiality system, *-napo-* is an inferential evidential marker that evokes the use of explicit evidence in the context and an inductive inference process. In contrast, *-keyss-* is an presumptive epistemic-modal marker that evokes the use of the speaker's prior knowledge and a deductive inference process. The crucial evidence for this claim is that *-keyss-* is licensed in cases where the speaker's prior knowledge contributes more significantly to the meaning than her concurrent perceptual access to evidence immediately available in the context. Conjunct/disjunct asymmetries, i.e., asymmetries in the use of a first- vs. non-first-person subjects, are only relevant to *-napo-*, not to *-keyss-*; this provides further evidence that contemporary Korean employs *-keyss-* as a modal marker concerned with a variety of modal semantics including presumption, prediction, futurity, volition, and epistemic modality, whereas it employs *-napo-* as an inferential evidential marker, part of the three-term evidentiality system in the KVC.

4.3.3 The Reportive/Quotative Evidential *-Ay-*

The third evidentiality marker is *-ay*, which indicates that the speaker has obtained the focal information secondhand via an indirect mode of access such as hearsay.

4.3.3.1 The Constructional Properties of *-Ay-*

This section provides some background on the *-ay* constructions. The reportive evidentiality

use of the marker *-ay* is licensed with any terminal verbal suffix other than the assertive marker *-ney*. The sentences in (55) exemplify some of the relevant utterance types.

(55)a. *nayil* *pi-ka* *o-n-ta*
tomorrow rain-Nom come-Imprf-Decl
'It will rain tomorrow.'

b. *nayil* *pi-ka* *o-n-ta-(ko)-ha-n-ta*
tomorrow rain-Nom come-Imprf-Decl-Comp-say-Imprf-Decl
'I'm told it will rain tomorrow.'

c. *nayil* *pi-ka* *o-n-t-ay-n-ta*
tomorrow rain-Nom come-Imprf-Decl-Ev.Rep-Imprf-Decl
'It **will rain** tomorrow."

The reportive evidentiality marker *-ay* originally comes from the periphrastic expression *ta-(ko)-ha* Decl + complementizer + 'say.' A more literal translation of (55b) would be something like 'It's said that it's raining tomorrow.' The periphrastic expression has undergone phonological attrition (*tako-ha-e* [tagɔhæ] > *ta-ha-e* [tahæ] > *tay* [tæ]). This type of attrition process has taken place with other types of utterances used with *-ay* as well, as shown by the examples in (56). (For an in-depth discussion of the combinations of *-ay* within the basic sentence types, see J.-Y. Chung, in preparation).

(56) Target Construction: Indicative ending + *-ay*
a. Declarative: *tako-ha-e* [tagɔhæ] > *ta-ha-e* [tahæ] > *tay* [tæ]
b. Imperative: *lako-ha-e* [lagɔhæ] > *la-ha-e* [lahæ] > *lay* [læ]
c. Interrogative: *nyako-ha-e* [ñagɔhæ] > *nya-ha-e* [ñahæ] > *nyay* [ñæ]
d. Hortative: *cako-ha-e* [cagɔhæ] > *ca-ha-e* [cahæ] > *cay* [cæ]

Before analyzing the phenomena in question more fully, I will clarify the definitions of reportive and quotative evidentials. The distinction between these two constructions is crucial to identifying the *-ay* marker's functional properties; *-ay* covers two functions in Korean. This distinction is absent in Chung's discussion of the syntactic constraints on the *-ay* construction: "The reportive evidentiality requires that the source of information be a third-person source, *whether the source is explicitly expressed or not*" (J.-Y. Chung, in preparation:13).

What I mean by *reportive evidentiality* is an entailment that the mode of access by which the speaker has obtained the focal information is not direct or firsthand, but an indirect report, i.e., hearsay, without the exact source being specified (Aikhenvald 2004:177). When a speaker is told by about some information by some person she does not identify when she is talking about that information to others, she can still encode that the target information came from something she heard by employing a reportive evidentiality construction. Thus, the reportive evidential construction excludes the possibility of a non-third person being the information source, since first-person and second-person sources are generally grounded in the discourse context, which would yield a quotative reading.

In contrast, what I mean by *quotative evidentiality* is that the mode of access by which the speaker has obtained the focal information is also hearsay, but that the exact author of the quoted

information is explicitly specified in the construction (Aikhenvald 2004:177). When a speaker has been given some piece of information by a specific person she wants to identify, she can convey that information to the addressee using a quotative evidentiality construction. Consequently, a reportive evidential construction indicates that the reported information may or may not be accurate, whereas a quotative construction indicates that the information is accurately quoted. (The motivations for these implications are discussed in the following subsections.) If a first-person source is referenced in an *-ay* construction, it must therefore be the quotative construction, not the reportive construction. Based on these preliminaries, let us look into functional properties of *-ay*.

4.3.3.2 The Reportive Use of *-Ay*

Considering that the original form of *-ay* is *-ko-ha* complementizer + 'say,' it is likely that when it is used as a reportive evidentiality marker, the source of information involved is hearsay, where the source is neither the speaker nor the addressee. The indirectness of the mode of access can be seen in most tokens of utterances containing *-ay* in KORTERM.[55] *-Ay* constructions can be used in multiple contexts. The sentences in (57)-(58) exemplify the reportive function of the marker.

(57) *nongcang-i* *kyengchal-uy* *supkyek-ul* *pat-ass-t-ay*
farm-Nom police-Gen assault-Acc receive-Ant-Decl-Ev.Rep
'The farm **is under** attack by the police.'

(58) *ppalkan* *masukhu-ka* *tto* *yeca-lul* *cwuk-i-ess-t-ay*
red mask-Nom again woman-Acc kill-Caus-Ant-Decl-Ev.Rep
'The 'Red Mask' **has killed** another woman.'

In (57), the speaker is spreading information about the focal event, the farm's being assaulted by the police, to others, but the source is not explicitly indicated. Since there is no explicit source of information, there is no one who is responsible for the validity of the mentioned information. Thus, (57) could imply that, since the information is not based on the speaker's own observation, she is not sure about its factivity, but wants to disseminate it anyway. In (58), similarly, the information about the focal event, the Red Mask's killing someone, has been obtained from an unknown source. The speaker is simply conveying the obtained information, without claiming any responsibility for its truth, to the addressee. Since neither of these examples specifies the source of information, they are both examples of reportive evidential constructions.

4.3.3.3 Quotative

-Ay can also be employed in quotative constructions. Quotative constructions are different from reportives in that they have a source of information that is explicitly spoken on the surface. The speaker's reference to an explicit source allows her to imply that the information has some validity. Examples are given in (59) and (60).

[55] Free online Korean Corpus by Korean Advanced Institute of Science and Technology (KAIST; http://morph.kaist.ac.kr/kcp/)

(59) *wuli* *wangcho-ka* *koaynchanh-umyen* *sa-keyss-t-ay*
our boss-Nom be.okay-if buy-Presum-Decl-Ev.Quot
'According to our boss, our boss will buy it if it's okay.'

(60) *kimpwucang-nim-i* *kyelhon-ha-ci* *mal-l-ay*
chief.Kim-Hon-Nom marry-do-Conn not.do-Imper-Ev.Quot
'According to Chief Kim, I am not to marry.'

In (59) and (60), the source of the information is explicitly manifested as a grammatical subject, i.e., the speaker's boss in (59) and Chief Kim in (60). The example in (60) contains *-l-ay*, which implies that the speaker has had a conversation with Chief Kim in which Kim used an imperative.

4.3.3.4 Thirdhand Evidential Marking

The reportive/quotative evidentiality marker *-ay* is distinct from other evidentiality markers in that it can be repeated to contribute a second layer of reportive or quotative semantics. When *-ay* is duplicated and when the two instances are bridged by a morpheme of temporal grounding (such as the imperfective marker *-nun-* or the anteriority marker *-ess-*), the utterance conveys the focal information is thirdhand. This recursivity is not surprising, given that the marker has been grammaticalized from a form that contains a complementizer. This thirdhand evidentiality use is exemplified in (61).

(61) *Chelswu-ka* *Yenghuy-lul* *cohaha-n-t-ay*$_1$*-ess-t-ay*$_2$
Chelswu-Nom Yenghuy-Acc like-Imprf-Decl-EV.Rep/Quot-Ant-Decl-Ev.Rep
a. 'I heard it's said Chelswu likes Yenghuy.'
b. 'I heard that, according to Chelswu, Chelswu likes Yenghuy.'

The sentence in (61) is ambiguous because *-ay* itself is ambiguous between the reportive and quotative readings. If both uses of *-ay* in (61) are construed as reportives, (61a) is understood as having no specific information source at any degree of remove. In this case, there are six potential participants, Chelswu, Yenghuy, the speaker, the addressee, and two other unknown persons, X and Y. The situation could be construed as follows: Y obtained from X the information that Chelswu likes Yenghuy (it is not specified how X obtained this information). Y told the speaker that Y had heard that Chelswu likes Yenghuy. Then, the speaker is conveying the information that has been handed down from X via Y to the addressee.

In the other possible reading of (61), the first instance of *ay*$_1$ is construed as quotative and the second as reportive, yielding the meaning in (61b). In this case, there are five potential participants, Chelswu, Yenghuy, the speaker, the addressee, and some unknown person X. In this reading, it is understood that Chelswu himself told X that he likes Yenghuy and that X let the speaker know this information. The speaker is then conveying information that has been handed down from Chelswu via X to the addressee.

Notice that it cannot be the case that the utterance in (61) can be construed as a double quotative construction, because there is only one overt subject that can serve as an explicit information source. It also cannot be the case that only the second instance of *ay* is quotative, since the explicit subject cannot act as the recounting origo for hearsay of which he is the object.

To summarize the preceding subsections, in Korean, reportive evidentiality and quotative evidentiality are covered by a single marker *-ay*, although they are usually covered by separate markers in other languages (Aikhenvald 2004). The marker is a grammaticalized form derived from the periphrastic construction *-ko-ha-* complementizer + 'say.' This complementizing function is inherited from the original construction, allowing *-ay* to be used recursively to convey thirdhand information to the addressee.

4.3.4 The Distributions and Combinations of the Evidential Markers

We have seen that Korean has a three-term system of evidentiality that consists of the firsthand-retrospective marker *-te-*, the inferential marker *-napo-*, and the reportive/quotative marker *-ay*. Each of the markers is specialized for marking a particular semantic territory, parameterized in terms of the origo's mode of access to the focal information and/or information source.

Unlike languages that are equipped with a grammatical paradigm where the markers are all evidentials, Korean seems to have a scattered system of evidentials. As discussed above, *-te-* and *-napo-* are found in a non-terminal position in the verbal complex, whereas *-ay* is found in a terminal position. In addition, the two non-terminal evidential suffixes also convey tense and aspect information. This complexity makes fuzzy the boundaries among the tense, aspect, modality, and evidentiality categories and leads mainstream linguists to conclude that Korean has not developed an evidentiality system, that evidentiality is instead subsumed within the Korean modality system. This study claims, however, that present-day Korean has indeed come to have an evidentiality marking system, in light of the fact that, as I have shown, the evidential suffixes systematically induce the contemporary speaker to access the source of information in their construal.

In this subsection, I will focus on a typologically rare property of Korean, namely that, in Korean, more than two evidentials can be licensed in a single clause, a rare situation according to Aikhenvald (2004:93). Aikhenvald has argued that only one such example has been found, namely Tsafiki, where the reported evidential can be repeated to indicate up to three sources "between the speaker and the original event" (Dickinson 2000:408, cited in Aikhenvald 2004:93). The following example, with three evidential markers in a single clause, shows that Korean is another example of this kind.

(62) *pyengo-ka* *hoycang-nim-hako* *tamphan-ul*
Pyengo-Nom CEO-Hon-with solution-Acc
ci-ess-t-ay-napo-te-la
decide-Ant-Decl-Ev.Rep-Ev.Inf-Ev.Fh-Decl
'I guess I **heard** it's said that Pyeongo settled the issues with the CEO.'[56]

The sentence in (62) might be licensed in a situation in which the speaker clearly remembered that her friend had said something that caused the speaker to infer that the friend had heard from someone else that Pyengo and the CEO had settled the issues in question. In this example, the three evidential expressions are employed at the same time; to my understanding, this is the maximum number of markers that can appear between the two declarative markers *-t-* and *-la* in the KVC. The functions of the markers converge into a complex meaning that indicates that the

[56] http://moodeungilbo.co.kr/searchview.php3?no=60158&read_temp=20020416&section=12

conveyed information comes from someone else, neither the speaker nor the speaker's source (-*ay*), that the linkage between the original source and the person who passed the information on to the speaker has been inferred by the speaker (-*napo*-), and that the speaker remembers for sure what she heard and what that caused her to infer (-*te*). This compositionality of the markers' functions is not surprising, given that when two evidentials are used, they generally either confirm or complement each other (Shipibo-Konibo, Aikhenvald 2004:88). Utterances with two evidential markers are also easily found in Korean; some examples are given in (63)-(65).

(63) *coki-congyeng* *pantay-ka* *iss-umyen* *kyeysok*
early-shut.down objection-Nom be-if continuously
ha-n-t-ay-napo-e-yo
do-Imprf-Decl-Ev.Rep-Ev.Infr-Indic-Hon
'It seems that if there are objections to the early cancellation, they**'ll** keep **doing** it.'[57]

(64) *imyongkosa-nun* *mwue* *tases-myeng-to*
Teacher.recruitment.exam-Top what.DM five-Cnt-even
an *ppop-nun-t-ay-te-la*
Neg select-Imprf-Decl-Ev.Rep-Ev.Fh-Decl
'I **heard** they pick no more than five people.'[58]

(65) *ney* *yenlakche* *al-lyeko* *mwutenhi*
your point.of.contact know-Desid very.hard
nolyekha-ess-napo-te-la
attempt-Ant-Ev.Infr-Ev.Fh-Decl
'I **guess** he tried hard to get your contact information. '[59]

In each of the examples above, the evidential markers' functions do not conflict with each other; rather, they are construed compositionally. In (63), the reportive and inferential evidentials are used to indicate the speaker has made an inference based on something she heard; in (64), the reportive and firsthand evidentials are used to indicate the speaker remembers the direct experience of hearing something; and in (65), the inferential and firsthand evidentials are used to indicate that the speaker remembers the direct experience of inferring something.

In brief, the possibility of functional concatenation shows that the Korean evidentiality system is a scattered one, rather than a single grammatical paradigm where the markers are all evidentials. This is based on the important observation that Korean is another rare case where more than two evidentials can be used.

4.4 Discussion

It has been said that evidentiality in Korean has not been studied in enough depth that it can be determined precisely where and how it may fit within the typology of evidentiality (Strauss

[57] http://kin.naver.com/qna/detail.nhn?d1id=3&dirId=3010101&docId=54644134&qb=7ZWc64yA64KY67SQ&enc=utf8&section=kin&rank=25&search_sort=0&spq=0

[58] http://kin.naver.com/qna/detail.nhn?d1id=11&dirId=110405&docId=123200495&qb=64yA642U6528&enc=utf8&section=kin&rank=3&search_sort=0&spq=0

[59] http://www.dema.mil.kr/service/BlogMain/gagora/C999?pageno=10

2005:444). This chapter, however, argues that Korean has a three-term evidential system that spans different modes of access to the information source. In addition, this chapter has described the four major epistemic-modal markers in the terminal-suffix position in the KVC: one that indicates that the focal information comes from the speaker's knowledge (*-e*), one that indicates the speaker's strong commitment to vouching for the truth of the focal information (*-ci*), one that indicates the speaker's unprepared mind (*-kwun*), and one that indicates the speaker's strong certainty based on solid available evidence available, mostly from direct experience (*-ney*).

Based on the above discussion of the functional properties of the individual components of the Korean verbal complex and their distribution, this section makes an attempt to answer these major questions. First, does Korean have a position class in which the markers are all evidential? Second, how significant is the Korean language from a typological perspective? Third, do *-ney* and *-kwun*, whose identities have been variously described as modal and evidential, belong to the evidential system in Korean?

4.4.1 Does Korean Have a Category of Evidentiality?

The answer to the first question is yes and no. It depends on how we define evidentiality. If the existence of a category of evidentiality must be bound up with grammatical status (Anderson 1986, De Haan 2001, Boye and Harder 2009:10), we might not able to answer the question as yes, given that there seems to be no one paradigm where the markers are all evidential in Korean. If the linguistic category is considered a pragmatic, functional, or cognitive phenomenon (Boye and Harder 2009:10), however, the answer is yes. That is, just as the concept of time is evoked by the term tense, the terms evidentiality and information source evoke a corresponding conceptual category (Aikhenvald to appear:1).

This study takes the latter position.[60] I hence have argued in this section that contemporary Korean employs a scattered system of evidentiality whose members, *-te-*, *-napo-*, and *-ay*, are bound to the concept of mode of access (evoking, respectively, firsthand, inferential, and reportive/quotative access), and that there is no clear-cut boundary between the tense, aspect, modality, and evidentiality elements in the KVC. The three evidentiality markers are not found in the same grammatical position in the KVC; *-te-* and *-napo-* are located in the non-terminal-suffix position, whereas *-ay* is located in the terminal suffix position. Moreover, the variety of epistemic-modal terminal suffixes make the system more complex. They create a synergy effect to express rich evidential and/or epistemic modal semantics, yielding a number of different ways

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[60] In the literature, there are some grammatical requirements that a set of morphemes obey if a language is regarded as exhibiting grammatical evidentiality (Aikhenvald 2004, cited by Michael (2008:65-66).

- Semantic primacy: evidential meanings are the `core' meanings of the set of morphemes in question (Aikhenvald 2004: 3)
- Obligatoriness: the relevant constituent (normally a clause) must be marked by at least one evidential morpheme in any grammatical context that the constituent is capable of being so marked (Aikhenvald 2004: 10)
- Paradigmatic unilocality: evidential morphemes form a paradigm with a single syntagmatic locus (Aikhenvald 2004: 9)
- Paradigmatic uniformity: all the morphemes in the paradigm have evidential meanings as their core meanings (Aikhenvald 2003: 11).

Following Michael (2008: 66), I believe that the semantic primacy condition is a necessary one for grammatical evidentiality, but that the other conditions are not (for more discussion, See Michael 2008).

that various degrees of speaker belief (based on various kinds of modes of access to the focal information) can be conveyed.

It should be made clear that the concepts of evidentiality and epistemic modality are absolutely distinct (cf. Chafe 1986). Evidentiality and epistemic modality as grammatical categories are, however, not as easily distinguished as their conceptual correspondents. These grammatical categories cover different ranges of concepts in each individual language, just as the grammatical categories of tense and aspect work differently in different languages. (For further discussion, see Boye and Harder 2009.). Consequently, it is natural that the semantics of evidentiality and epistemic modality can arise from various kinds of combinations and interactions among the non-terminal tense, aspect, and traditionally-defined-as-modal suffixes; there is not always a clearly separable paradigm of evidentiality markers. In addition, it is natural that a marker that would be defined as an epistemic marker in the grammar of one language might also cover evidential semantics that would be marked by a separate evidential marker in another language.

For this reason, and also in light of the above discussion regarding the potential combinations and distributions of the elements of the verbal complex, this thesis argues that although Korean does not have a grammatical paradigm where the markers are all evidentials like that of some other languages, such as Quechua (Faller 2003, inter alia), it employs an evidential system that can be defined in terms of pragmatic, functional, and/or cognitive phenomena related to the concept of information source. It can thus be seen why some linguists would claim that the way the Korean language construes evidential meanings is significant from a typological perspective: An evidential meaning is not necessarily marked by independent morphemes, but can be expressed by interactions among other temporal categories (J. Lee 2008:18, 22).[61]

4.4.2 Evidentiality in Korean: A Three-Term Distinction

Given the claims made above, the answer to the second question seems to be that Korean is indeed significant from a typological perspective. It might be true that Korean has not historically had a single grammatical category for evidentiality. But it is also true that, as a result of complex grammaticalization processes, present-day Korean seems to come to have a system of evidentiality that consists of three evidentiality markers, specialized to encode three distinct modes of access to the focal information. Specifically, it includes *-te-* as a firsthand evidentiality marker, *-napo-* as an inferential evidentiality marker, and *-ay* as a hearsay evidential marker. The three-term evidentiality system is one of the well-attested types of evidential system according to Aikhenvald (2004), occurring in languages such as Aymara (Hardman 1986) and Wanka Quechua (Floyd 1997:71, 1999:48). Note that the firsthand evidential marker is the only one that is historically monomorphemic, which might indicate that it was historically the first element to acquire a specifically evidential function that involved the speaker's perception time or assessment time. From a synchronic point of view, considering how contemporary speakers construe the linguistic constructions under discussion, I claim that the other markers have conspired to fill the gaps in the emerging evidentiality system via a grammaticalization process that this is why contemporary Korean has a scattered system of evidentiality.

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[61] According to Woodbury (1986, cited by J. Lee 2008:18), in Sherpa, a Sino-Tibetan language spoken in Tibet and Nepal *-nok* and *-suŋ*, evidence types are not necessarily encoded in the meaning of the evidential elements (*-nok* and *-suŋ*), but they can be expressed by interactions between the temporal categories and the evidential markers.

4.4.3 The Typological Status of the Korean Evidentiality System

According to Aikhenvald (2004:54), languages differ with regard to the number of terms that mark modes of access. They vary from systems with two choices to those with five or more choices. Korean belongs to the group of languages that have evidentiality systems with three choices, in the subgroup that distinguishes between directly-perceived, inferred, and reported information.

It is noteworthy that the three evidential linguistic items do not belong to a single grammatical paradigm. *-Te-* and *-napo-* are located in a nonterminal-suffix position, whereas *-ay* usually occupies a terminal-suffix position. In other words, the evidentiality markers in Korean are scattered within the verbal complex, not forming a single paradigmatic category. This type of scattered evidentiality system is discussed by Aikhenvald:

> "A language may have grammatical expressions for a number of evidential meanings but the actual markers may not form one coherent category. The morphemes then occur in different slots of the verbal word, enter in different paradigmatic relationships with non evidentials, and have different restrictions on co-occurrence with other categories. The expression of evidentiality may itself be obligatory – but different evidentiality specifications 'scattered' throughout the verbal system by no means make up a unitary category. They still, however, qualify as grammatical evidentials." (2004:80)

Languages with scattered evidentiality systems are not rare. Examples include the Wakashan language Makah (Jacobsen 1986), and the Eskimo languages (Fortescue 2003, cited in Aikhenvald 2004:80). This study claims that Korean is nother such language.

4.4.4 The Terminal Suffixes *-Ney* and *-Kwun*: Evidentials or Modals?

Some linguists argue that the sentence-terminal suffixes *-ney* and *-kwun* are evidential markers as well (Strauss 2005, K.-S. Chung 2005, 2007, J.-M. Song 2009, J. Lee 2010). As I described in Section 4.2, *-ney* is a factive marker indicating the speaker's perception of the focal event at the speech time or realization at the speech time about some event she initially observed in the past, and *-kwun* is a mirativity marker signaling the speaker's immediate and instantaneous discovery at the moment of speech (Strauss 2005:442).[62] Both indicate generally indicate that the source of information is the speaker's sudden recognition or reasoning process.

Both markers are concerned with the information source of the speaker's inference or reasoning. This attribute might qualify them as evidential markers. However, the fact that they can encode evidential semantics does not necessarily mean that that is their primary function. Rather, they are mainly concerned with how information is processed and evaluated, that is, with how the focal information is construed and with how the mode of access contributes to the speaker's degree of certainty about or responsibility for the information. In other words, the markers' main function is to encode the speaker's epistemic stance resulting from her processing of the focal information, rather than encoding the source of the information.

My claim is thus that these two terminal suffixes are epistemic modal. Note that the morphosyntactic paradigm they belong to also accommodates various elements that express experiential and performative components of situations, including epistemic-modality meanings,

[62] Strauss (2005) seems to assume that mirativity is a subcategory of evidentiality; for a counterargument, see DeLancey (2001).

illocutionary forces, and degrees of politeness (H.-S. Lee 1991:96). In addition, as I noted above, *-ney* and *-kwun* also have particular pragmatic illocutionary forces. *-Ney* encodes assertiveness, i.e., the strength and solidity of the speaker's claim, whereas *-kwun* specifically does not, and is therefore licensed only in exclamatory statements and soliloquys. In sum, the two markers carry discourse-functional properties that are more related to the speaker's epistemic stance or responsibility for the focal information than to marking the source of the information.

This dissertation therefore argues that *-ney* and *-kwun* are epistemic-modal markers, encoding, respectively factivity/realization and mirativity, not evidential markers. This statement is supported by DeLancey's claim (1997:46) that *-kwun* marks surprise and the newness of information, independently of inference and hearsay evidential; he refers to it as a member of a group of final particles that he calls "utterance qualifier." It further is further supported by Aikhenvald's claim (2004:214) that a language can have a morpheme that encodes surprise as its main meaning, rather than as a derived meaning from its evidential semantics.

4.5 Summary

This chapter has discussed the systems of modality and evidentiality in the KVC, exploring the functional distributions of the epistemic modal and evidential elements and their interactions with one another. Overall, I have claimed that sentence terminal suffixes express the speaker's subjective assessment of and epistemic attitude about the conveyed information. Following H-S. Lee's (1991) account, I described the four major epistemic modal terminal suffixes: (i) *-e*, which encodes the speaker's intention to convey information that is already part of her knowledge to the addressee, (ii) *-ney*, which encodes the speaker's assertion of the information being conveyed based on solid evidence, (iii) *-kwun*, which marks the speaker's unprepared mind and the availability of the evidence in the context, and (iv) *-ci*, which encodes the speaker's commitment to vouching for the information that is being conveyed. In the non-terminal suffix position, three modes of access to focal information can be expressed, using *-ay* for hearsay, *-napo-* for inference, and *-te-* for direct-firsthand experience.

Figure 2 summarizes the Korean modality and evidentiality system in a nutshell.

The Evidentiality System	The Epistemic-Modal System
① Reportive/Quotative (*-ay*)	(i) Indicative (*-e*)
② Inferential (*-napo-*)	(ii) Factive/Realization (*-ney*)
③ Direct (Firsthand) (*-te-*)	(iii) Mirative (*-kwun*)
	(iv) Committal (*-ci*)

Figure 2. The Korean Evidential and Modal Systems

Figure 2 lists the three evidential suffixes to the left of the epistemic-modal suffixes in harmony with the morphological ordering; the evidential suffixes come before the epistemic-modal suffixes in the KVC. Other tense and aspect elements can also occur in the non-terminal positions; given that modal semantics also kick in when the evidentials combine with the semantics of the tense elements,[63] the potential outcomes of the complex tensions between the

[63] For instance, if firsthand evidential semantics combines with perfective aspect, the resulting construction depicts a situation where the speaker infers the occurrence of the focal event based on her witnessing of the resulting state. In other words, the construction conveys that the speaker is making an assumption or guess about a past event, which

tense, aspect, modality, and evidentiality elements in the non-terminal position can be quite rich semantically, which results a complex TAME system.

In this study, I have examined the status of evidentiality as a grammatical category in present-day Korean. My claim is that, although it does not seem to have a grammatical paradigm where the markers are all evidentials, Korean does have a scattered system of evidentiality. In light of H-S. Lee's claim that the KVC has historically only carried aspect information and that the semantics of tense, modality, and evidentiality have arisen via grammaticalization (2011, p.c.), the idea that there is a scattered evidentiality system in contemporary Korean is more convincing. The complex tension mentioned above between the tense, aspect, modality, and evidentiality elements in the KVC has triggered reanalyses on the part of language users of the constructions that contain those elements. However, because the grammaticalization is a local process, not a teleological shift in a whole paradigm, some elements in the KVC have gained evidential interpretations while others have not. My guess is that this is why Korean has not developed a grammatical paradigm for evidentiality.

However, Korean is certainly equipped with evidential markers. As I have shown in the thorough discussion in this chapter, there are three specialized elements that encode distinct modes of access to the focal information.

This chapter has also examined a controversial issue regarding the definitions of some of the terminal epistemic-modality suffixes, namely, *-kwun* and *-ney*. *-Kwun* and *-ney* convey meanings that are closely related to evidentiality marking, in that *-kwun* encodes the origo's unprepared mind facing newly perceived information and *-ney* encodes the origo's direct access to the focal information or realization of having drawn a conclusion from information to which she had access in the past. I have claimed that *-kwun* and *-ney* are modal markers rather than evidential markers because they are part of a clear modal-suffix paradigm at the sentence-terminal position and because their functional properties are more related to expressing the speaker's intention and epistemic stance than to encoding the particular mode of access via which the speaker obtained the information being conveyed.

In sum, the major contributions of this chapter to the study of tense, aspect, modality, and evidentiality in Korean are 1) showing that the semantics of epistemic modality and evidentiality are obligatorily involved whenever tense and aspect elements are construed, 2) shedding light on the evidential semantics of three major non-terminal suffixes, which has not received much attention in the literature, and 3) grouping these three suffixes as a scattered evidentiality system, thereby providing a systematic account of their evidential properties.

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in turn evokes epistemic reasoning. When inferential semantics is coupled with perfectivity, it generally tends to evoke mirativity semantics in general (DeLancey 2001).

Chapter 5
Korean Evidentiality and Mental Spaces Theory

5.1 Introduction: Evidential Constructions as Perspective Phenomena

The presence of evidential elements in utterances indicates that the speaker observed or apprehended the focal event via a particular mode of access. This suggests two things: first, that there must be a perspective or a viewpoint from which the speaker made this observation or came to this apprehension, and second, that there must be multiple levels of event structure that the speaker is accessing in making the evidential statement. These facts conspire to suggest that in order to explain a speaker's simultaneous access to multiple levels of event structure, we must be able to represent more than one level of event structure, with each being simulated by a conscious viewpoint. This is the conceptual reasoning motivating my claim in previous chapters that we must include the possibility of another perspective, secondary viewpoint time, in our analysis in order to better grasp how information is construed in the Korean verbal complex.

This chapter employs a cognitive approach, specifically Mental Spaces Theory (MST) (Fauconnier 1997, Fauconnier and Turner 2002), as a theoretical tool for the analysis of the Korean evidential constructions. I have chosen this framework because MST is specifically designed to be able to represent more than one level of event structure, whether overt or covert, and to effectively represent how the experiencing origo accesses the multiple levels simultaneously. MST is particularly optimal for analyzing Korean evidential constructions because the construal of these constructions requires access to the implicit semantics that they evoke.

In the evidential construction, an implicit perspective (the origo) metarepresents a focal event in which that origo might or might not be a participant. The examples in (1) and (2) of the use of the Korean firsthand evidentiality marker *-te-* indicate that there is more than one participant and that there is an implicit perspective that metarepresents the focal event.

(1) *Yenghuy-ka hakkyo-ey ka-te-la*
Yenghuy-Nom school-Loc go-Ev.Fh-Decl
'Yenghuy **was going** to school.'

(2) ??*nay-ka hakkyo-ey ka-te-la*
I-Nom school-Loc go-Ev.Fh-Decl
'I **was going** to school.'

The construal of each of these examples involves two perspectives, i.e., that of the speaker (the implicit experiencer) and the grammatical subject *Yenghuy* in (1) and *nay* 'I' in (2). Utterances like (1) and (2) are called disjunct and conjunct utterances (Aikhenvald 2004),[64] respectively,

[64] The term 'conjunct/ disjunct phenomena' is borrowed from Aikhenvald's (2004) work, which asserts that in languages with grammatical evidentiality, one may expect there will be different possibilities for evidentiality marking depending on the person of the subject; the participant marking may depend on the information source and the speaker's attitude towards it (2004:123-124). Thus, "[e]videntiality systems often interact with the grammatical person of the subject or experience" (Aikhenvald and Dixon 2003:16), and "[s]ome evidentials may not occur in a

referring to whether the surface grammatical subject is different from or the same as the semantic experiencer of the firsthand perception encoded by the evidential marker. The referential relationship between the two entities affects the licensing of the construction. A sentence such as that in (2) is dispreferred in most contexts; the firsthand evidential marker can generally only be used with a first-person subject to signal that the speaker did something unconsciously or unintentionally. In most contexts, this would be incompatible with the implication of agentive intention that the action verb *ka-* 'go' usually imposes. (This phenomenon will be discussed in detail later in this chapter.). In essence, these patterns indicate that evidential constructions are a consequence of the superimposition of multiple levels of events and the superimposition of viewpoints (including a covert viewpoint).

MST offers a useful way to represent the embedded implicit perspectives in the target construction because it is based on the assumption that a given mental space is always attached to some perceiver or cognizer who is implicitly or explicitly evoked in the context (Sweetser forthcoming:2-3). This is in line with our fundamental assumption that conceptual structures are not unique to overt linguistic expressions. Rather, we understand utterances by construing conceptual structures that linguistic constructs tap in our mind. In order to clearly represent the conceptual structures involved in the construal of evidential constructions, MST use a spatial semantics where particular information can be accessed by or restricted from access by particular perspective.

Another strength of the theory is that it enables us to measure conceptual distance, including deictic (spatial/ temporal), emotional, and epistemic distance. As Sanders and Redeker (1996:311-312), among others, point out, it provides a way of representing restrictions on validity arising from perspectivization, including temporal, spatial, epistemic-modal, and counterfactuality restrictions.

Evidential constructions are another consequence of our perspectival construal and conceptualization processes (Sweetser forthcoming:2), in that they involve complicated interactions and tensions between multiple perspectives that humans are capable of accessing simultaneously. As Sanders and Redeker (1996:293) also state, "[*P*]*erspective* is the introduction of a subjective point of view that restricts the validity of the presented information to a particular subject (person) in the discourse." Because evidential constructions invoke the experiencing origo's simultaneous access to another viewpoint's beliefs or thoughts, they qualify as prototypical perspective phenomena. Analyzing evidential constructions as perspective phenomena, can also enhance our understanding of a variety of kinds of texts and discourses,

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first person context" (Aikhenvald 2004:8). The examples in (i) and (ii) are from Tsafiki, a Barbacoan language spoken by the Tsachi.

(i) *la* *kuchi=ka* *tote-yo-e*
1M pig=Acc kill-Conj-Decl
'I killed the pig.' (intentionally)

(ii) *la* *kuchi=ka* *tote-i-e*
1M pig=Acc kill-Disj-Decl
'I killed the pig' (unintentionally)

(From Dickinson 2000; her example 4.27)

In this case, the phenomena are related to the intentionals of the grammatical subject. In (i), the pig was killed intentionally, and the speaker uses the conjunct marking. In contrast, a disjunct form such as that in (ii) may be used to indicate a speaker's surprise (i.e., it may have mirative overtones) or it may be be used ironically.

including literary narratives, where the flow of construal is significantly affected by shifting or manipulating viewpoints.

Korean evidential constructions have received little attention as subjective perspective phenomena in the literature. The main goal of Chapter 5 is to fill this gap and provide cognitively motivated accounts of the Korean evidential constructions within Mental Spaces Theory. In particular, I will discuss in detail how experiential and non-experiential predicates interact with conjunct and disjunct construal processes and with the three evidential elements in Korean, the firsthand evidential marker *-te-*, the inferential evidential marker *-napo-*, and the reportive/ quotative evidential marker *-ay*.

Section 5.2 provides some theoretical background on MST and its relevance to analyzing evidentiality in Korean and elaborates on why previous formal approaches and pure syntactic approaches have failed to provide a unified account of Korean evidentiality. In Section 5.3, I claim that, for MST to be able to provide a cognitively motivated account of evidentiality, we must redefine Base space and revise our analysis of its function, which has naively been assumed to be unspecified, inactivated, or insignificant background knowledge. Then, I propose the notion of *backgrounded information accommodation* (BIA) in which a backgrounded space accommodates information that is backgrounded but nevertheless obligatorily involved in the construal of evidential constructions, namely, the fact that the experiencing origo has obtained the focal information via a specific mode of access. In addition, another type of space elaboration is proposed, *indirect epistemic space triggering* (IEST), to account for the triggering of an epistemic mental space by accessible evidence in the cases of inferential and reportive evidentiality. In Section 5.4, I use MST to analyze Korean some evidentiality data and show that the theory is capable of providing a unified account that is cognitively motivated. Section 5.5 summarizes the discussion.

5.2 Theoretical Background: Mental Spaces Theory

One naïve folk theory about language is that linguistic expressions directly represent the shape of the world. However, as cognitive linguists and cognitive scientists have argued, language and the mind do not work that way. Linguistic elements and expressions evoke the semantic frames in our minds that bestfit the given context, and thereby lead us to an understanding of the focal information presented. These linguistic constructs and frames are always delimited by a particular perspective. The necessary involvement of a cognizer in construing every single linguistic expression produced requires that there must be at least one particular or vantage point from which an experiencing origo views the world.

Mental Spaces Theory is optimally designed to capture these perspective phenomena. Within this theory, we can explicitly represent the experiencing origo's vantage point and her particular conceptualization, and in addition, we can capture the covert semantics that arise from the origo's access to other viewpoints. For this reason, I have chosen to use Mental Spaces Theory to analyze evidential construction and their subjective semantics.

Mental spaces are constructed by both covert and overt cues in linguistic content. The roles and values in those spaces and the relations between the elements in a given space or across different spaces are also constructed by both implicit and explicit linguistic cues, such that new elements can be freely added to the extant spaces (Fauconnier 1994[1985]: 16).[65] Under the mental-spaces

[65] Mental-spaces structures may also be built and filled using pragmatic information, mapping from other domains, or inferencing or reasoning processes (Cutrer 1994:21).

view, language comprehension and production involves the construction of hierarchically organized and interconnected cognitive domains, or in other words, the subdivision or partitioning of information into different spaces and the construction of connections between elements in those different spaces and between the spaces themselves (Fauconnier 1994[1985]; Cutrer 1994: 48).

New mental spaces are built off from the starting point of the base space by space-builders, and are subordinate to the base space. Space builders may take a variety of grammatical forms: prepositional phrases, connectives, complement-taking clauses, implicit pragmatic cues and so on (Cutrer 1994:50). The English sentence in (3) is an example where a new mental space is evoked and built; the diagram in Figure 1 represents how the two spaces are related.

(3) *In the picture, the woman with green eyes has blue eyes.*

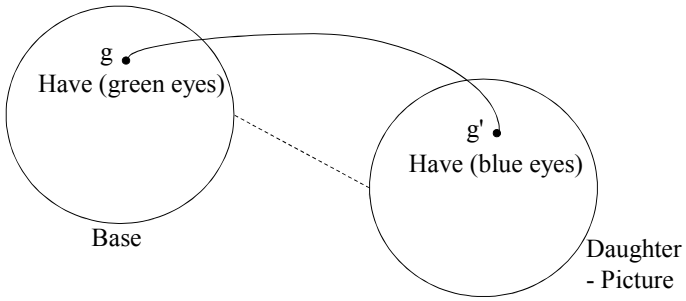


Figure 1. Representation of the Space-Evocation Process in Example (3)

The explicit space-builder *in the picture* in (3) plays the role of evoking and focusing the construer's attention on the temporally and spatially limited PICTURE space. It sets up a mental domain within which the ensuing constructions, like *the woman with green eyes*, can be interpreted appropriately and the truth-conditionally contradictory sentence can be licensed. Frame elements or events in the evoked frame or mental space can be inherited or exploited from the common ground (the base space). My analysis follows Fauconnier in treating this relationship as a subordinating link between spaces. The dashed line in the diagram in Figure 1 between the base space and the daughter space represents how the daughter space (the picture space) is embedded in and subordinated to the base within the lattice of the discourse space by the explicit space-builder (*in the picture*). Fauconnier 1997:43). In addition, the roles that correspond in the two spaces are linked with a solid line that represents an identity link, meaning that their identities are the same.

Different types of spaces with different degrees of accessibility can be established for temporal elements, spatial elements, beliefs, images, hypotheticals, counterfactuals, and so forth (Cutrer 1994:66). In evidential constructions, I believe that the speaker's subjective-experience space (SE space) is obligatorily involved; this is the space where the speaker obtains the focal information via some mode of access. MST has been proven to effectively capture this kind of subjective knowledge, with embedded spaces entailing restrictions on the validity or factuality of the embedded material (Fauconnier 1994[1985]; Sanders and Redeker 1996:293).

The evidential construction is a prototypical example of the kind of perspective phenomena that are optimally captured in Mental Spaces Theory, in that the evidential construction involves the experiencing origo's subjective access to another perspective that is not manifested syntactically on the surface. Construing these constructions therefore requires understanding the

deep semantics they convey behind the scenes, namely the perspectival semantics tapped in by the presence of a cognizer or an origo in the construal process.

5.3 Novel Ways of Elaborating Spaces

Before fully embarking on a mental-space analysis of the Korean evidential constructions, would like to put forward some novel ways of elaborating mental spaces. As I mentioned briefly mentioned above, these novel means of elaboration are needed for accessing backgrounded information about the specific mode of access by which the experiencing origo has obtained the focal information and for evoking epistemically-marked information that arises from some accessible evidence in cases of inferential and reportive evidentiality. My claim is that the means for space building that have been proposed in the literature so far, are unable to fully account for the constructions in question. Sanders et al. (2010) has also unequivocally stated the need for novel means of elaborating spaces:

> "[O]ne possible concern which a reader of Mental Spaces Theory could raise would be how to limit the proliferation of posited mental spaces: the real issue here is how to motivate the spaces brought up in an analysis. And one important sub-issue is how certain spaces seem to be implicitly present, ready for reference without overt marking…" (2010:25)

To accommodate the types of knowledge involved in evidentiality within MST, I propose two novel means of space-building that are involved in the construal of the evidential constructions: *backgrounded information accommodation* and *indirect epistemic-space triggering*.

5.3.1 Backgrounded-Information Accommodation

Evidential constructions are perspective phenomena that involve multiple viewpoints. As such, their analysis requires a theoretical tool that is capable of accounting for and delimiting the validity of information when that validity holds only in a certain perspective. I would like to claim that MST is an optimal tool for capturing such perspectival conceptualization phenomena; in effect, the evidential constructions call up the speaker's subjective experience space where the focal information that she has obtained is accessible only to her.

It is notable, however, that how mental spaces are built up in evidential constructions is different from normal space-evocation processes. In general, the presence of evidential elements presupposes that the speaker has already obtained the information in question prior to the coding time. In other words, as soon as an utterance that contains an evidential element is made, the addressee immediately recognizes that information of how the speaker has obtained the focal information has not been directly asserted. Rather, the addressee accesses the backgrounded information that the speaker has obtained the focal information via a certain mode of access) and takes it for granted. This is conceptually different from normal space-embedding in that space-builders do not generally operate on backgrounded information, but unfold the focal information that is foregrounded in the discourse context. The significance of this difference can be seen when an evidential construction is compared to a periphrastic expression about the speaker's mode of access (like English *I see that…* or *I heard that…*); this is discussed in detail in Section 5.3.1.2.

This raises two overall questions. First, what is the status of this kind of backgrounded information in Mental Spaces Theory? In particular, what is its status with respect to the base

space? Presupposition has so far been naively assumed to be undifferentiated from the rest of our shared knowledge in the Base space; however, I claim that we must specify and represent this type of backgrounded information independently even though it is part of the Base space. That is, the backgrounded information is accommodated in a distinct mental space because it involves knowledge only accessible from a certain perspective. Second, if the backgrounded information is of a different type than that involved in normal space-evocation processes, how can we model the process by which it is accommodated? This section seeks to answer those two questions, proposing a way of representing the incorporation of the backgrounded information into the discourse that I call backgrounded-information accommodation.

5.3.1.1 Base Space Revisited

Cutrer defines the Base space is as "[t]he initial space, the starting space; it contains a temporally and spatially zero center of reference. In the canonical case, the Base space is speaker reality, although other types of Base spaces are also possible" (1994: 53). The encyclopedic background knowledge about semantic frames that is employed in construing the relations among roles and values in mental spaces also permeates the Base space. The Base is the space where the active deictic center of the discourse is located, and the space that includes any implicit information that the interlocutors need for accessing the newly updated information in any mental spaces. The backgrounded information evidentials convey about speakers' modes of access is definitely one kind of implicit information that is found in the Base space.

I believe, however, that the functions of the Base space should be more clearly defined by explicitly specifying what kind of information it contains and how that information is structured. Among the various kinds of information in the Base space, I believe that backgrounded information about each interlocutor's modes of access to focal information should be represented in a separate subdomain, the subjective-experience space for that interlocutor, because that information is accessible only by a particular relevant perspective. In other words, it should be assigned a quasi-independent mental space that is part of the Base space, that is to accommodate that information, when a speaker takes an epistemic or evaluative attitude towards the focal information.

5.3.1.2 Mental Spaces Theory and Backgrounded Information in the Evidentiality Construction

Various kinds of implicit information are assumed to belong in the Base space; this information is exploited in the on-line construal that takes place in the real-time evocation of mental spaces. My claim is that, among these various kinds of implicit information, some kinds, such as backgrounded information about sources of knowledge, must be accommodated by separate mental spaces because they are accessible only to particular perspectives.

This particular type of backgrounded information is obligatorily involved in the encoding of evidential constructions. Whenever an evidential element is used in discourse, it imposes the precondition that the speaker has obtained the focal information via a particular mode of access. It is noteworthy that these conditions differ from those imposed by periphrastic expressions such as *I saw that…* or *I heard that…* The information in focus in these periphrastic evidentiality-marking strategies is the event of the speaker's observation or apprehension process (*see*, *infer*, *hear*, etc.), whereas the focused information in the evidential construction is the focal event that

is observed or apprehended by the speaker (Kwon 2011b). In brief, in the evidential construction, the mode of access is backgrounded.

How information about the mode of access is encoded in evidential constructions can be tested with negation. If information is backgrounded, it is not in of the scope of negation. What is negated is the focal information about the observed event, not the backgrounded information about how that focal information was obtained. When the three evidentiality markers in Korean are coupled with negativizer *an-*, what is negated is not the information about the mode of access, but the focal content. The example in (4) demonstrates that the evidential information provided by the retrospective firsthand evidential marker *-te-* is backgrounded.

(4)a. *pakk-ey* *pi-ka* *manhi* *o-te-la*
outside-Loc rain-Nom much come-Ev.Fh-Decl
'It **was pouring** outside.'

b. *pakk-ey* *pi-ka* *manhi* *an* *o-te-la*
outside-Loc rain-Nom much Neg come-Ev.Fh-Decl
'It **was**n't **raining** that much.'
≠ 'I didn't see that it was raining that much.'

The use of *-te-* in (4a) would be licensed when the speaker had obtained the focal information firsthand via her own senses. When we negate that utterance, as in (4b), the only possible reading is that the focal event is negated, not that the mode of access is negated. The other two evidential elements, *-napo-* (inferential) and *-ay* (reportive/ quotative), show similar patterns. The sentence in (5a) might be licensed in a situation where the speaker could hear raindrops, but did not have access to a window.

(5) a.*ppakk-ey* *pi-ka* *o-napo-a*
outside-Loc rain-Nom come-Ev.Infr-Indic
'It**'s raining** outside.'

b. *ppakk-ey* *pi-ka* *an* *o-napo-a*
outside-Loc rain-Nom Neg come-Ev.infr-Indic
'It**'s** not **raining** outside.'
≠ 'I can't tell whether it's raining outside.'

The translation of (5b) shows that the mode of access involved, the speaker's inference, is outside the scope of negation. When the inferential evidential statement is negated, the focal information being conveyed by the speaker is that it is not raining outside.

The sentence in (6a) would be licensed in a situation where, for example, the speaker had been told it was raining outside.

(6) a.*pakk-ey* *pi-ka* *o-n-t-ay*
outside-Loc rain-Nom come-Imprf-Decl-Ev.Rep'
'It'**s** raining.'

b. *pakk-ey* *pi-ka* *an* *o-n-t-ay*

outside-Loc rain-Nom Neg come-Imprf-Decl-Ev.Rep'
'It **is**n't raining.'
(≠ I haven't heard that it's raining.')

The translation of (6b) also shows that the event within the scope of negation is the raining event, not the speaker's perception event. These examples suggest that, we employ an evidential element, the fact that the speaker has obtained the information via a particular mode of access is obligatorily backgrounded. It is infelicitous to refer explicitly to the question of whether the speaker observed the event or not, as it has been backgrounded by the speaker.[66]

In the MST literature, this type of backgrounded information is simply assumed to belong to the Base space, and has not received much attention. For instance, Sanders and Redeker, who discuss mental-space representations of direct, indirect, and free indirect speech modes, treat the indirect mode of access by adding arbitrary brackets to the notation, but did not discuss the motivation behind that notation (1996:300). Their diagram using the bracket notations is given in Figure 2.

[66] A similar distinction has been made in the formal-semantics literature between at-issue and not-at-issue content (Stalnaker 1974, Chierchia and McConnell-Ginet 1990, Potts 2005, Abbott 2000, Simons et al. 2010; cited in J. Lee 2010:111-119). According to them, "[a]t-issue content is defined as the content that can be the 'main point' of the utterance and that is 'directly related to the conversation at hand.' Not-at-issue content is 'backgrounded'." The negation test employed here is in the same vein as testframes like the question-under-discussion (Roberts 1996) and challengeability tests (Faller 2002, Matthewson et al. 2007, Roberts et al. 2009, Murray 2010). The exchanges in (iii) is an example of the question-under-discussion test.

(iii) A: Where's Bob?
B: Bob, who likes pizza, is at the pizza parlor.
B': # Bob, who is at the pizza parlor, likes pizza. [Cited in J. Lee 2010]

Roberts (1996) argues that, by asking a question that reflects the immediate goal of the current discourse, we can determine which part of the linguistic content is at-issue/currently being talked about or not-at-issue/backgrounded.

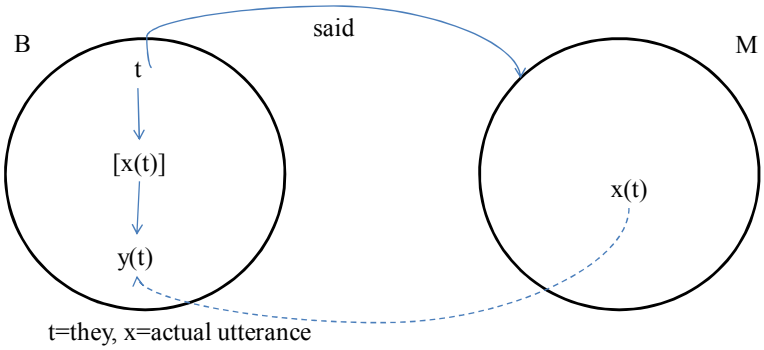
The challengeability test (Faller 2002, Matthewson et al 2007, Roberts et al 2009, Murray 2010) is exemplified in (iv).

(iv) A: Bob, who likes pizza, is at the pizza parlor.
B: No, that's false. Bob is in the office.
B: No, that's false. # Bob does not like pizza. [Cited in J.Lee 2010]

In other words, at-issue content can be directly challenged, but not-at-issue content cannot be the target of direct denial and investigation.

I believe that what these authors regard as not-at-issue contents is the same as the content that I am proposing is accommodated by the backgrounded space.

(7) They had heard shots as well, but knew nothing else, they said.



t=they, x=actual utterance
[x(t)]=virtual element; what they actually said
y=that they heard shots, but knew nothing else
B=Narrator's reality, base space
M=Character's reality, embedded space
-----=Consequence relation

Figure 2. Mental-Spaces Representation of Indirect Speech (Sanders and Redeker 1996)

According to Sanders and Redeker, the linguistic cue *said* creates a daughter space that is subordinated to the Base space. The notation 'y(t)' in the Base space represents the resulting utterance token, which is related to the actual utterance 'x(t)' via the narrator's construal of that utterance '[x(t)].' It seems likely that the authors intentionally simplified the internal event structure into the notation [x(t)] in the diagram because that is not what they were focusing on, but I believe that this is an oversimplification because it represents only the result of the narrator's reasoning process without specifying the details of that process, including how she accessed the focal information.

Posting a specific backgrounded space requires positing a different kind of space elaboration. When no evidential information is given, the addressee's representation of the speaker's mode of access to the focal information (i.e., of the speaker's subjective-experience space) remains underspecified. When an evidential marker is used, the backgrounded information becomes available in the addressee's Base space as soon as she recognizes that backgrounded information has been conveyed. In other words, once the backgrounded information has been evoked by a particular linguistic item in the speaker's utterance, the speaker's subjectivity experience space is accessed within the addressee's conception of the Base space. As a result, the addressee, who has not previously had access to the backgrounded information, can accommodate it into a specification of the contents of her conception of the speaker's subjective-experience space. In sum, how mental spaces are elaborated by evidential constructions is different from the normal way spaces are created (cf. Figure 1) in that, rather than building a new space, they access a present but previously-underspecified space. I term this novel type of space elaboration *backgrounded-information- accommodation*. The diagram in Figure 3 shows how BIA works in the general case.

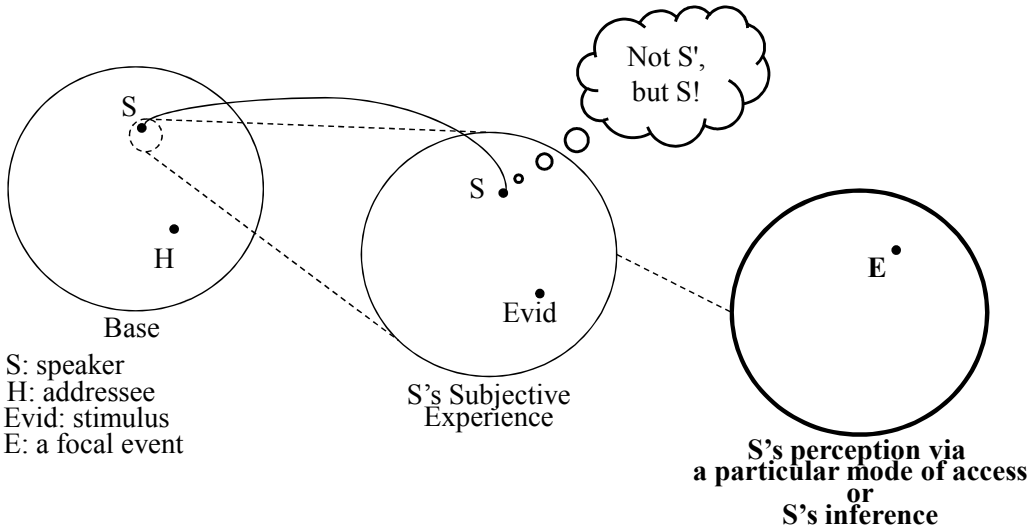


Figure 3. Backgrounded Information Accommodation in an Evidential Construction

The speaker 'S,' in the Base space, projects her subjective-experience space, which is backgrounded; this space accommodates information about the stimulus (Evid) from which the speaker obtained the focal information. The speaker can access the stimulus firsthand or indirectly (via inference or hearsay). The type of the mode-of-access space (the space of S's perception via a particular mode of access above or the space of S's inference) is determined by the type of evidence she is relying on. The crucial point made by this diagram is that in the case of evidential constructions, it is the focal event accommodated by the speaker's experience space *per se* that is profiled.

This profiling of the speaker's mode of access space is what distinguishes evidential constructions from periphrastic constructions conveying evidential semantics. We can compare the representation in Figure 3 to the representation in Figure 4 of the periphrastic evidential expression *I saw that*…:

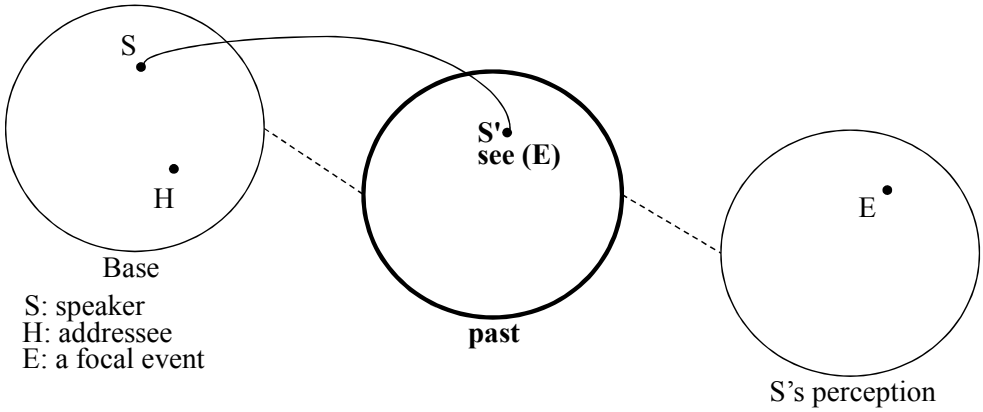


Figure 4. Space-Building in a Periphrastic Evidential Expression

Both types of construction use similar kinds of information, and the interpretations that the interlocutors ultimately obtain from them are similar. However, unlike in an evidential construction, in a periphrastic evidential expression, the temporal setting of the speaker's perception (in the case in Figure 4, the past) is profiled and asserted. In other words, an

evidential construction is distinct from a periphrastic evidential expression in that it profiles different portion of the mental-space network.

Note that the notion of evidence is different from that of information source. The evidence ('Evid' in Figure 3) is the stimulus that the experiencing origo accesses. The information source is the mode of access by which the speaker obtains some piece of information or in MST terms, the term 'information source' refers to the speaker's indexical access to the focal referent/ stimulus (the evidence) in the context. Different modes of access are expressed by different evidential markers.

The notation in Figure 3 differs from that in Figure 1 in that 'S' rather than 'S',' is used to represent the speaker in the speaker's subjective-experience space. This notation convention is used, because, even though the subjective-experience space is in some sense separate, in that it contains backgrounded information that only one interlocutor (the speaker) can access, it is essentially still part of the Base rather than being a fully independent embedded space that can introduce a new viewpoint. 'S' in the subjective space is therefore deictically identical to s in the Base space. This analysis is supported by the fact that the S in the subjective-experience space cannot be conceptualized to be a person who is being objectively observed by the S in the Base space.

Using the mechanism of backgrounded-information accommodation, I believe we can capture the phenomenon of backgrounded information in Base space that only the speaker can access, and that therefore must be analyzed as being in a quasi-separate mental space. In the following subsections, I will argue that all of the constructions in Korean that contain evidential elements can be analyzed using this representation and be given a unified account.

5.3.2 Indirect Epistemic-Space Triggering

Recognizing the cognitive space-elaboration process of *accommodating backgrounded information* helps us to fully understand the workings of the Korean evidentiality system within MST. Considering their internal structures, however, the inferential and the reportive evidential constructions in Korean are different from the firsthand evidential construction. The *-napo-* and the *-ay* constructions have a common internal structure; when the speaker is exposed to some piece of evidence, it catalyzes her reasoning based on that indirect experience, such as an inference process or the recognition of the content of hearsay. An inferential evidential statement is licensed when the speaker has been exposed to evidence that triggers a process of inductive reasoning; for example, the sentence in (7) might be licensed when the speaker had heard raindrops from inside a room that did not have a window.

(8) *pi-ka* *o-napo-ta*
rain-Nom come-Ev.Infr-Decl
'it**'s raining**.'

Such an inferential statement is licensed only when some piece of evidence (such as the sound of raindrops) has caused the speaker to make an epistemic assessment. In this case, the evidence is prominent and immediately accessible in the context. This prominent and immediately accessible evidence triggers the experiencing origo's inference process. This is different from the firsthand evidential construction; *-te-* encodes the speaker's firsthand experience and further the speaker's positive epistemic stance toward the experience, not an indirect experience.

In order to fully represent the inferential and the reportive evidential constructions, we need to describe another kind of space elaboration, which I shall call indirect epistemic space triggering. The MST representation of the sentence in (8) is shown in Figure 5.

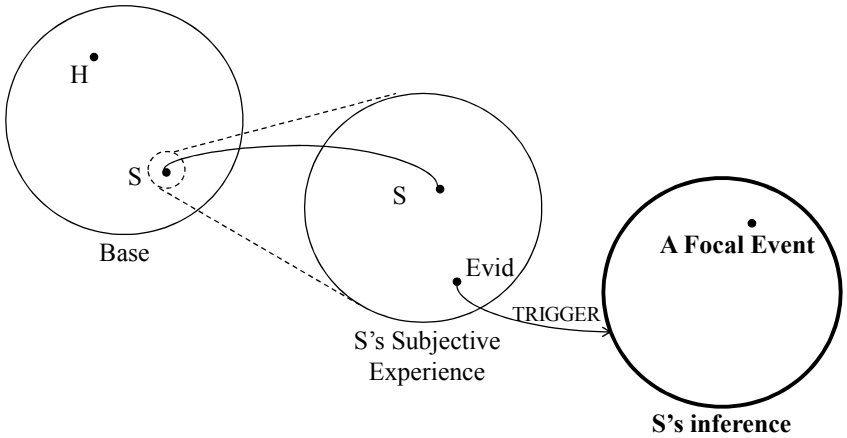


Figure 5. The Inferential Evidential -*Napo*-, as Used in (8)

In her initial construal process, the speaker is accessing information in her subjective-experience space. When she recognizes the presence of some piece of evidence, it triggers an inference process that embeds a focal event in the space, with an attendant epistemic assessment (for example, recognizing the sound of raindrops leading to a conclusion that it is raining now). This kind of space evocation is represented in the diagram with an arrow labeled TRIGGER.

Note that the way the speaker's indirect-experience space, i.e., the speaker's inference-space is built up differs from the normal way mental spaces are evoked (cf. Figure 1). The perceptual evidence that is immediately accessible to the speaker triggers the speaker's indirect-experience space.

It is also important to understand why this kind of space elaboration should be called indirect 'epistemic' space triggering. The triggered mental space is an epistemic one, meaning that the speaker's epistemic stance differs depending on which mode of access is specified by the space. For example, when the speaker's inference space is triggered, her epistemic stance will be weaker than when the speaker's firsthand-experience space (FE space) is evoked. I argue that formal representation of *indirect epistemic space triggering* is necessary to represent inferential and reportive constructions. The indirect means way of elaborating mental spaces is employed throughout this chapter for modeling the construal of inferential and reportive evidential constructions.

5.4 Modeling Korean Evidential Constructions Within MST

In general, each of the three kinds of evidential construction in Korean conveys the backgrounded information that the speaker has obtained the focal information via a particular mode of access. In addition, inferential and reportive evidentiality convey that the focal information is part of the speaker's indirect experience that has been triggered by available evidence. Representations of those types of evidentiality therefore involve backgrounded information accommodation and indirect epistemic space triggering.

This section explores each of the Korean evidential constructions – the retrospective firsthand evidential marker *-te-*, the inferential evidential *-napo-*, and the reportive/ quotative evidential marker *-ay* – and models them within MST. It particularly focuses on conjunct/ disjunct phenomena that occur in the uses of the three constructions experiential and nonexperiential predicates.

5.4.1 The Retrospective Firsthand Evidentiality Marker *-Te-*

The evidential element *-te-* is versatile in that it indicates firsthand evidentiality, past tense reference (retrospectivity), imperfectivity, and strong positive epistemic modality. Linguists have analyzed *-te-* in a variety of ways because, as I described in Chapters 3 and 4, it is employed in expressing firsthand evidentiality, in reporting information from a conceptual distance, and in highlighting that an event is cognitively bounded off from the spatial and temporal domain where an utterance takes place.

When the firsthand evidentiality marker *-te-* is used, it indicates that the information in the utterance is derived from the speaker's direct experience. An event that is perceived by the speaker and another event where the speaker recollects the focal information are superimposed. The superimposition of the two events results in tension between the identities of the two experiencers of those two events, which in turn yields a semantics of subjectivity. This subjective semantics has been grammaticalized into restrictions on subject results in conjunct/ disjunct phenomena.

5.4.1.1 Conjunct/ Disjunct Phenomena in the *-Te-* Construction

The conjunct/ disjunct phenomena found in the *-te-* construction have been described in grammars of Korean; scholars have explained them in terms of syntactic constraints such as equi- and non-equi-subject-constraints (Seo 1993). The constraints that have been proposed are summarized in (9) and (10).

(9) Equi-subject constraint (ESC): The subject of a clause with *–te-* must be the speaker if the main predicate is experiential (sensory or psych) (cited in Seo 1993).

(10) Non-equi-subject constraint (NESC): The subject of a clause with *-te* cannot be the speaker if the main predicates is not experiential (sensory or psych).

The constraint in (9) indicates that the grammatical subject should refer to the speaker herself when an experiential predicate is used; in other words, the origo should be the speaker. This constraint is exemplified in the contrast between (11) and (12).

(11) *ku ttay* *nay-ka* *oylop-te-la*
the time I-Nom be.lonely-Ev.Fh-Decl
'I **was lonely** at that time' [cited in Seo 1993]

(12) **ku ttay* *Yenghuy-ka* *oylop-te-la*
the time Yenghuy-Nom be.lonely-Ev.Fh-Decl
'Yenghuy **was lonely** at that time.' [cited in Seo 1993]

Where the experiential predicate *oylop* 'be lonely' is used, the grammatical subject must be coreferential with the speaker, as it is in (11), where the subject is *nay* 'I.' In contrast, the sentence in (11), where the subject is the third person *Yenghuy*, is ruled out.

The second constraint, in (10), describes the opposite type of case, where the grammatical subject cannot refer to the speaker. When any predicate but an experiential predicate is used, the grammatical subject must refer to someone else. This is exemplified in the contrast between (13) and (14).

(13) *Yenghuy-ka* *hakkyo-ey* *ka-te-la*
Yenghuy-Nom school-Loc go-Ev.Fh-Decl
'Yenghuy **was going** to school.'

(14) ?*nay-ka* *hakkyo-ey* *ka-te-la*
I-Nom school-Loc go-Ev.Fh-Decl
'I **was going** to school.'

When a nonexperiential predicate like *ka-* 'go' is used, the grammatical subject cannot be coreferential with the speaker; i.e., it cannot be a first-person pronoun, or the utterance will not be acceptable.

The pure syntactic approach is, however, problematic. Although these efforts to make generalizations about the patterns of distribution of grammatical subjects with respect to coreference with the speaker are on the right track, exceptionless generalizations about the reference or coreference of surface linguistic forms are generally hard to come by. The sentences in (15) and (16), for example, are exceptions to the generalizations in (9) and (10).

(15) *kkwum* *sok-eyse* *nay-ka* *kong-ul* *cha-te-la*
dream inside-Loc I-Nom ball-Acc kick-Ev.Fh-Decl
'In my dream, I **was kicking** a ball.'

(16) *nay-ka* *maum-ul* *tulyetapo-nikka,* *yenghuy-ka*
I-Nom mind-Acc look.in-Cause Yenghuy-Nom
oylop-te-la
be.lonely-Ev.Fh-Decl
'I read her mind, and she **was feeling lonely**.'

If there is an adverbial such as *in my dream* that evokes a separate imaginary self, or if the speaker is in some science-fiction context where she has direct access to the contents of other people's minds, then sentences with *-te-* can be considered acceptable even if they violate the NESC or the ESC, respectively. The unacceptability of the sentences in (12) and (14) cannot be attributed solely to syntactic rules, given that (15) and (16) show such sentences would be entirely acceptable in some broader discourse context that involved a dream or mind-reading. I therefore argue that it is not a matter of syntactic rules *per se*, but a matter of the semantics of viewpoint shifts.

One generalization that we can draw from these observations is that, although it can invoke a past event, *-te-* alone cannot create enough distance for the speaker to fully objectify herself, i.e.,

to make of herself a separate object for her own observation. However, in a context where the speaker is already divided into subject and object (for example, in a dream about herself), *-te-* can be used to refer to this observer's experience. In fact, there are a number of contexts in which the sentence in (14) would be perfectly acceptable, for instance, if the speaker were suffering from amnesia and could not remember what she had done, but was observing a video that has been taken of her. To license such an utterance, the speaker must be capable of somehow creating a distance between the cognizer and the observed subject, or in other words, a conceptual discontinuity between the speaker and the observed subject participating in the event (even if it is the speaker's self), in the given context. If she is successful in creating such a conceptual discontinuity using rich implicatures, utterances like (14) can be licensed.

There are yet more types of counterexamples that are fully acceptable despite violating the NESC. First-person utterances with *-te-* are licensed when the speaker can make herself a separate object of her own observation by conceptually dividing her mental state into unconsciousness at the event time and that of consciousness at the speech time. For instance, the adverbial *molu-key* 'unconsciously' in (17) objectifies the grammatical subject so the origo can identify it – i.e., herself – as her observational target from a conceptual distance.

(17) *na-to* *molu-key* *kong-ul* *cha-te-la*
I-even not.know-Adv ball-Acc kick-Ev.Fh-Decl
'I **was** unconsciously **kicking** a ball.'

The sentence in (17) is licensed even though it contains a nonexperiential predicate a first-person subject, and *-te-*.

These data demonstrate that the relevant generalizations are not about syntactic constraints on surface forms, but about coherent construal and how the chain of events that constitutes the situation of interest is semantically and pragmatically mediated. The marker's distancing function is conceptually salient enough to override the syntactic constraint on subject use that would otherwise have rendered the utterance ungrammatical. The origo is not usually explicitly expressed in Korean syntax; only one subject is expressed on the surface, so a purely syntactic treatment of *-te-* constructions would require a lot of abstract syntax (for further discussion, see Kwon 2009).

In the following subsection, I show that Mental Spaces Theory enables us to account for the apparent counterexamples as well as the typical data and to make more plausible generalizations.

5.4.1.2 Modeling the *-Te-* Construction Within MST

The primary semantic property of *-te-* is its firsthand evidentiality function; the marker is used only if the speaker herself has perceived or directly experienced the event in question. The speaker's means of obtaining the focal information is, as I argued above, backgrounded information that is specified by the use of the evidential marker. Figure 6 shows how the proposed mechanism for space-building, BIA, provides a cognitively motivated representation of the *-te-* construction as it is used in (18).

(18) *Chelswu-ka* *kong-ul* *cha-te-la*
Chelswu-Nom ball-Acc kick-Ev.Fh-Decl
'Chelswu **was kicking** a ball.'

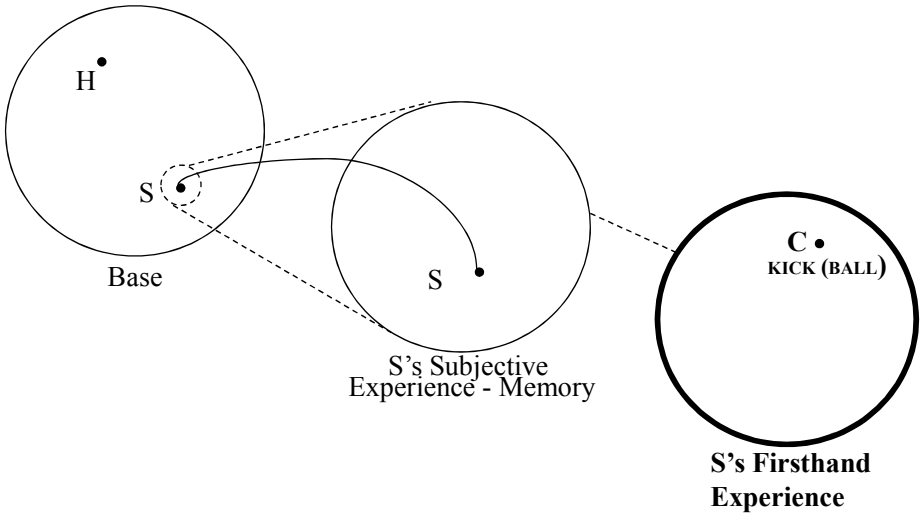


Figure 6. Representation of (18)

In (18), the speaker in the base space recollects Chelswu's (C) action in the past. This involves two additional spaces, the speaker's subjective experience space and the speaker's firsthand-experience space. The speaker's firsthand-experience space is profiled, because what the evidential construction is intended to convey is that the focal event has taken place, not that the mode of access is the speaker's firsthand experience. The spaces may overlap, but they are not identical, as they are in the normal past-tense space. The backgrounded space, the speaker's SE space, has a role (S) that corresponds to the speaker in the Base space because the subjective experience belongs to the speaker (i.e., the entity who witnessed the focal event in the past is the speaker). The SE and FE spaces are both involved in the construal, and the speaker (S) accesses the subject's (C) kicking event in her FE space via her SE space (her memory space).

The advantage of this system of representation is that it can represent in an intuitively plausible way *-te-*'s firsthand evidential function. By representing the speaker's SE and FE spaces separately from the Base space, and by enabling the speaker in the Base space to access Chelswu's action in her FE spaces via memory, we can show how the speaker witnesses the event in her SE and FE space. This thesis argues that this firsthand evidential function is the most fundamental semantic property of *-te-* and that the other semantic properties I described in Chapter 3 are based on the interaction between the firsthand evidential semantics in the FE space and its retrospective tense-like property in the memory space. The diagrams in the remainder of this subsection show that the examples mentioned above of other uses of *-te-* are based on the basic template of its firsthand evidential function, where the speaker has firsthand access to the target event in her firsthand-experience space.

5.4.1.2.1 Cognitive Discontinuity

Another semantic property of *-te-* is that it can mark a cognitive discontinuity between the speaker's temporal/spatial domain and the target event's temporal/spatial domain. Formal approaches cannot explain this semantic property and *-te-*'s other properties in a uniform way because discontinuity and direct accessibility are difficult to reconcile without taking into account viewpoints and spatial semantics. The example in (19) shows such a deictic discontinuity.

(19) **cikum* *pi-ka* *manhi* *o-te-la*
now rain-Nom much come-Ev.Fh-Decl
'Now it **was raining** hard.'

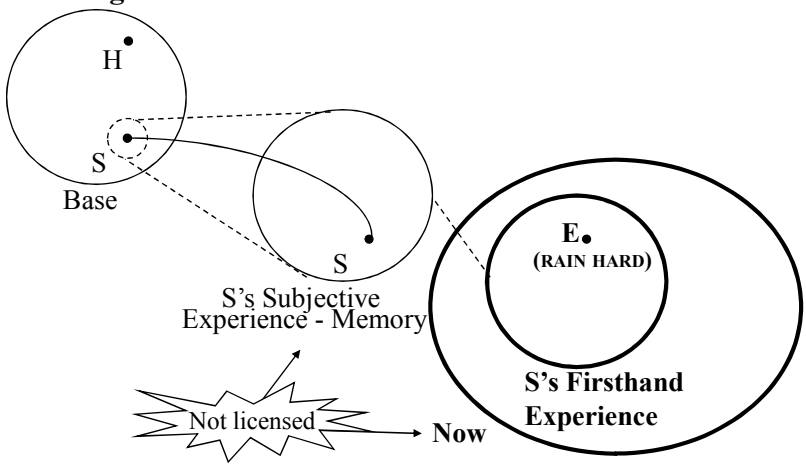


Figure 7. A Mental-Spaces Representation of (19)

The sentence in (19) cannot be used in a context where the speaker has visual access to the outside through a window. Only if the speaker's access to the event is blocked is *-te-* licensed. In addition, (19) is not licensed because its temporal settings of the evoked spaces clash with each other. The setting where the speaker utters the sentence and the setting where it is raining are deictically discontinuous. The linguistic expression *cikum* is a space-builder that creates a mental space whose temporal grounding is 'now.' However, this adverbial is not compatible with the speaker's SE space which belongs to the speaker's memory. Thus, the sentence is not licensed.

5.4.1.2.2 Conjunct/Disjunct Phenomena With Nonexperiential Predicates

Now, let us take another look at the constraint in (9), which requires that the protagonist of the target event that was observed by the speaker not be identical to the speaker if the predicate is of the experiential type. It is important to understand that the OBSERVATION frame is core to the construal of the evidential construction. It evokes relevant frame elements such as OBSERVER and OBSERVEE. The semantic restrictions imposed by this frame in most cases rule out a first-person pronoun in the subject position when the sentence contains the marker *-te-*, because in a normal context, a speaker does not objectively observe her behavior from a third-person perspective because the OBSERVER and OBSERVEE cannot be the same entity. For instance, the sentence in (20), where a first-person pronoun is used, is not felicitous.

(20) ?*nay-ka* *kong-ul* *cha-te-la*
I-Nom ball-Acc kick-Ev.Fh-Decl
'I **was kicking** a ball.'

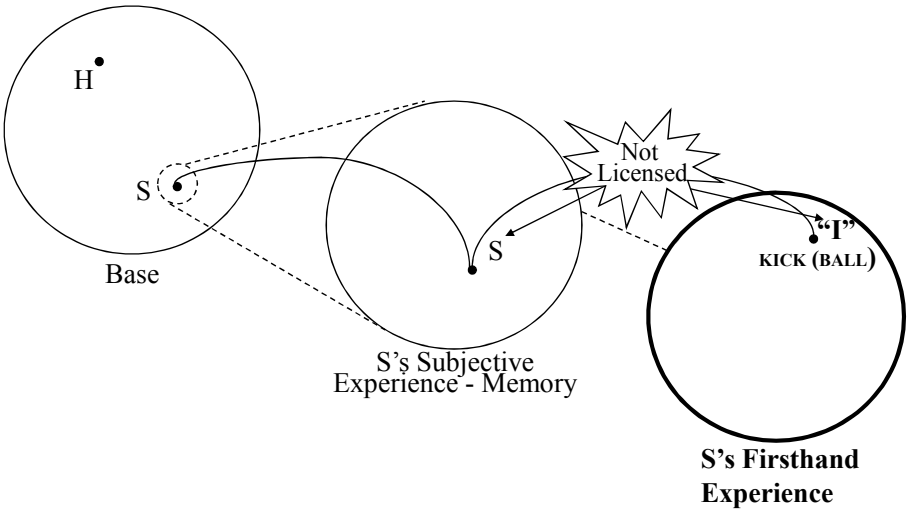


Figure 8. Mental-Spaces Representation of (20)

Figure 8 shows the semantic clash that makes (20) problematic; the speaker does not tend to be identical to the target of her own observation. The observed participant, *nay* 'I,' is the same person as the speaker, and the speaker cannot observe her own actions in the past. The reason I label it "I" is to note that "I" represents the protagonist of the focal event, whereas 'S' represents the speaker of the recounting event. For S to observe "I," the two roles should be construed to be separate, so one can observe the other objectively. This is the reason (20) is not licensed; likewise we can straightforwardly account for the other examples that syntactic accounts handle using constraints.

The advantage of the MST approach is its ability to account for the examples that the previous accounts could not handle properly. For example, the sentence in (15') is perfectly felicitous.

(15')	*kkwum sok-eyse*	*nay-ka*	*kong-ul*	*cha-te-la*
	dream inside-Loc	I-Nom	ball-Acc	kick-Ev.Fh-Decl

'In dream, I **was kicking** a ball.'

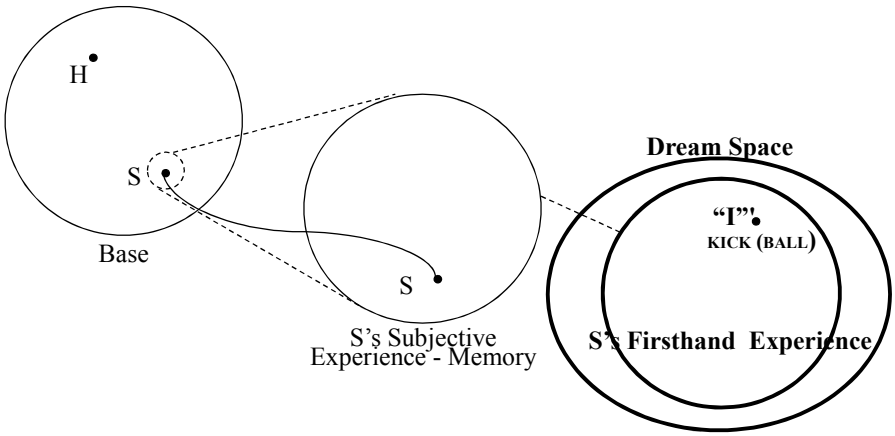


Figure 9. A Mental-Spaces Representation of (15')

When an explicit space builder is added to the sentence, it is licensed, even though it violates the NESC. The sentence in (15') includes such an explicit-space builder, *kkwum sok-eyse* 'in a

dream,' which contributes to the licensing of the utterance. With an explicit space-builder, the identity relation that is not licensed in (20) does not cause a clash; this is demonstrated in the diagram in Figure 9. The roles S (in the S's SE space) and I (in the S's FE space) can be separated without serious resistance from our common sense; in our dreams, we can freely observe ourselves from within or without. Putting it in MST terms, thanks to the metaspace established by the adverbial *kkwumsok-eyse*, the S in the SE space is not necessarily identical with the I in the FE space, so the speaker can access the actions of I as if she were a third party. In other words, a speaker's firsthand witnessing of her self is more plausible in a dream space.

5.4.1.2.3 Conjunct/ Disjunct Phenomena With Experiential Predicates

Let us look at the converse constraint, which requires that the protagonist of the target event be identical to the speaker in sentences with an experiential predicate (such as *oylop-* 'be lonely,' *sulphu-* 'feel sad,' or *hayngpokha-* 'feel happy') (Yang 1972, Seo 1993). Since experiential predicates express the internal state of the speaker, nobody but the speaker herself can have an access to the target state. Such a sentence is given in (21):

(21) *ku-ttay* *nay-ka* *oylop-te-la*
the-time I-Nom be.lonely-Ev.Fh-Decl
'At that time, I **was feeling** lonely.'

Because the example in (21) contains *-te-*, the speaker's SE space is backgrounded, as it is in the example shown in the diagram above (Figures 6-9). However, (21) also includes an explicit-space builder, *ku ttay* 'at that time' (i.e., in the past), there is also a metaspace that creates a deictic distance between the speaker and her past self. This conceptual distance licenses a self-split, in which the speaker view her self as if that self were a third person.

It is noteworthy that an experiential predicate creates a mental-space layer that blocks access to the internal state of its experiencer, i.e. to the experiencer's experience space. An experiential predicate usually evokes such an inherent mental space because of its idiosyncratic nature of limited accessibility; this can be represented in a mental-spaces diagram such as that in Figure 11 by an oval line surrounding the role I in the speaker's FE space (Kwon 2009).[67]

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[67] In some cases, an experiential predicate can be licensed with a third-person subject, where the light verb *-e ha-* is attached after the main verb (K.-S. Chung 2007: 199), as in the example in (v).

(v) *ku ttay* *Chelswu-ka* *oylop-**e ha-te**-la*
That time Chelswu-Nom be.lonely-LV-Ev.Fh-Decl
′At that time, Chelswu **was feeling** lonely.′

The sentence in (v) could be licensed in a context where the speaker witnessed behavior of Chelswu′s that she evaluated as being due to his feeling lonely. This example, however, does not undermine our analysis, because what makes the sentence acceptable is the auxiliary verb *-e ha-* ′do.′ According to a number of Korean speakers including the present author, the light verb *-e ha-* ′do′ can be used with a stative verb to frame the situation as an action, via a metonymic relationship between the state and the typical things a person would do when she was in that state. For instance, in (v), it might be the case that Chelswu tends to drink a lot when he feels lonely, and the speaker knows this, so when she observes that Chelswu has been drinking a lot, she infers that he is lonely. In this way, the light verb contributes information that allows the sentence to be licensed.

In other words, the light verb *-e ha-* conveys that the description of the target event or situation is based on the speaker′s inference formed by observing the protagonist′s indexical activities. If it is used with an experiential predicate, the experiential nature of that predicate is neutralized, and therefore, it is compatible with a third-person noun as the subject. Access to the self-generated domain of the protagonist, Chelswu, is not needed, because the typical activity that Chelswu does when he feels lonely is the object of the speaker′s observation, rather than the

In (21), however, the layer is transparent; this is represented in the diagram of (21) in Figure 11 by a dashed-line oval. Because the meta domain that contains the layer belongs to both the experiencer and the speaker, as the speaker can freely access her own retrospective mental state. In some sense, because *-te-* indicates that the speaker is encoding her own remembered mental state in the utterance, no one but the speaker herself should be able to access it.

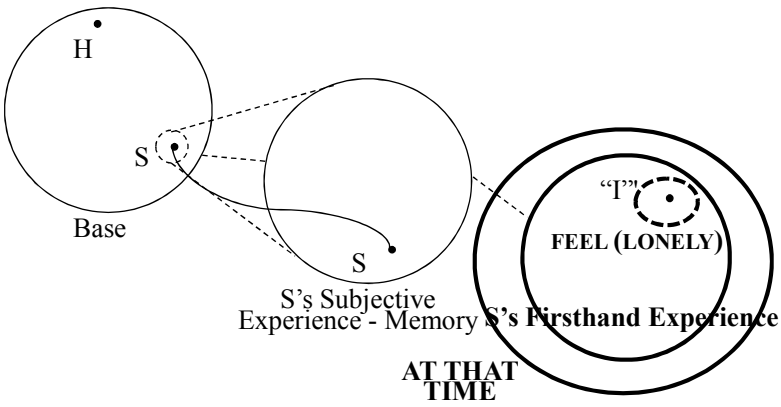

Figure 10. A Mental-Spaces Representation of (21)

Note that this pattern shown by experiential predicates is the opposite of the pattern shown by nonexperiential predicates such as those in (18) and (20) above. When an experiential predicate such as *oylop* 'be lonely' is used in a sentence, a first-person subject is licensed, but a third-person subject generally is not. The bottom line underlying this observation is that "I" is the only participant who can access the internal state of the speaker (S), and that no one can access another person's mind, unless they have extrasensory or supernatural capabilities. Because experiential predicates convey information about the internal states of the human mind, information about non-first persons is inaccessible; this cognitive reality has been reified into the syntactic constraint of the ESC.

Because the speaker can only access her own internal state, third-person subjects are not licensed in sentences that contain an experiential predicate and *-te-*, such as (22).

(22) **ku-ttay* *Chelswu-ka* *oylop-te-la*
the-time Chelswu-Nom be.lonely-Ev.Fh-Decl
'At that time, Chelswu **was feeling lonely**.'

inner state that only Chelswu can access.

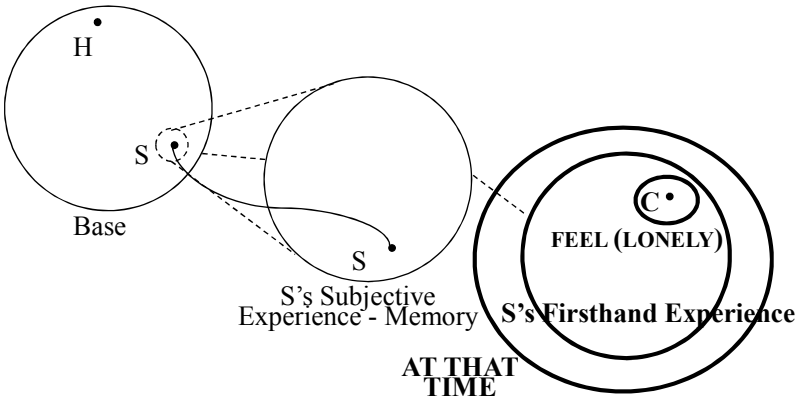

Figure 11. A Mental-Spaces Representation of (22)

As shown in Figure 11, the speaker is not identical to the protagonist, Chelswu, so the mental-space layer that the experiential predicate creates is in effect; no one but the protagonist can access his mental state. The speaker does not have access to Chelswu's (C's) internal state, because she cannot physically witness what is in another person's mind. This cognitive structure results in the sentence being unacceptable.

5.4.1.2.4 Distancing Effects

The sentence in (23), which is identical to that in (21) except that it lacks the explicit-space builder 'at that time,' is judged as marginal, despite meeting the ESC. It seems that a sentence such as that in (23) is difficult to construe properly without having an explicit temporal setting that creates a proper environment for deictic discontinuity.

(23) ?*nay-ka* *oylop-te-la*
I-Nom be.lonely-Ev.Fh-Decl
'I **was feeling lonely**.'

The speaker is not distinct from the first-person subject, and her objective observation of her self is unlikely to be licensed simply because the backgrounded information has been conveyed that the target event occurred and was experienced by the speaker. There must also be a mental space involved that creates conceptual distance between the recounting origo and the grammatical subject so that the self-splitting process can take place in the speaker's mind.

As I mentioned above, one means of improving the grammaticality of (23) would be to employ a distancing tactic (Dancygier and Sweetser 2005) in which the speaker distances herself from the focal event so that she can talk about it without being much involved or can present it as if she were a third party to the event. Putting it in MST terms, this distancing strategy can be represented by positing more than one space between the base space and the speaker's perception space.

Distancing effects can be found in various kinds of grammatical constructions. Any construction that creates an informational asymmetry in how the overall semantics of the sentence is construed belongs to this category, including topicalization constructions and scalar

grammatical elements such as *even* and *also*.[68] (For a detailed discussion, see Kwon 2009.) To provide an example of how MST handles distancing effects by layering spaces, I will start by analyzing the example in (24) with the distancing linguistic cue *-man* 'only.' The sentence in (24) would be licensed in a situation where the speaker had expected everyone would be kicking the ball.

(24) *na-man* *kong-ul* *cha-te-la*
I-only ball-Acc kick-Ev.Fh-Decl
'I **was** the only one **kicking** the ball.'

The contrast in (24) between what really happened and what the speaker expected to happen licenses the sentence. That is, the grammatical element *man* 'only' signals a presupposition that other people were there and that they could have kicked the ball, and this presupposition evokes the speaker's expectation space. The blended space, represented at the top of Figure 12, yields the contrast based on the inputs from the speaker's FE and expectation spaces. As a result, the speaker's access to the protagonist, the objectified I, is affected by the speaker's expectation space, and is distanced.[69] Consequently, the sentence is licensed despite having a first-person subject with a nonexperiential predicate.

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[68] Some linguists, such as J.-M. Song (1998), have argued that passivization can also improve the grammaticality of such sentences, and providing the examples in (vi) and (vii) as proof.

(vi) **nay-ka* *phiano* *soli-lul* *tut-te-la*
I-Nom piano sound-Acc listen.to-Ev.Fh-Decl
'I **was listening to** the sound of the piano.'

(vii) *nay-ka* *phiano* *soli-ka* *tul-li-te-la*
I-Nom piano sound-Nom listen.to-Pass-Ev.Fh-Decl
'The sound of the piano **was being listened to** by me.'

These previous works have claimed that (vi) is not grammatical and (vii) is, and that this is an exception to the NESC. However, it seems to me that both examples could be licensed, depending on the context. The sentence in (vi) would be licensed in a context where the speaker intended to listen to the music, while (vii) would also be licensed in a context where the speaker did not intend to listen to it, but heard it nonetheless. (The Korean verb *tut-* is vague with regards to intentionality; it could be translated as either *listen.to* or *hear* depending on the context.) We therefore cannot conclude that this pair of sentences is a definitive counterexample to the NESC; we can only conclude that the grammaticality of such sentences depend on whether they are uttered in a context where the speaker has distanced herself enough to objectify her observation. How to specifically represent the subtle agency shift in passivization will require further study.

[69] This tendency does not seem to be limited to Korean, as demonstrated by the pair of English sentences in (viii) and (ix).

(viii) ?It seemed I kicked a ball.
(ix) It seemed I was the only one who kicked a ball.

In general, the sentence in (ix) is considered more felicitous than that in (viii). This comparison shows that the grammatical element *only* also evokes a topic space between the Base space and the speaker's perception space in English (Russell Lee-Goldman, p.c.).

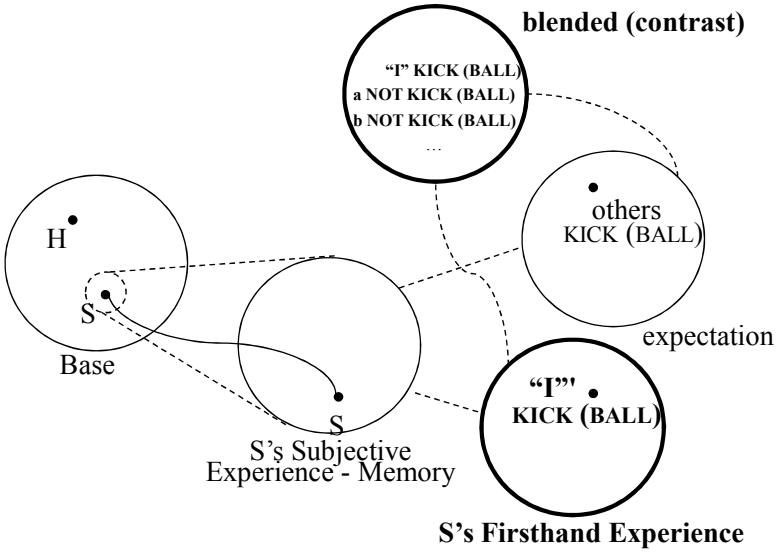

Figure 12. A Mental-Spaces Representation of (24)

In this example, we see that the speaker's presupposition and its evocation of a contrastive meaning, facilitates the licensing of (24). This shows that what is interesting about the subject asymmetries in the uses of *-te-* is not whether they adhere to formal constraints or not, but what the speaker's stance towards the focal event is and how the construal of that stance is affected by the speaker's viewpoint shifts and distancing strategies, which are likely to be frequently used in the course of communication.

This subsection has explored various factors that affect the grammaticality of examples that have been regarded as exceptions to conjunct/disjunct constraints in previous research. All the data analyzed here conspires to indicate that the Korean retrospective firsthand evidentiality marker *-te-* can be fully grasped only when we consider its semantics of subjectivity and the conceptual distance between the speaker and the experiencer of the focal event. Using MST, I have modeled these phenomena in a more elegant and intuitive fashion than the previous formal approaches (For more discussion of these data, see Kwon (2009).

5.4.2 The Inferential Evidentiality Marker *-Napo-*

-Napo- functions as an inferential evidential marker. Unlike from the firsthand evidentiality marker *-te-*, it does not convey other information such as tense and aspect, but functions solely as an evidential cue indicating that the source of information is the speaker's inference. An inference event that results from the speaker's perception of some evidence about a focal event, and another event where the speaker accesses the focal information, are superimposed. Note that the information source in this case is indirect, the speaker is making an inference based on some piece of evidence present in the context. Because inference is relatively independent of temporal and spatial configuration with regard to direct experience, *-napo-* is relatively freely licensed with both conjunct and disjunct subjects, unlike the firsthand evidentiality marker *-te-*. However, the superimposition of viewpoints still results in tension between the identities of the two experiencers of the two events, which in turn yields a semantics of subjectivity, as with *-te-*.

5.4.2.1 Conjunct/ Disjunct Phenomena

The evidential function of *-napo-* requires that the speaker's inference be based on her objectified observation. Because *-napo-* encodes that the speaker's mode of access to the information is indirect, i.e., inference, if the marker is used with an event that the speaker has directly experienced, the acceptability of the utterance is marginal. This is because the speaker is not abiding by the Gricean Maxim of Quantity (Grice 1975); the speaker is not expressing as much as she knows. This yields asymmetries in grammaticality between usages involving first-person subjects and those involving non-first-person subjects; this contrast is demonstrated in (25) and (26).

(25) *Chelswu-ka* *cikum* *selkeci-lul* *ha-napo-a*
Chelswu-Nom now dishwashing-Acc do-Ev.Infr-Indic
'Chelswu **is doing** the dishes now.'

(26) ??*nay-ka* *cikum* *selkeci-lul* *ha-napo-a*
I-Nom now dishwashing-Acc do-Ev.Infr-Indic
'I**'m doing** the dishes now.'

As shown in (25) and (26), a third person subject is licensed with *-napo-*, whereas a first-person subject is marginal in most contexts. The cognitive reason for this asymmetry is that *-napo-* indicates that the speaker's conceptualization of the event referred to in the utterance is a result of her conjecture; it therefore, also implies that she is not certain about the information. However, people are normally aware of their own conscious, volitional actions occurring at the speech-act time such as washing dishes. Therefore, if the speaker describes what she herself is doing at the coding time and uses an inferential marker, it seems contradictory. The information source that *-napo-* encodes is not direct, and that indirect inferential evidentiality conflicts with the direct access that speakers, i.e., first-person subjects, can usually be assumed to have with respect to our own current actions.

These data on nonexperiential predicates contrast with the data on experiential predicates. As discussed with regard to firsthand evidentiality in the previous subsection, because an experiential predicate refers to someone's internal state of mind, only the experiencer has access to that state. Limitations on access to the contents of someone else's mind explain the disjunct phenomena exhibited by the firsthand evidentiality marker *-te-*. However, these limitations access do not result in strict constraints on the person of subjects used with *-napo-*, as shown by the examples in (27) and (28).

(27) *Yenghuy-ka* *manhi* *oylop-napo-a*
Yenghuy-Nom much be.lonely-Ev.Infr-Indic
'Yenghuy **feels lonely**.'

(28) *nay-ka* *manhi* *oylop-napo-a*
I-Nom much be.lonely-Ev.Infr-Indic
'I **feel lonely**.'

The sentence in (27) would be licensed in a context where the speaker had noticed that Yenghuy was drinking a lot, which she knew was Yenghuy's typical behavior reaction to feeling lonely. The speaker might then infer from Yenghuy's behavior when that Yenghuy felt lonely. (This inference might or might not be true, but it is what the speaker thinks based on her observation of Yenghuy's behavior.) The sentence in (27) is licensed because the speaker's limited access to Yenghuy's internal state of mind is compatible with the semantics of indirect inferential evidentiality.

However, note that (28), which includes the first-person subject *nay* 'I,' is also licensed. A possible context for (28) might be that the speaker is telling the addressee that she is not sure what she is feeling now, but she can guess that maybe she feels lonely. The inferential semantics of *-napo-* do not make the utterance unacceptable, even though the speaker is identical to the grammatical subject; rather, it implies a conceptual distance between the speaker and her self so that she can frame the situation as though she does not have direct access to her own mind and has to guess about what her internal state might be.

This conceptual distance can also be created by grounding the tense information associated with the events involved differently. For example, when the temporal reference of the focal event is encoded as past tense, the conceptual distance is lengthened and therefore first-person nonexperiential utterances like that in (29), with the anteriority marker *-ess-*, become acceptable.

(29)	*nay-ka*	*selkeci-lul*	*ha-ess-napo-a*
	I-Nom	dishwashing -Acc	do-Ant-Ev.Infr-Indic
	'I **did** the dishes.'		

In an utterance with a nonexperiential predicate, a first-person subject, and *-napo-*, the event in question is interpreted as unintentional or mentally inaccessible. For example, (29) could be licensed if the speaker had lost her memory of doing the dishes, for example if she had gotten so drunk that she did not remember anything that happened when she woke up the next day, but found that the dishes were somehow clean.

In sum, *-napo-* can create conceptual distance between the speaker's recounting event and the focal event that she has inferred. Because the mode of access encoded by the marker is indirect, disjunct-subject constructions with an experiential predicate are licensed with *-napo-*. In addition, extra conceptual distance can be created by inserting an anteriority marker or by configuring the tenses of the involved events differently, affecting the acceptability of *-napo-* constructions. As I argued above, the semantics that arise from tensions between the identities of the speaker and the grammatical subject and from the so-called distancing effect cannot be properly dealt with if one considers only the surface syntactic effects. In the following subsection, I employ Mental Spaces Theory to provide an explanation that captures the viewpoint semantics of the *-napo-* construction and its distancing effects.

5.4.2.2 Modeling the *-Napo-* Construction Within MST

Mental spaces are evoked whenever a particular viewpoint takes a stance or an attitude towards some piece of information. The construal of the *-napo-* construction involves two such mental spaces. One is the speaker's subjective-experience space, which contains information about how the speaker has obtained the focal information. The information accommodated by the SE space is backgrounded and is implicitly accessed by the interlocutors within the Base space.

The other is the speaker's inference space, which indicates that the information source is an inference process that has been triggered by some evidence the speaker has been exposed to in the context.

In this subsection, I provide mental-spaces representations of the *-napo-* construction in terms of the mechanisms of backgrounded-information accommodation and indirect epistemic-space triggering that I introduced above in Section 5.3.

5.4.2.2.1 Conjunct/ Disjunct Phenomena in *-Napo-* Constructions

The example in (30) of a nonexperiential predicate with *-napo-* is disjunct in that it has a grammatical subject not equivalent to the speaker. The utterance in (30) could be licensed in a context where the speaker had heard someone running water in the kitchen sink inferred from the sound that her housemate Chelswu was washing dishes at the speech-act time.

(30) *Chelswu-ka* *cikum* *selkeci-lul* *ha-napo-a*
Chelswu-Nom now dishwashing-Acc do-Ev.Infr-Indic
'Chelswu**'s doing** the dishes now.'

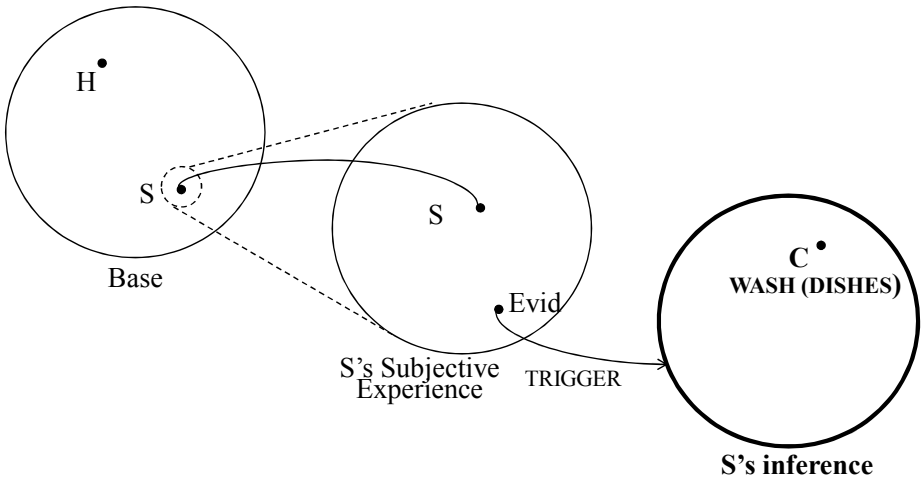

Figure 13. A Mental-Spaces Representation of (30)

The diagram in Figure 13 shows that the construal of (30) involves three mental spaces: the Base space, the speaker's subjective-experience space (SE space), and the speaker's inference space. The SE space is elaborated by BIA; this projection is represented in the diagram by a dotted line originating from the speaker in the Base space. In the speaker's SE space, the speaker accesses the evidence that triggered her inference, in this case, the sound of someone using the sink. The inference is triggered by the evidence; this is the IEST process; in the resulting inference space, the event of Chelswu's washing dishes is taking place.

The way the speaker's inference space is created is different from the way the speaker's firsthand-experience space is evoked. The speaker's firsthand experience is linked directly to the speaker's subjective-memory space because the speaker has already obtained and is thus able to access any relevant information about the experience. In contrast, an inference space is evoked only when the speaker perceives a piece of evidence that triggers an inference.

Accordingly, the epistemic nature of the speaker's inference space differs from that of the speaker's firsthand-experience space. Since the speaker can fully vouch for what she has experienced herself, the firsthand-experience space's epistemicity is strongly positive; she is sure that the focal event happened or the focal situation holds. In contrast, in the case of inferential evidentiality, the speaker's epistemic stance towards the event is weak, and she does not fully vouch for the validity of the information she is conveying.

What this difference in epistemicity indicates is that the process of creating and elaborating the kind of mental space that is evoked by the inferential evidential marker *-napo-* is different from other space-building processes. This is represented in the diagram above of indirect epistemic-space elaboration by the lack of a standard space link between the speaker's subjective-experience space and the speaker's inference space; rather, there is a *trigger* link between the evidence in the SE space and the speaker's inference space. This *trigger* link is employed in diagrams in the remainder of this work to represent connections between the speaker's subjective-experience space and the speaker's inference space that are involved in inferential evidential constructions.

Figure 14 represents the infelicitous sentence in (31), showing why it is ruled out in terms of MST.

(31) ??*nay-ka* *cikum* *selkeci-lul* *ha-napo-a*
I-Nom now dishwashing-Acc do-Ev.Infr-Indic
'I'**m doing** the dishes now.'

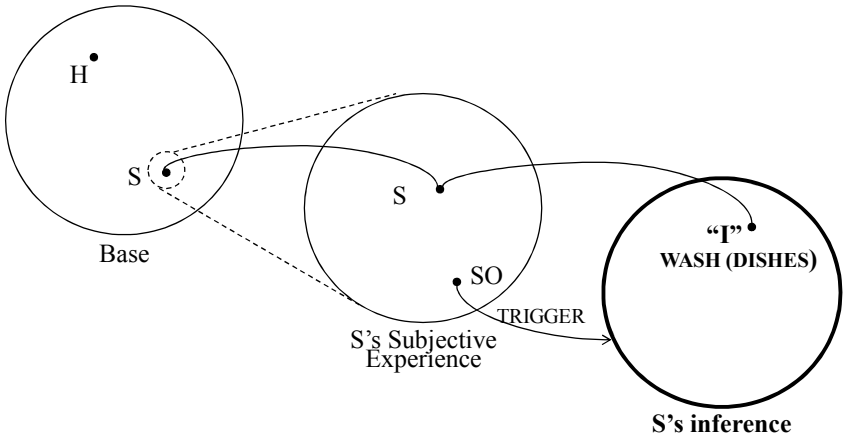

Figure 14. A Mental-Spaces Representation of (31)

The diagram is similar to that in Figure 13 except that the protagonist in the speaker's inference space is the speaker herself. The speaker is observing some piece of evidence (Evid) and inferring based on it that some action is taking place at the speech act time; this is anomalous because one generally does not have to use an inference process to access information about one's own behavior, unless there is a deictic gap between the behavior and the recounting event. In other words, the access S in the speaker's SE space has to "I" in the speaker's inference space must be indirect if it is encoded by the indirect inferential evidential marker *-napo-*, but instead, the speaker and the grammatical subject are identical (shown by the solid identity link between S in the SE space and S' in the inference space), and it is difficult to imagine a context where such an indirect link would be licensed, especially because non-experiential predicates usually refers

to the intentional actions of a particular viewpoint. In addition, because *-napo-* does not convey any tense and aspect information, it cannot by itself create any further conceptual distance. Consequently, the utterance in (31) is not licensed.

Turning to experiential predicates, the limitations they impose on external access goes well with the semantics of indirect evidentiality. First, let us look at an utterance where a third-person subject is used with *-napo-*.

(27') *Yenghuy-ka* *manhi* *oylop-napo-a*
Yenghuy-Nom much be.lonely-Ev.Infr-Indic
'Yenghuy **feels lonely**.'

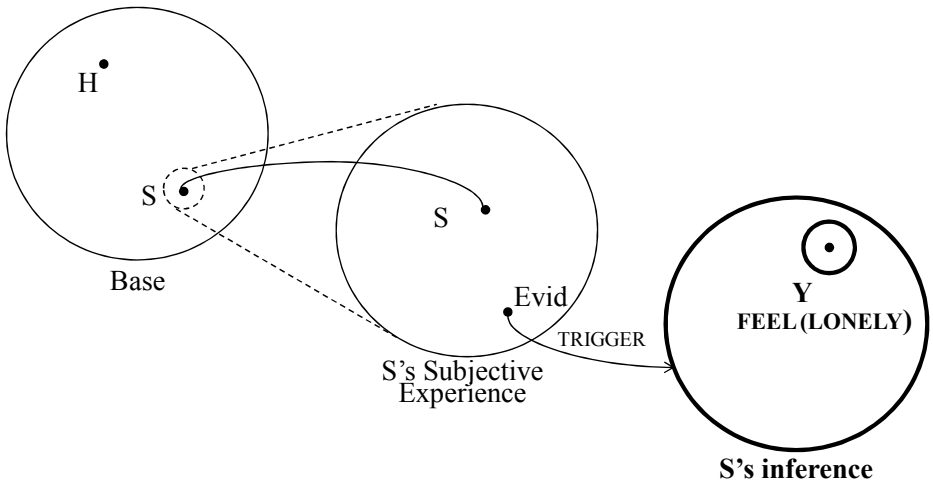

Figure 15. A Mental-Spaces Representation of (27')

The experiential predicate in (27') is in its own domain that only the experiencer can access; this limitation is represented in Figure 15 by a circle that surrounds the role of Yenghuy (Y) in the speaker's inference space. The speaker does not have access to this special domain within the speaker's inference space, because she cannot access someone else's internal state. This limited access to the domain of Yenghuy's internal state is compatible with a structure of indirect access to the role of Yenghuy, and therefore with the semantics of inferential evidentiality, which conveys that the speaker is making an assumption, prediction, or inference that is being indirectly evoked via some information source. As a result, (27') is licensed.

Meanwhile, utterances like (32), which have first person subjects, experiential predicates, and *-napo-*, are also licensed. It is intriguing that an experiential predicate can be licensed with *-napo-*, even though the speaker and the grammatical subject are identical.

(32) *nay-ka* *manhi* *oylop-napo-a*
I-Nom much be.lonely-Ev.Infr-Indic
'I **feel lonely**.'

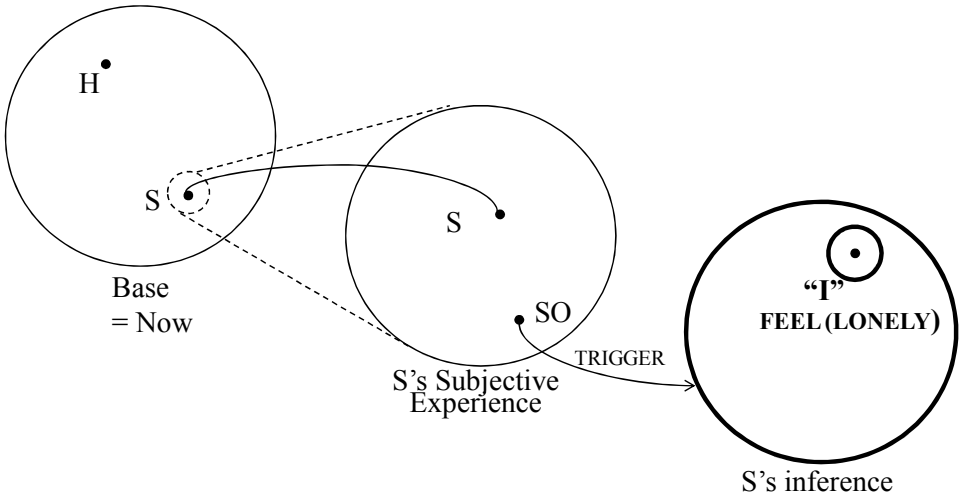

Figure 16. A Mental-Spaces Representation of (32)

Common sense tells us that the access S in the speaker's SE space has to "I" in the speaker's inference space ought to be direct, since the speaker should be able to access her own state of mind. However, the link is construed as indirect, as if the speaker were observing herself objectively from a third-person perspective. Such an utterance is licensed in a context where the speaker is not sure of how she is feeling now and is guessing at it. This type of self-split is more likely than a self-split with a nonexperiential predicate because the type of states and processes experiential predicates encode is not intentional. The less intentional one's behavior is, the more possible it is to access it from an objective point of view. In other words, the unintentionality of the experiential predicate yields a conceptual distance between the speaker and her own behavior, and so sentences like that in (32) are licensed.

5.4.2.2.2 Another Factor in Distancing Effects: Tense Configuration

In addition to experiential predicates, where lack of intentionality creates a conceptual distance, the conceptual or deictic distance can be created by variety of other kinds of space-builders. One such linguistic cue that creates a distinct mental space is temporal configuration. When the temporal reference of the observed event differs from that of the recounting event, there is a temporal gap that gives rise to conceptual distance. For instance, a sentence similar to that in (31) would be licensed if the focal event were accommodated in a distinct tense domain that was different from the temporal reference of the Base space. The example in (29') shows that such a sentence is felicitous when the anteriority marker *-ess-* is added and the event is accommodated in a past-tense space.

(29')	*nay-ka*	*selkeci-lul*	*ha-ess-napo-a*
	I-Nom	dishwashing-Acc	do-Ant-Ev.Infr-Indic
	'I **did** the dishes.'		

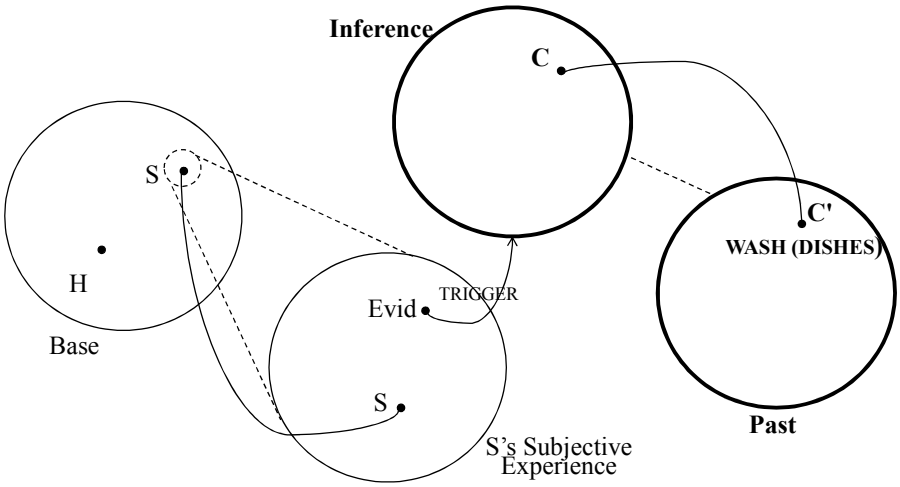

Figure 17. A Mental-Spaces Representation of (29')

The nonexperiential predicate *selkeci-ha* 'do the dishes' does not create its own domain, because it is an event that not only the experiencer but also other persons can access. To represent the sentence in (29'), we need to posit another mental space that branches off from the speaker's inference space, a past space. Since the speaker infers that the focal event (the speaker's washing dishes) took place in the past, the past space is embedded in the speaker's inference space. As with other uses of *-napo-*, the inference space is triggered by a piece of evidence (Evid) in the speaker's subjective-experience space, and therefore, the link between the speaker's SE space and the inference space is not direct. This deictic discontinuity creates more distance between S in the Base space and S' in the speaker's inference space, conveying the unintentionality or cognitive inaccessibility of the speaker's behavior. As a result, an utterance like that in (29') can be licensed, even though the speaker is making an inference about her own behavior.

This section has examined the inferential evidential *-napo-* construction, exploring how to provide cognitively motivated explanations for them. The analysis indicates that the construal of the *-napo-* construction involves the semantics of subjectivity and relies on conceptual distancing between the speaker and the experiencer of the focal event. I have modeled a variety of constructions with *-napo-* using Mental Spaces Theory. The marker's indirect mode of access, inference, licenses utterances with an experiential predicate and a third person subject, but it also licenses utterances with an experiential predicate and a first person subject, because experiential predicate connote unintentionality on the part of the speaker. The speaker can therefore take a stance towards her own behavior as if she were viewing it from a third-person perspective. Just as the unintentionality of experiential predicates creates conceptual distance, space-builders such as tense morphemes can create conceptual distance that improves the grammaticality of utterances that would otherwise appear to violate conjunct/disjunct constraints.

5.4.3 The Reportive/ Quotative Evidentiality Marker *-Ay*

The final evidential marker in the Korean evidentiality system is the reportive/ quotative evidentiality marker *–ay*. (The distinction between reportive and quotative functions is discussed in Chapter 4.) Like the inferential evidentiality marker *-napo-*, it does not convey any other information like tense and aspect, but indicates that the focal information was obtained by

hearsay, i.e., that it is an indirect quotation or a report that the speaker has obtained indirectly from someone else.

Similarly to the two evidentiality markers discussed so far, construal of the *-ay* construction involves assimilating two superimposed events, in this case an event in which the speaker obtains the information in question from something someone says and another event where that someone first obtains the information. When the original disseminator of the information is explicitly part of the context, the *-ay* construction encodes quotative semantics; when the disseminator is unspecified, the construction encodes reportive semantics. In either case, the mode of access is strictly indirect; the speaker is not construed as having been present at the scene of the focal event or situation. This semantic restriction gives rise to conjunct/ disjunct phenomena in the *-ay* construction as well.

5.4.3.1 Conjunct/ Disjunct Phenomena With the -Ay- Construction

Due to the semantic restrictions of reportivity and quotativity (discussed in Chapter 4), the *-ay* construction has conjunct/disjunct syntactic constraints. A previous study on the reportive/quotative marker captured these patterns and drew the generalization that "the source of the embedded utterance must be someone other than the current speaker and addressee..." (J.-Y. Chung in preparation: 25). This is a plausible generalization. This subsection, however, argues that the relevant phenomena cannot be given fully plausible accounts using only syntactic constraints; rather, we must consider the semantics of the reportive evidential constructions and how they involve viewpoint shifts and the speaker's subjective experience.

The *-ay* construction covers both reportive and quotative functions, as discussed in Chapter 4. When used as a reportive marker, it requires that the information source be a third-person source; its reportivity is defined by the source of information being unidentified and ungrounded in the context, i.e., anonymous. A first- or a second-person subject is necessarily specific and grounded in the context (no speaker regards what she herself has said as hearsay originating from some unidentified and ungrounded source). This semantic restriction is sufficient to explain the phenomenon; a separate syntactic constraint is not needed for the reportive use of the marker. However, the constraint is more relevant to the quotative usages of *-ay* constructions. Quotative evidentials such as that in (33) are licensed in contexts where the speaker is indirectly quoting what she heard from someone else specific.

(33) *emma-ka* *kuke* *nwulu-myen* *an-toy-n-t-ay*
mom-Nom it press-if not-be.okay-Imprf-Decl-Ev.Quot
'According to my mom, I **won**'t **be okay** if I press on it [the button].'

In (33), the information source is a third-person, the speaker's mother, and the speaker is quoting what she heard from her mother. A similar utterance with a first-person subject, such as that in (34), is only marginally acceptable.

(34) ?*nay-ka* *kuke* *nwulu-myen* *an-toy-n-t-ay*
I-Nom it press-if not-be.okay-Imprf-Decl-Ev.Quot
'According to me, I **won**'t **be okay** if I press on it.

It is difficult to imagine a context in which a speaker cites something she had told herself as a

source of evidence. This semantic constraint on the quotative construction is realized as a syntactic constraint, which affects the grammaticality judgment.

This syntactic constraint is, however, nullified in some contexts where the so-called split self (Lakoff 1996) is possible, i.e., where the recounting self in the evidential construction and the acting self in the focal event structure can be construed as separate due to their temporal and/or spatial configuration, as in (35) and (36).

(35) *kkwum-sok-eyse* *nay-ka kuke*
dream-inside-Loc I-Nom it
nwulu-myen *an-toy-n-t-ay*
press-if not-be.okay-Imprf-Decl-Ev.Quot
'According to the me in my dream, I **wo**n't **be okay** if I press on it.'

(36) *nay-ka* *kuke* *nwulu-myen* *an-toy-n-t-ay-ess-ci*
I-Nom it press-if not-be.okay-Imprf-Decl-Ev.Quot-Ant-Cmt
'I'm telling you, I said, I **wo**n't **be okay** if I press on it.'

Both of these utterances are licensed, even though they have first-person information sources. The sentence in (35) is licensed because the adverbial 'in my dream' demarcates a conceptual boundary between the recounting self of the speaker and the acting self in her dream; hence the speaker can quote herself. The sentence in (36) is licensed because the anterior marker *-ess-* and the committal marker *-ci*, which convey past tense and the speaker's assertive stance based on her belief, respectively, demarcate a temporal and an epistemic boundary between the speech act, the recounting event, and the focal event, so that the speaker at the speech time conceptualizes the self in her memory as an objectively quotable information source.

Based on these data, I would like to argue that the conjunct/disjunct phenomena associated with *-ay* cannot be given fully plausible accounts with only syntactic constraints; rather, we must consider how the semantics of the reportive/ quotative evidential constructions interact with viewpoint shifts and the speaker's subjective experiences. This interaction is a natural consequence of the evidential constructions' involving multiple events. The event of the speaker's perception, the event that has been perceived by the speaker, and the event of recounting are encoded simultaneously by a single grammatical construction. Since each of these events has a profiled participant, it is natural that there should be some interesting syntactic patterns that reflect the interactions among the profiled participants in each of the events, especially when all of these participants are identical. These phenomena are not merely the result of surface syntactic constraints, but of a deep semantics of subjectivity involving the speaker's viewpoint and shifts in that viewpoint. As an alternative, this study provides a way of effectively presenting the subjective semantics of the phenomena within MST; this is the main goal of Section 5.4.

5.4.3.2 Modeling the *-Ay-* Construction Within MST

This subsection models the *-ay* constructions within the Mental Spaces framework (Fauconnier 1994, 1997). To begin with, let us take a look at the ambiguous example with *-ay* in (37).

(37) *Chelswu-ka* *ne-lul* *salangha-n-t-ay*
Chelswu-Nom you-Acc love-Imprf-Decl-Ev.Quot/Rep
a. 'According to Chelswu, Chelswu **loves** you.'
b. 'I hear Chelswu **loves** you.'

The sentence in (37) is ambiguous between a quotative (a) and a reportive (b) reading. In (37a), the source of the information and the grammatical subject are interpreted as being identical, namely *Chelswu*, whereas in the reportive reading in (37b), the evidence is interpreted as originating with someone unspecified who is not coreferential with the grammatical subject. The two readings can be distinguished in terms of the different kinds of mental spaces they evoke; the quotative construction evokes a speech space, whereas the reportive construction evokes a hearsay space where the exact authorship of the information is unspecified. The two constructions are represented using mental-spaces diagrams in Figures 18 and 19.

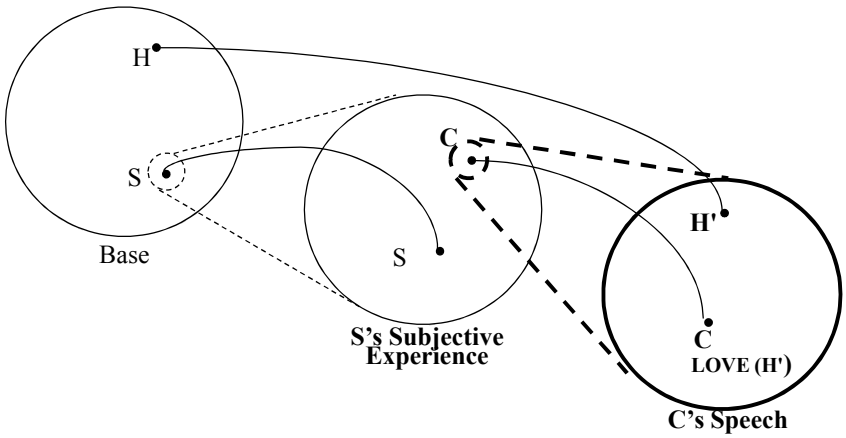

Figure 18. A Mental-Spaces Representation of the Quotative Construction in (37a)

In Figure 18, representing the quotative reading, the current communicative frame is represented by the Base space within which the speaker (S) and the addressee (H) exist. The speaker's experience of apprehending the information is backgrounded; the information is accommodated by the speaker's subjective-experience space via its projection of a daughter space, in the BIA process described earlier in the chapter. Because the speaker's utterance is based on her experience, i.e. on conversing with Chelswu, the speaker's subjective-experience space contains the speaker (S) and Chelswu (C) and that is the mental space where the speaker indexes that the information comes from Chelswu. Note that the speaker is designated by S, not S', in the speaker's subjective-experience space, because the SE space is accommodating backgrounded knowledge. The cognizer in the SE space is in the temporal, spatial, and deictic domain to the speaker in the Base space, because the speaker in the Base space and the cognizer in the subjective-experience space are identical. Lastly, we must accommodate the proposition that is denoted by Chelswu's speech in a separate space, because the speaker obtains the information that Chelswu loves the addressee by accessing C's subjective experience via Chelswu's speech. It is Chelswu's speech space that is profiled, because the contents of that space are what the speaker is asserting in the utterance, with the exact authorship of the focal information being backgrounded. In Chelswu's speech space, Chelswu (C') loves the speaker's current addressee; this space contains the addressee (H'), Chelswu (C'), and the semantic frame LOVE.

Note that, because S cannot directly access the information that Chelswu loves her addressee, but has access to it via her subjective experience of indirectly obtaining the focal information, of the evidentiality conveyed is indirect. In addition, the diagram in Figure 18 conveys that the quotative construction involves successive dissemination of the focal information via the speaker's subjective experience and Chelswu's speech, represented in terms of the successive evocation of two spaces for the speaker and for another participant (in this case, Chelswu).

Now, let us take a look at the other reading, (37b), represented in Figure 19.

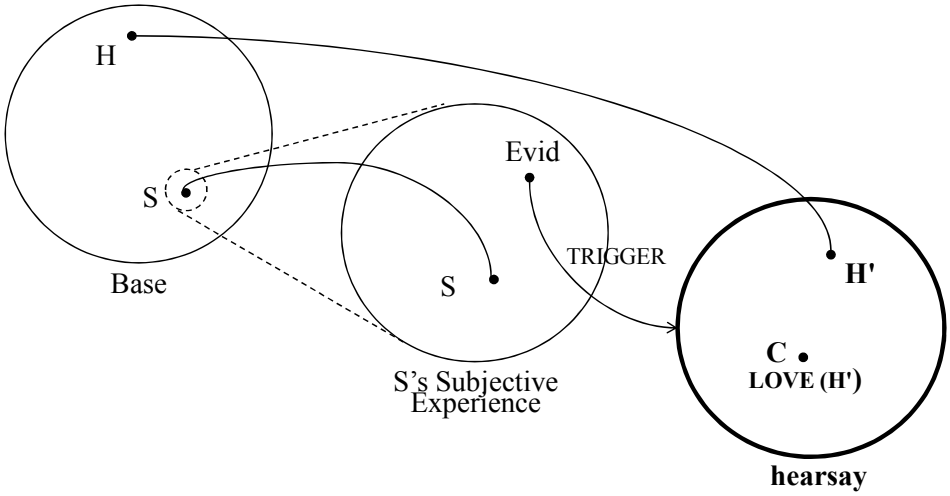

Figure 19. A Mental-Spaces Representation of the Reportive Construction in (37b)

The diagram representing the reportive suffix *-ay* as used in (37b) is similar to that for the inferential evidential *-napo-* construction. The fact that the focal information has been obtained from an unidentified source (Evid) (an unnamed person, hearsay, or rumor) is present in the speaker's subjective-experience space. The evidence role in the SE space then triggers a hearsay space in which the speaker reconstructs the focal event based on what she has been told. In this case, the hearsay space contains the roles of Chelswu (C) and the addressee (H') and the semantic frame LOVE. The epistemic nature of the hearsay space is weak because the authorship of the information is not clear, and thus the speaker is unable to fully vouch for the validity of the conveyed information. The way the triggered space is represented for inferential and reportive evidential constructions are consistent is therefore similar.

The two different representations for the quotative and reportive constructions show how the semantic ambiguity that gives rise to the different readings of (37) is cognitively motivated. Comparing the reportive interpretation to the quotative one, we see that reportive constructions convey less accuracy and less responsibility on the part of the speaker for the information. This is captured by the representation in Figure 19, in which S cannot directly access the focal information and even its authorship is ungrounded, being labeled merely as 'hearsay.' The speaker's indirect access through an unidentified information source in a reportive construction gives rise to an interpretation of less responsibility than the speaker's indirect access through an explicit information source in a quotative construction.

The other construction in which *-ay* can be used as a quotative marker, as in (33), is the one in which the person who disseminates the information about the focal event is not a participant in the focal event; an example is given in (38).

(38) *Chelswu-ka* *taythonglyeng-i* *saimha-n-t-ay*
Chelswu-Nom president-Nom resign-Imprf-Decl-Ev.Quot
'According to Chelswu, the president **is resigning**.'

In (38), Chelswu is disseminating the information about the president's resignation, but, unlike in (37) he is not a participant in that focal event. This situation is represented in Figure 20.

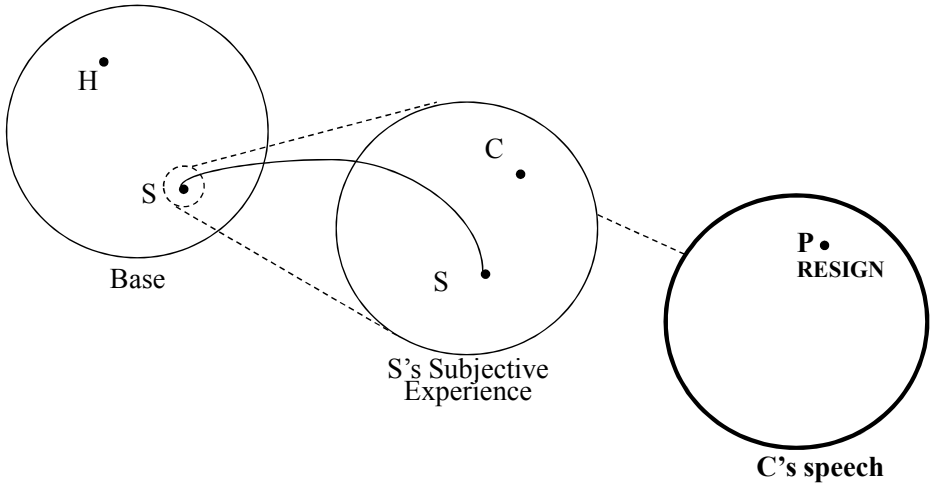

Figure 20. A Mental-Spaces Representation of the Quotative Construction in (38)

Because (38) is a quotative construction that provides the exact authorship of the conveyed information, Chelswu is shown as part of the speaker's subjective-experience space in the diagram. The focal information is excerpted from Chelswu's actual speech, which occurred in the past; this is why a mental space for Chelswu's speech is embedded within the speaker's subjective-experience space. The semantic frame RESIGN is included in Chelswu's speech space because focal information the speaker has obtained from the speech concerns the president's (P's) resignation.

This model easily captures the fact that reportive/ quotative reading is not possible when the information source and the recounting self are identical, i.e., when the surface subject is first-person, although a reportive reading is. This contrast is shown in the example in (39).

(39) *nay-ka* *ne-lul* *salangha-n-t-ay*
I-Nom you-Acc love-Imprf-Decl-Ev.Quot/Rep
a. ≠ 'According to me, I **love** you.'
b. 'I **love** you.'

The reading in (39b) is not licensed, while the reading in (39a) is acceptable. Under normal circumstances, a conscious speaker would not use the sentence in (39) in a quotative sense, as there is usually no practical reason for a speaker to cite what she has said as a source of evidence. The speaker's SE space involves the semantic frame OBSERVATION, which has frame elements such as an observer, an entity that is observed, and an instrument. When the observer and the entity that is observed are identical, the construction necessarily involves the speaker's subjective experience. In this respect, it would normally be unnatural for the speaker to regard herself as an observable object. The conceptual inseparability of the speaker and herself means that (39)

cannot be interpreted as in (39b).

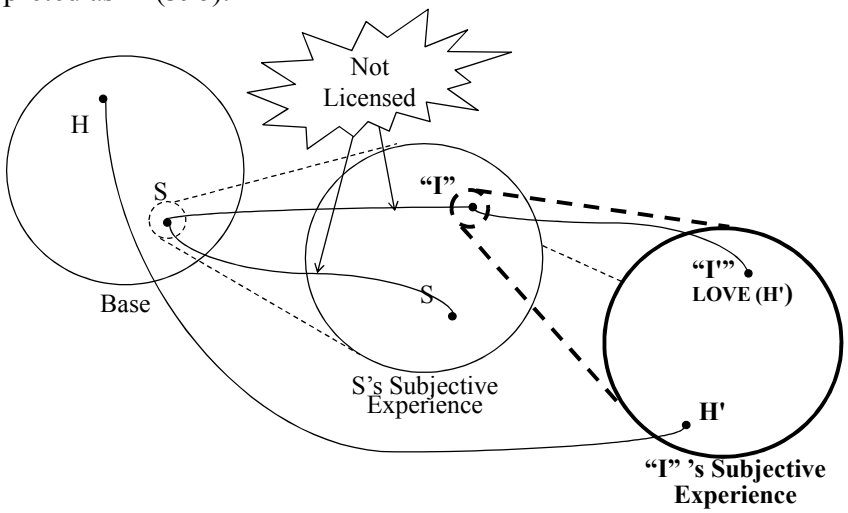

Figure 21. A Mental-Spaces Representation of the Quotative Reading in (39b)

As shown in Figure 21, the speaker S being inherited from the Base space cannot be split into S and "I" in the speaker's subjective-experience space; because the S whose viewpoint is inherited from the Base space cannot occur in the same mental space as "I" does, because one cannot observe oneself from a third-person viewpoint. Furthermore, if S in the Base space could access both S and "I" in the subjective experience space, it would be modeled as a direct mode of access, because S in the Base space and "I" in the subjective space are directly linked. This restriction is intuitive because, in the real world, the self cannot be split; in other words, one cannot objectively observe oneself performing an action. The unacceptability of this split in the interpretation in (39b) is represented in Figure 21 by the unacceptability of the linking of both S and "I" in the speaker's subjective experience space to S in the Base space.

In contrast, the interpretation in (39a) is not problematic because there is no self-split in the speaker's subjective experience; the speaker simply obtains the information from an unidentified source (Evid), triggering a hearsay space; this is represented in Figure 22.

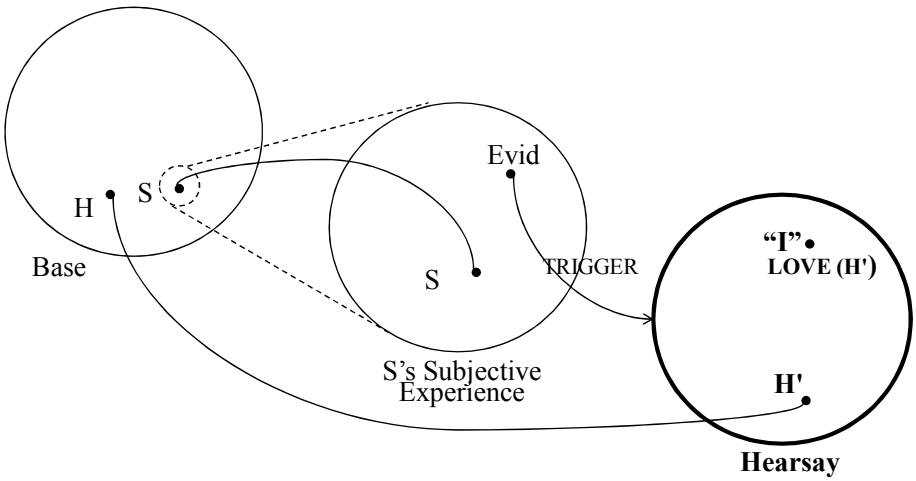

Figure 22. A Mental-Spaces Representation of the Reportive Reading in (39b)

In contrast, the quotative utterance in (40), even though it has a first-person subject as its information source, is licensed. In other words, even though the speaker is quoting herself, (40) is licensed. This is unexpected in the light of Chung's generalization that the source of information must be third-person.

(40) *nay-ka* *ne-lul* *salangha-n-t-ay-ess-e*
I-Nom you-Acc love-Imprf-Decl-Ev.Quot-Ant-Informal.Indic
'I said I **love** you.'

However, (40) includes an anterior marker that marks a past tense or a perfective aspect, which affects its acceptability.

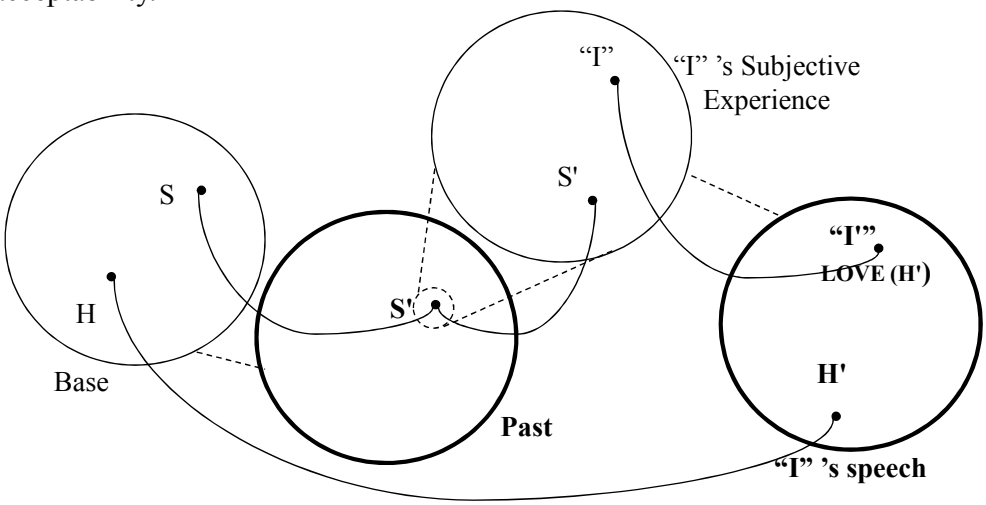

Figure 23. A Mental-Spaces Representation of (40)

In (40), a past space is evoked by the anterior marker, and this space in turn accesses a backgrounded space for the speaker's subjective experience in the past. Note that S' in the past space and "I" in the SE space are split; because the current speaker's viewpoint at S in the Base space is accessing S' in the SE space via S' in her past space, S' in the SE space inherits the current viewpoint from S in the Base space. However, "I" does not inherit the viewpoint of S in the Base space, because "I" is conceptualized as an external source, creating conceptual distance between S' and "I."

The distancing effect is captured in an observation made by Slobin and Aksu's (1982:198) that "[h]earsay evidentials often indicate that the speaker feels distanced from the situation he is describing. Conceptual distance is created not between the speaker and the event, but between the speaker and his/her own discourse." The assumption that *-ay* inherits the distancing properties of indirect evidential in general, motivates the diagram in Figure 23, where the current viewpoint anchors to S', the experiential origo who obtains the information. The temporal distance from the speech time conveyed explicitly by the anterior marker *-ess-* allows the speaker to regard herself as an observable object, even though the person acquiring the evidence and the person expressing it are identical. For this reason, (40) can be used in a quotative context even though (39a) cannot.

Yet more distance can be encoded by adding another layer of mental space. In (41), by adding a speaker's belief space evoked by the committal marker *-ci*, the conceptual distance is explicitly

taken one more step, and thus, a conjunct utterance is licensed with quotative evidentiality.

(41) *nay-ka* *ne-lul* *salangha-n-t-ay-ess-ci*
I-Nom you-Acc love-Imprf-Decl-Ev.Quot-Ant-Cmt
'I'm telling you I said I **love** you.'

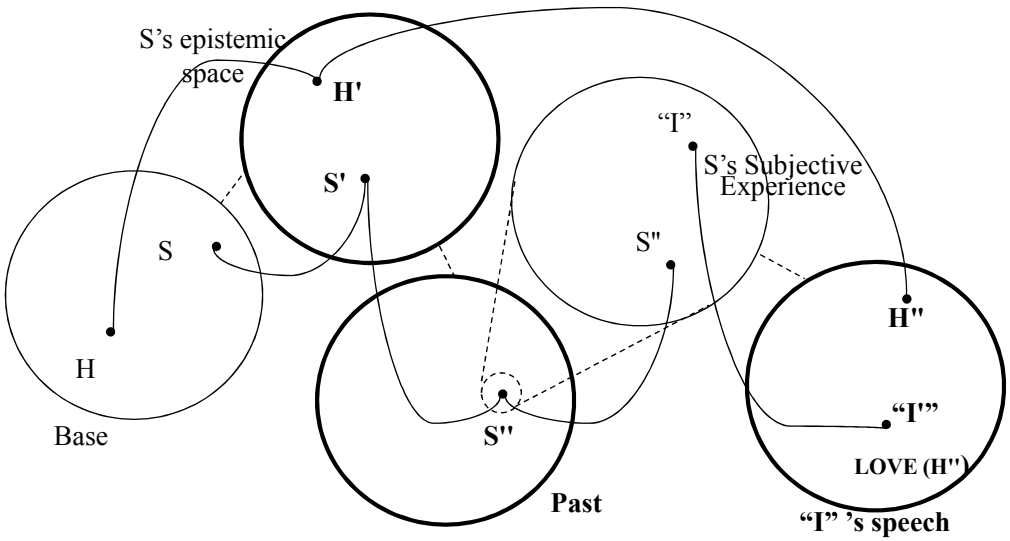

Figure 24. A Mental-Spaces Representation of (41)

The sentence in (41) conveys a strongly epistemic-modal stance of speaker certainty and assertiveness; it would be licensed in a context where the speaker was reemphasizing the fact that she had told the addressee that she loved her. As shown in Figure 24, the committal marker *-ci-* evokes another space between the Base space and the past space, which forms another layer between the speaker and her own discourse. In other words, the two additional layers evoked by the anterior marker and the committal marker increases the conceptual distance between the speaker and her own discourse (S in the Base space – S' in the epistemic space – S" in the past space – S" in the SE space). As a result, the quotative evidential with a first-person source is licensed. This has been noted in the previous literature; J.-Y. Chung stipulates that "the source of the embedded utterance must be someone other than the current speaker and addressee*...or the embedded utterance must be one which is assumed to have been uttered*…" (In preparation: 13, 25; italics mine). In the MST framework, there is no need to make such an *a priori* stipulation because the effects of viewpoint shift and distancing account for the phenomena.

There is another case where the semantics of *-ay* constructions override syntactic constraints on subject usage, namely, when an adverbial clause is employed that demarcates the conscious self from the unconscious self and therefore facilitates, a self-split. For instance, when *kkwum-sok-eyse* 'in a dream' is used in a quotative evidential statement with a first-person pronoun as in (35) above, the syntactic constraint is neutralized. Another example is given in (42).

(42) *nay* *kkwum-sok-eyse* *nay-ka* *ne-lul* *salangha-n-t-ay*
my dream-inside-Loc I-Nom you-Acc love-Imprf-Decl-Ev.Quot
'According to the me in my dream, I **love** you.'

In (42), the person who is quoted is the speaker herself, so if the utterance had depicted the real world, it would have been ruled out, because in the real world, a speaker cannot view her self as an observable entity. In the speaker's dream space, however, nothing is impossible; the person who obtains the evidence and the person she obtains it from can both simultaneously be the speaker. When the speaker's dream space is evoked, the syntactic constraint is loosened, and the utterance seems to mean the speaker heard herself say she loved the addressee and was then reporting it to her.

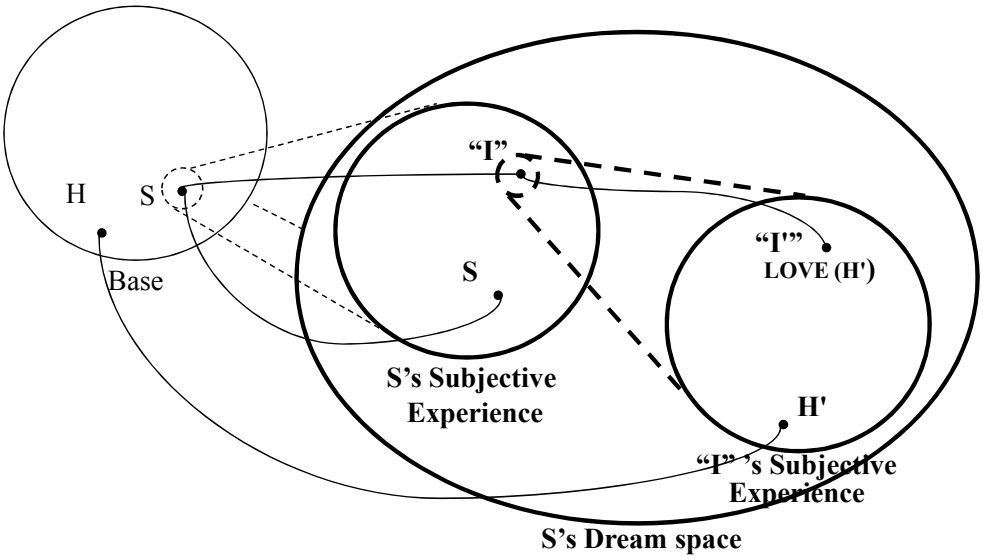

Figure 25. A Mental-Spaces Representation of (42)

The adverbial builds up a metaspace that contains the speaker's subject-experience space within it because the utterance is all about the speaker's dream. The S in from the Base space is freely linked with both S and "I" in the speaker's SE space within the dream space, because in a dream, the experiential origo can play the roles of both observer and information disseminator.

Multiple successive instances of dissemination of the obtained information is freely expressible with the *-ay* construction, which can express third-hand information if it is repeated, as in (43).

(43) *Chelswu-ka* *Yenghuy-lul* *cohaha-n-t-ay-ess-t-ay*
Chelswu-Nom Yenghuy-Acc like-Imprf-Decl-Ev.Rep-Ant-Decl-Ev.Rep
'Chelswu **likes** Yenghuy.'

In the reportive construction in (43), the repeated *-ay* marking conveys a situation where the focal information (that Chelswu likes Yenghuy) was given to the speaker by some unnamed person X, who had heard it from some other unnamed person Y, who had actually heard it from Chelswu. X and Y are both unspecified sources. This third-hand reportive evidentiality is conveyed by the repetition of the *-ay* construction. The identity opacity of X and Y is interesting in that, in the process of dissemination, their particular identities lose importance, so that they are deprofiled and the information becomes general hearsay that does not require any exact authorship.

In sum, to grasp the semantics of the *-ay* construction, we must consider its deep viewpoint

semantics, specifically the speaker's mental access to and distance from the origo depending on which semantic domain the speaker anchors her viewpoint to. I have shown in this section that the Mental-Spaces approach can best describe where the narrating viewpoint is anchored because it can transparently represent degrees of accessibility and conceptual distance.

5.5 Summary

This chapter has discussed the three kinds of evidential markers in Korean, the firsthand-experience marker (*-te-*), the inference marker (*-napo-*), and the quotative and hearsay marker (*-ay*). These three evidentiality markers in Korean share the syntactic/semantic constraint that when an utterance employs one of these markers, it shows asymmetrical distribution of first-person and non-first-person subjects, depending on whether an activity or an experiential predicate is involved.

These phenomena are readily explainable by taking into account the semantics of subjectivity that is invoked by evidential markers: the presence of an evidentiality marker indicates that the experiencing origo's viewpoint is implicitly involved. This is because evidentiality indicates that the origo is perceiving or has perceived an event or process via some sensory organ; the protagonist of this focal event or process may or may not be identical to the origo. To use a different set of terminology, an evidentiality marker evokes the semantic frame OBSERVATION. This use of the frame essentially consists of the speaker's subjective experience, because the backgrounded knowledge of how the frame elements are instantiated is only accessible to the speaker herself at the speech-act time. In the OBSERVATION frame, we have frame elements such as OBSERVER, AN OBJECT OBSERVED, MODE OF ACCESS, and so forth. The reason for the subject asymmetry is that the object is mapped onto the focal event or process, and the observer is either mapped onto the protagonist in the focal event or process or is construed as a third-person observer that is watching the event or process as a whole. The asymmetry in the uses of experiential and nonexperiential predicates can be accounted for in that, in the case of experiential predicates, the perceiver cannot directly access the internal state of the protagonist's mind.

The relationship between subject asymmetries, predicate types, and evidential markers cannot be approached from a purely syntactic perspective, because it is not a matter of formal syntactic rules per se, but a matter of semantics that stems from the tension between the identities of the speaker and the experiencer of the focal event. I have therefore argued that, to better grasp how evidentiality markers are construed, we must examine their semantics, especially in terms of how the origo's viewpoint and the subject's viewpoint interact with each other and how meanings arise from the (inter)subjectivity of those interactions. In this vein, I have argued that the cognitive approach of Mental Spaces Theory (Fauconnier 1994, 1997) can capture these viewpoint-shift phenomena more accurately than other formal-syntactic approaches. Each of the three evidentiality markers in Korean accesses the mental space of the speaker's subjective experience. (For more detailed discussions of the analysis of each marker, see Kwon 2009 (*-te-*), 2010 (*-napo-*), and 2011d (*-ay-*)).

To capture the phenomena I have discussed, I proposed two novel ways of elaborating mental spaces: backgrounded-information accommodation and indirect epistemic-space triggering. The BIA accesses the speaker's subjective-experience space and elaborates it with information that is backgrounded at the speech-act time. The SE space's daughter space accommodates the focal event that was perceived by the experiencer. When the projection of this daughter space is

triggered by some indirect evidence that the speaker is exposed to, as in inferential and reportive evidentiality, the daughter space is evoked and elaborated by means of IEST. In all three cases, the daughter space is profiled, because it contains what the speaker intends to assert; this distinguishes the evidential constructions from periphrastic evidential expressions. Figures 26-29 sketch the MST representations of the uses of the three markers.

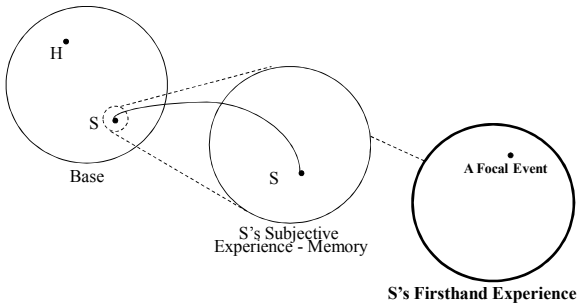

Figure 26. Firsthand Evidentiality -*Te*-

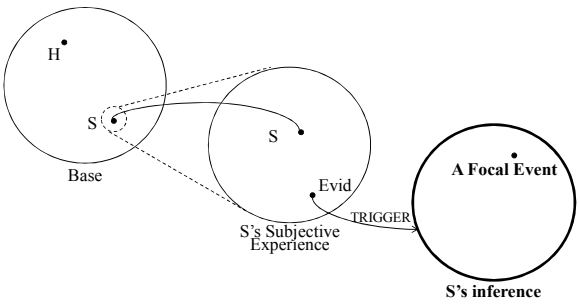

Figure 27. Inferential Evidentiality -*Napo*-

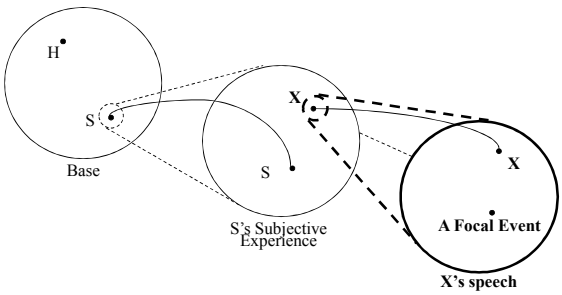

Figure 28. Quotative Evidentiality -*Ay*

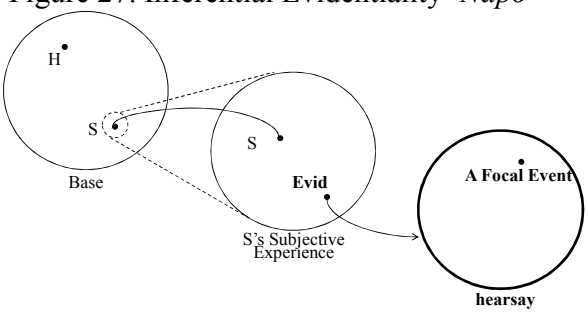

Figure 29. Reportive Evidentiality -*Ay*

As shown in these figures, construal of the evidential markers necessarily involves the speaker's subjective-experience space, where the speaker accesses a piece of evidence and obtains the focal information.

When the firsthand evidential marker -*te*-, represented in Figure 26 is used, the speaker's SE space involves a memory of the focal event. The information of how the focal information was obtained (the mode of access) is specified in its daughter space, which is the speaker's firsthand space. The temporal grounding of the speaker's SE space is in the past, because -*te*- indicates that the speaker's obtaining of the focal information preceded the speech-act time. In other words, the semantics of retrospectivity is grammatically encoded in the firsthand evidential marker (for more detail, see Chapter 3). The representation in Figure 26 does not contain an explicit role for evidence in its SE space, because the statement is based on the speaker's direct access to the focal information. The direct access is represented in the relationship with the speaker's firsthand-experience space, and there is therefore no need to have a separate role for evidence in the representation.

Figure 27 represents how the inferential evidential marker -*napo*- involves the speaker's SE space; in that space, the speaker accesses some piece of evidence that triggers the speaker's inference processes (IEST). Note that the speaker's SE space is not linked to the speaker's inference space in the standard way in representation, because how the inference space is elaborated is different from how, for example, the speaker's firsthand-experience space is elaborated. The focal event in the speaker's inference space is conjectured and elaborated only when the speaker has been exposed to evidence that triggers the inference process. By positing

'trigger' elaboration, or IEST, we can model the unique way mental spaces are elaborated in the construal of inferential evidential semantics.

Figure 28 and 29 represent two uses of a single construction in Korean, the reportive/ quotative marker *-ay*. These figures also contain an SE space where the speaker obtains the focal information. In the quotative use, represented in Figure 28, the information is obtained from a specified disseminator, labeled here X, who has previously come into possession of the focal information. In contrast, in the reportive use, represented in Figure 29, the authorship of the information is unspecified; it is hearsay. The schematic structures of the quotative and reportive constructions are different in that, in the former the exact source is specified in the context, whereas in the latter, the profiled information is triggered by underspecified evidence.

In this way, the construal of the three evidentiality markers can berepresented in a unified way within MST: The speaker's subjective-experience space is accessed through backgrounded-information accommodation and a daughter space is created or triggered, depending on the mode of access. The backgrounded accommodation process coded by an evidential construction differs from the normal space-evocation process coded by a periphrastic evidential expression in that the event of the speaker's obtaining the focal information is not foregrounded or not at issue, but is backgrounded, whereas it can be foregrounded or at issue when a periphrastic expression is used.

I also have shown in this chapter that MST can effectively represent the creation of conceptual or deictic distance in terms of the creation and accommodation of new spaces projected or triggered by the space-building linguistic cues of evidential markers. When conceptual distance is created, the speaker poses a distanced stance towards the focal information. In addition, the so-called conjunct/ disjunct phenomena associated with evidential constructions are caused by the created conceptual distance between the two active perspectives encoded by the construction.

The relevance of the conceptual distance between the described event and the recounting event imposed by evidential elements has also been discussed by Lazard, who characterizes evidentials as serving a *mediative* function: "[T]he operation creates a distance … between the speaker and his or her own discourse, or between the speaker as the person acquiring evidence and the person expressing it" (2001:362). As shown in Figures 26-29, the MST approach shows clearly how the evocation of the speaker's SE space and of a space that is defined by a mode of access results in the distancing effects that have been reported to be typical of evidential elements (Aikhenvald 2004).

In this chapter, I have attempted to provide a unified account of the subjective semantics of the Korean evidentiality markers within MST. The relevant generalizations about these constructions should not be framed as pure syntactic constraints on surface forms, but as being about coherent construal and about how a chain of interconnected events is semantically and pragmatically mediated. This conclusion is supported by the fact that the evidential markers' distancing functions are conceptually salient enough to override the purported syntactic constraints on subject usage that should otherwise have rendered certain evidential utterances ungrammatical.

Chapter 6
Simulations, Mental Spaces, and Constructions

6.1 Introduction

This chapter seeks to answer three major questions about the theoretical implications of the cognitive approach taken in this study with respect to previous work in these areas. First, what are the theoretical implications of the multilayer analysis of the Korean tense, aspect, modality, and evidentiality (TAME) system? Second, how can we represent the construal process involved in Korean evidential constructions in a clear way? And finally, a question that has not been discussed in sufficient depth in the literature: What is the nature of inferential evidentiality? The inference process, is, strictly speaking, different from the origo's processes of sensory perception, in what ways is it part of the same functional category as the other types of evidentials?

My claim is that the multilayer analysis is conceptually more intuitive and is superior to other analyses because it is founded on theoretical assumptions that are cognitively motivated and embodied. Specifically, it assumes that the understanding of language is a consequence of certain patterns of neural activations; this assumption is pervasive in the field of cognitive linguistics, articulated in, for example, the Neural Theory of Language (NTL) (Bergen and Change to appear, Lakoff 2008) and simulation semantics (Feldman 2006). In section 6.2 of this chapter, I introduce some of the relevant notions used by the multilayer approach and discuss its advantages. Section 6.3 tries to answer the second question, providing analyses of the target constructions within Construction Grammar (Kay and Fillmore 1999). I have chosen this framework for representing the evidential construction because it relies on the same cognitive assumptions mentioned above. These representations show how the semantic bindings evoked by the forms help us develop a clear analysis of the evidential constructions. Lastly, in section 6.4, I provide analyses of the internal event structures involved in inferential evidential constructions, discussing how inference differs from other types of evidentiality in terms of its indirectness.

By considering these issues, this chapter aims to support my claim that cognitive linguistics allows us to develop a clearer picture of the Korean evidentiality system.

6.2 Theoretical Implications of the Multilayer Analysis

In Chapter 2, I argued that the construal of tense, aspect, modality, and evidentiality in languages should be analyzed using a comprehensive multilayer approach because we cannot construe tense and aspect information independently of modality and evidentiality information. The interdependence of the construal of tense, aspect, modality, and evidentiality information is consonant with the fundamental tenets of the simulation-semantics model (Feldman 2006, Bergen and Chang 2005). This model assumes that an interlocutor cannot conceptualize any kind of information, including information about tense, aspect, modality, and evidentiality without a viewpoint from which she can simulate the frame that the linguistic content taps in her brain. An interlocutor must subjectively access multiple pieces of information to understand utterances; this construal cannot be accomplished independent of her experiences nor of the viewpoint from which those experiences are conceptualized and framed, because human experiences are never independent of time and the origo's perspective. I have therefore argued that the Korean TAME system should be given a multilayer analysis that takes into account the cognitive-linguistics

assumption that construing utterances is never possible without recognizing the origo's presence in (or absence from) the scene of the speech act. This approach also assumes that the tense, aspect, modality, and evidentiality layers are considered simultaneously and that interlocutors necessarily rely on their relevant experiences of tense, aspect, modality, and evidentiality in understanding the semantics encoded in utterances.

A number of linguists have dedicated themselves to researching these topics, and their work shares some key notions in common. This section begins by exploring the common notions of event time, reference time (or "topic time" Klein 1994), and speech-act time discussed in major work on tense, aspect, and modality. This review lays the logical foundation for my assertion that Korean does not fit into an approach that assumes a single layer where the three temporal reference points interact in a way that gives rise to tense and/or aspect readings. To fully account for the Korean system, in which is difficult to separate modality and evidentiality from tense and aspect, believe it is necessary to incorporate other layers into the analysis, including a layer involving the time at which the speaker perceives a stimulus that results in their conceptualization of the focal event (evidentiality) and a layer involving the time at which the origo makes an assessment of some kind about the focal event (modality). The reasons for this assertion were discussed in detail in Chapters 2 and 3.

Analysts have long recognized the need to refer to other temporal points besides event time and speech-act time in their discussions of tense, aspect, and modality; other relevant temporal parameters that have been described include Reichenbach's reference time (1947) and Klein's topic time (1994). This study has so far used *reference time* as a cover term for those notions that draw attentions to how focal information is profiled by particular linguistic expressions (Langacker 1991).

I prefer *reference time* to other terms like *topic time* because it makes explicit the essential role of the human mind in the relevant temporal categorizations. My claim is that the semantic terminology and concepts used in theories of embodied cognition will facilitate the explanation of intriguing subjective semantic phenomena such as those discussed in the previous chapter. I believe that such phenomena arise from the interactions between the origo's viewpoint and other temporal and/or modal elements. Cognitive linguistics assumes that language use is not mere symbol manipulation but involves a cognizer's construal of a mental representation that language evokes. I argue that the *reference time* is the most intuitive term for indicating whether or not the speaking origo's viewpoint is anchored to the speech time and whether the speaker is viewing a process, event, or directly, as an on-looker or an experiencer, or indirectly.

I begin by briefly reviewing some descriptive terms that are frequently-used to analyze tense, aspect, and modality and discussing what distinguishes the more cognitively motivated theories from the others.

6.2.1 The Need for a Third Temporal Reference Point

Tense and aspect are not concrete, physically visible entities. Therefore, strictly speaking, we are unable to 'view' them. Nevertheless, we are constantly construing and conceptualizing them in our daily lives. For example, we understand that a given event took place prior to the speech-act time, i.e., now, that it is taking place at the speech-act time or coding time, or that it will take place at some later point. Each phase of the timeframe corresponds to an event, and we therefore understand the flow of time in terms of a series of events.

The linguists who developed the classical approaches to tense and aspect have always been

well aware of the tight relationship between time and events, and even the oldest approaches do seem to successfully describe and analyze the patterns in how languages reflect that relationship. However, understanding tense and aspect involves more than understanding the relationship between times and events. It necessarily requires understanding of where an experiencing origo's perspective (i.e., a cognizer's perspective) is anchored, because it is cognizers who construe times and events in utterances. The necessity of involving such a perspective in analyses led to scholars positing third temporal reference point in addition to speech-act time and event time where the experiencing origo's attention is directed, namely, reference time.

This is not a new idea; the need to posit a third temporal reference point has been recognized by more than a few scholars. While simple tenses such as past, present, and future can be accounted for in terms of two temporal points, speech-act time ("utterance time" in Klein 1994; "speech time" in Reichenbach 1947) and event time ("situation time" in Klein 1994 and Smith 1991). When the ET precedes the ST, the tense is past, when the ET coincides with the ST, the tense is present, and when the ET follows the ST, the tense is future. However, this simple analysis fails to explain relative tenses like the pluperfect.

To cope with such phenomena, the Reichenbachian account posited another relevant temporal point and proposed that each tense involves three temporal elements: the ST, at which the actual utterance takes place, the ET, at which the focal event occurs, and the RT, the temporal standpoint or perspective from which a situation is presented.[70] Tense and aspect information can be interpreted in terms of two relations between these three temporal concepts: tense as a relation between ST and RT and aspect as a relation between RT and ET. In other words, tense does not, in fact, refer to the temporal relationship between the ET and the ST, but to the relationship between the ST and the logical phase of the focal event that is being attended to in the given context.

Speech-act time and event time are the central components of an analysis of the concept of tense, but RT has been more controversial (Smith 2000). The relevance of the first two notions to the deictic properties of tense are transparent, while the relevance of RT might not necessarily be so obvious. However, Smith's (2000) arguments for using it seem quite plausible. Firstly, a third time point is required for interpreting relative tenses or compound tenses, including the past perfect. For instance, when we interpret the English sentence *Mary had arrived*, we know that the tense is past in that the focal event (ET) is prior to the speech act (ST) on the time scale. However, to interpret the perfect tense/aspect, we need to take into account another time point that the speaker is marking as a reference point. The temporal layout of this sentence is represented schematically in (3).

(3) Mary had arrived
ET > RT (TT) > ST

The past perfect tense can also be schematized using the framework of cognitive grammar (Langacker 1991); such a diagram is given in Figure 1.

[70] The definition of reference time is "[t]he time point or time interval of some event which is typically mentioned in the preceding context" (cited in Klein 1994:25). However, as Klein points out, Reichenbach himself does not give a clear definition, but only mentions a possible candidate for a third temporal point that could be called *reference time*.

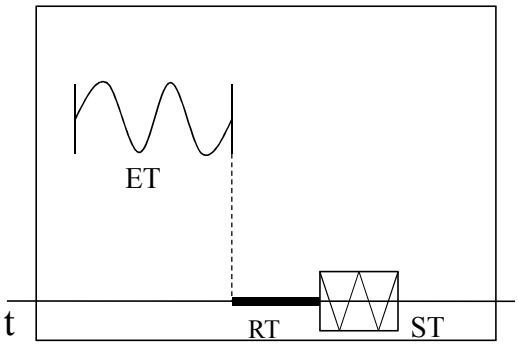

Figure 1. Schematic Representation of the Past Perfect

In Figure 1, the focal event as a bounded temporal entity is represented by a wavy line between two vertical lines, where the vertical lines represent the beginning and the ending of the event. (As described in Chapter 2, using a curved line indicates that the event has a dynamic internal structure.) The horizontal line at the bottom represents a timeline on which any time when any event occurs can be marked. In Figure 1, representing a past-perfect sentence like that in (3), the end point of the focal event and the immediately subsequent time are profiled, i.e., emcompassed in the RT. The profiled period is prior to the ST (represented in Figure 1 as a box with a zig-zag line in Figure 1).[71] The schematics in (3) and in Figure 1 show how a third temporal reference point is necessary for explaining relative tenses such as past perfect.

Klein (1994:22) presents the additional argument (for topic time) that, when someone utters a sentence like that in (4) as an answer to a question like *Do you know where John is?*, it is otherwise difficult to explain why past tense would be employed, given that what is denoted by 'dead' does not pertain only during the time period prior to the speech time:

(4) They found John in the bathtub. He was dead.

Klein (1991:23) argues that, in uttering the second sentence, the speaker clearly does not simply wish to assert that the time of John's being dead precedes the time of the utterance, as the interpretation does not exclude the possibility that the time of John's being dead also includes the speech time. Rather, the speaker would like to make an assertion about some particular time prior to the speech time. In this respect, efforts to account for tense and aspect using only two temporal points fails.

Thirdly, interpreting certain kinds of sentences with temporal clauses requires there to be a specific temporal point that the speaker is anchoring the focal event to. For instance, in the sentence *When he fell asleep, she came in*, the speaker is anchoring the event of someone's coming in to the time picked out by the *when* clause (Hinrichs 1986). The anchoring point at which the event described in the main clause takes place is provided by the *when*-clause, which draws our attention to the specified time period.[72] This profiling of a time period cannot be

[71] This way of representing speech-act time is borrowed from Langacker 1991, for the purposes of this example. For the most part, I have represented speech-act times as temporal points rather than intervals in this study because I believe that speech-act time is in most cases conceptualized as a punctual event.

[72] This observation is elaborated in Mental Spaces Theory. For example, as I mentioned in the previous chapter, Fauconnier (1997) contends that a temporal connective builds a mental space to which the speaker's viewpoint anchors, enabling her to access the focal-event space from the space established by the connective.

expressed only in terms of event time and speech-act time.

Lastly, as Smith (2003) points out, so-called shifted-deixis phenomena such as time-adverbial/predicate-tense mismatches like that in the second sentence in (5) also require a third temporal point for explanation.

(5) Mary sat down at the desk. Now she was ready to start work. [Smith 2003]

In (5), neither the ST nor the ET can be referred to by the time adverbial *now*. The speaker is empathizing with Mary's perspective, and the RT is the anchoring point for that perspective. It is not surprising, as any analysis must acknowledge that it is a cognizer who is construing the situation and determining the uses of tense in the context. In a cognitive framework, which assumes that construal of sentences in general is not possible without the existence of a human mind or viewpoint, the utterance in (5) would only be abnormal if we assumed the speaker's viewpoint had to be anchored to the ST. In contrast, the anchoring of the speaker's viewpoint with Mary's at the RT explains the licensing of the utterance in (5). Mismatches such as that in (5) clearly show that a third temporal parameter, where the cognizer's viewpoint is anchored, is needed.

As I mentioned above, the labeling of this third temporal parameter has itself been somewhat controversial. Klein (1994) asserted that the contextually dependent and flexible definition of it should be clarified. Because there is no third event involved in simple-tensed sentences, nor in relative-tensed utterances with contextually implicit reference points, the involvement of such a third event cannot be used as the criterion. According to Klein, without a concrete definition, the notion of "reference time" is vacuous, and does not contribute to the analysis of tense. He therefore proposes the concept of topic time, which he defines as the time about which the speaker wants to make an assertion.

6.2.2 The Need for Pragmatic Flexibility

In addition to the notion of a third temporal reference point, Smith (In press) argue that the interpretation of tense meanings also involves pragmatic principles such as the deictic principle, the bounded-event constraint, and the simplicity principle of interpretation. The deictic principle requires the ST be the default orientation point because the speaker is the deictic center. The bounded-event constraint states that bounded situations cannot be located at the ST because situations in the present must be open and unbounded. The simplicity principle guides us to choose the interpretation that requires that the least information be added or inferred. For instance, when an imperfective could potentially be construed as either present or future, the simplicity principle would guide us to construe it the situation as occurring in the present because, according to Smith, the future is more complex than the present.[73]

Smith (1997, 2003) further argues that we should examine which discourse mode utterances belong to in order to find regular patterns of tense interpretation that can help us better interpret the meanings of tense and how it interacts with aspect (and modality).[74]

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[73] This seems to be related to the notion of "settledness" (Cover 2010:55). What happened in the past (relative to the perspective time) is settled and irreversible. In contrast, what will happen in the future (relative to the perspective time) is not yet settled and may develop in any number of possible ways.

[74] The five modes Smith distinguishes are narrative, report, description, informative, and argument-commentary. These modes vary in terms of point of view, authorial stance, and level of formality. Meanings are construed in the

In a similar vein, Klein (1994) argues that the various types of tense and aspect patterns in languages can be accounted for by examining the interactions between the temporal reference points and the state patterns inherently coded by lexical predicates. For instance, in the sentence *She has left the room*, the predicate *leave* is a two-state verb, because what it denotes is comprised of two states, a source state where the subject is located in the room and a target state where the subject is not located in the room any more. The tense and/or aspect are determined by which portion of the event is covered by the TT. Since the TT includes the time of the target state and the ST, and since the ET includes the TT, the sentence is coded in the present perfect. Klein (1994) distinguishes at least three types of predicates, zero-state, one-state, and two-states. Zero-state predicates such as *be pretty* and one-state predicates such as *be asleep* have different tense- and/or aspect- marking patterns.[75]

The generalizations that have been made in the literature and the principles that have been described as relevant seem to be correct and applicable. However, I would like to claim that if our knowledge of cognition and how the mind works is taken seriously as a basis for analysis, there is no need for special pragmatic principles nor some categorization systems (which always turn out to require the stipulations of exceptions). Sub-section 6.2.3 further describes the motivation for the cognitive approach employed in the previous chapters.

6.2.3 Reference Time and the Cognitive Approach

Klein's and Smith's observations are plausible with respect to the necessity of positing a third temporal parameter that marks a range of time being attended to and about its pragmatic flexibility. Nevertheless, I argue that the cognitive approach taken in this study is superior, for the following reasons. First, the construal of linguistic expressions cannot be accomplished independent of human experiences. In particular, it is not possible for humans to construe temporal/ aspectual/ modal/ evidential utterances – i.e., any utterance – independent of our experiences, because humans are never free from the bounds of time and because we cannot reason independently from our 'selves.'

Second, our understanding of utterances is not accomplished by referring to a fixed set of special pragmatic principles; rather, we access a variety of pieces of relevant information that have been obtained via our perception and assessment. For example, the bounded-event constraint, one of Smith's pragmatic principles, requires that a situation occurring in the present be unbounded. However, the construal of performative utterances (e.g. *I hereby pronounce you husband and wife*) or immediate-descriptive statements (e.g. *He scores!*) is that they are bounded even though they refer to present situations. Interlocutors' construal of utterances is based on how they conceptualize the experiences that their linguistic stimuli tap in their minds. Because construing linguistic expressions necessarily requires the involvement of the speaker's experience and beliefs, whether or not those experiences and beliefs are explicitly encoded in the linguistic cues, we must model how the relevant information and the speaker's knowledge

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different modes are construed based on the principle of advancement and on the types of entities introduced into the universe of discourse: eventualities (event and state), stative eventualities (generic and generalization/habitual) or abstract entities (facts, propositions, or projective (irrealis) propositions) (Smith 2003).

[75] Utterances with zero-state predicates (like *The book is in Russian*) do not involve a contrasting TT; utterances with one-state predicates (like *The book is on the table*) involve an outside contrast; utterances with two-state predicates (like *The book was taken off the table*) involves in addition an inside contrast (between the book's being on the table and not being on the table).

contribute to the overall construal of the target utterances.

The cognitive approach provides a unified account of TAME phenomena without isolating our reasoning from our experiences and without setting up special pragmatic rules. Rather, the cognitive approach assumes that every construal relies on our experiences – or, strictly speaking, on our simulation of our experiences. I have given cognitive accounts of tense, aspect, modality, and evidentiality elements in the Korean verbal complex in Chapter 4, and specifically a Mental Spaces Theory analysis of evidential markers in Chapter 5. In this section, I discuss what makes the cognitive approach more convincing than others by examining its basic assumptions.

Traditional approaches are based on disembodied theoretical assumptions. The approaches of Reichenbach (1947), Klein (1994), and Smith (1997) all assume that meanings arise from a direct link between words and the world. This perspective is exemplified in the following excerpted statement:

> "It seems mysterious that a set of situations should have duration, or an end in reality, but the corresponding lexical contents do not contain such a temporal feature. But if this is true, the distinction between 'event VPs' and 'state VPs' without boundaries, or between punctual and non-punctual verbs (or VPs) collapses, because in reality there are no situations without duration." (Klein 1994:33)

However, if abstract concepts, events, states, and so on existed independent of human beings, what Klein finds so mysterious would not be surprising. Again, construals of time and of situations are not extant in the real world. Rather, they exist only in our conceptualization, and come into existence through our mental simulation. Klein's description of topic time itself indicates that what is referred to by a tense expression is not an extension of a referent in the real world, in that the speaker's perspective must be involved to mark the speaker's assertion as being about a particular time. His temporal reference points therefore are quite useful in explaining temporal and/or aspectual complexities.

However, this study argues that this disembodied view is not adequate; we must modify this notion of topic time so that it is more cognitively motivated, something more like the concept of reference time. It is this necessity that underlies my proposal for a multilayer approach that models how interlocutors understand language use and how, in the process, they access information about tense, aspect, modality, and evidentiality simultaneously and unconsciously. The set of temporal reference points described in my approach are grounded in the idea that the construals of all of these abstract notions and concepts is possible because the notions and concepts are being subjectively perceived, conceptualized, and assessed via human viewpoints and human sensorimotor systems There is thus nothing to feel mystified about; linguistic expressions reflect human beings' construals via subjective experience and embodiment.

The multilayer framework I employ in this study is not entirely new. It inherits assumptions and motivations from a number of approaches within the field of cognitive linguistics. The mechanism of profiling, by which entities or events that receive more attention are intuitively expressed, is taken from Langacker's Cognitive Grammar (1987). The multilayer approach is also based on one of the fundamental assumptions of the Neural Theory of Language (Feldman 2006, Lakoff 2008, Bergen and Chang 2005), that people understand utterances by performing mental simulations. That is, people understand what linguistic content is describing by activating the same perceptual, motor and other brain systems that would be activated if the described scenes were actually being experienced (Bergen and Chang to appear). In particular, I incorporate Narayanan's (1997) x-schemas into the multilayer approach to capture the internal structures of events and processes in a way that allows us to develop an intuitive explanation of

how aspect information is understood. Within simulation semantics, x-schemas provide a clear tool for understanding aspectual information because they are designed to represent the flow of activation through the motor-control system responsible for the performance or simulation of particular action (Bergen and Chang to appear). The next subsections briefly describe how the multilayer approach is related to these two major frameworks, Cognitive Grammar and NTL.

6.2.3.1 The Multilayer Approach and Cognitive Grammar

Cognitive saliency plays a crucial role in the multilayer approach: Langacker's (1991) accounts of tense and aspect make reference to the cognitive mechanisms of profiling and active zones; these notions are based on cognitive psychology. In our cognition, some portion of our experience (some entity or status, including entities or statuses expressed by linguistic content) receives relatively more attention, while the other parts are backgrounded. The portion that receives more attention is described as "profiled;" viewpoint evoked in the given context determines degree and scopes of the attention. Those entities, events, or states included in that attentional scope are activated in the construal of the target. Cognitive Grammar uses these conceptual devices to explain linguistic phenomena in a unified way.

For example, a perfective predicate is construed as a bounded process. Its endpoints are included within the scope of predication in the temporal domain. In contrast, an imperfective predicate profiles a stable situation that may extend indefinitely beyond the scope of predication in either direction (Langacker 1991:87-88). Examples of these two kinds of aspect are given in (6), and their temporal profiling are schematized in Figures 2 and 3.

(6) a. *Paul learned the answer—in fact he still does.
b. Paul knew the answer—in fact, he still does. (Langacker 1991:87-88)

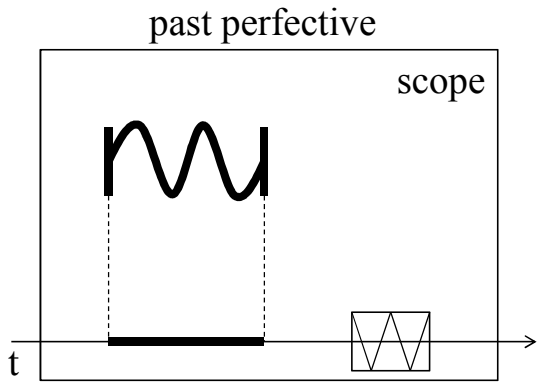

Figure 2. Schema of the Past Perfective

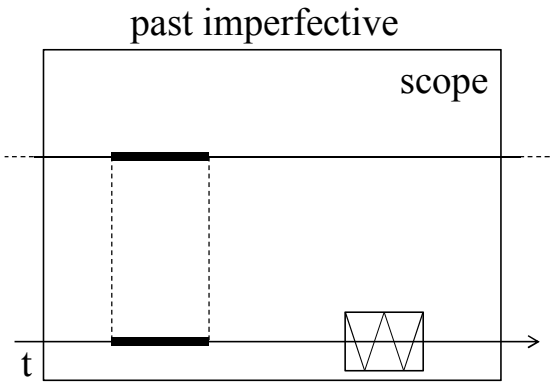

Figure 3. Schema of the Past Imperfective

In both (6a) and (6b), the first clause is in the past tense, and the second clause describes the continuation of the process in question through the present. In (6a), the second clause is infelicitous because the bounded event referred to by the predicate *learn* (represented by a bounded and wavy-lined event in Figure 2) is situated prior to the speech act (represented by a box with zigzag lines) and, because it is bounded, the assertion in the second clause cannot hold. In contrast, the sentence in (6b) is considered felicitous because the indefinite process referred to by the predicate *know* can still hold when the speech act takes place because the profiled portion is not bounded.

Incorporating the cognitive mechanism of profiling into the analysis is clearly helpful in representing which portion of an event or a process receives more attention relative to the others. In the multilayer approach deployed in Chapter 3, the various possible combinations of tense, aspect, modality, and evidentiality semantics coded by Korean suffixes are represented effectively as profiling the salient portions of multiple layers. (In other languages, these possible semantic combinations might have been expressed by multiple clausal constructs.) Cognitive Grammar is quite capable of handling the perspective phenomena that this study is focusing on because it acknowledges that one's understanding of an utterance is based in the conceptual structures that the utterance evokes, and thus on one's subjective construals and conceptualizations of one's experiences.

6.2.3.2 The Multilayer Approach and the Neural Theory of Language

The theoretical assumptions of the multilayer approach are similar to those of the Neural Theory of Language (Feldman 2006, Lakoff 2008, Bergen and Chang 2005, Narayanan 1997). The fundamental assumption of NTL is that language understanding involves *simulation* semantics (Narayanan 1999, Gallese and Lakoff 2005). This theory holds that, in understanding utterances, people simulate the situations that are evoked or activated by the linguistic constructs involved or in other words, understanding involves activating internal representations of perceivable things or performable actions, even without the things actually being there or the actions actually being performed (Barsalou 1999, Glenberg and Robertson 2000, Pulverlmueller et al 2005 (cited in Bergen and Chang to appear)).

Crucially, this simulation process involves the activation of some of the same neural structures (or of similar neural structures) as those that would be active when the person was performing, observing and/or imagining the events being described by a given utterance (Dodge 2010:13).

There has been an increasing amount of work describing how tightly interwoven the understanding of linguistic content is with experience. Claims about the cognitive mechanism of simulation have been supported by a considerable amount of neuroscientific research that has found evidence that the neural networks that are active when someone is performing an action are also active in other circumstances, such as when they are imaging or observing actions (Rizzolati and Crighero 2004 (cited in Dodge 2010:14), Lakoff and Gallese 2005). For instance, it has been reported that, when people simulate motor actions, either in recollecting or in forming intentions, they activate parts of their brains dedicated to motor control without actually engaging their muscles (Bergen and Chang to appear, Ehrsson, Geyer, and Naito 2004, Nyberg et al. 2001). Similarly, recent studies have shown that understanding visual perception requires mental the simulation of vision (Kosslyn et al. 2001).

This neural basis is crucial to language users' understanding of aspect information. Simulation semantics assumes that meanings are grounded in the brain's perceptual and motor systems (Bergen and Chang to appear); the same dynamic control systems that people use to perform actions and perceive events are also used to simulate actions and events (Feldman 2006, Narayanan 1997). We use and understand linguistic expressions by unconsciously simulating what they evoke and thereby activating knowledge of their internal structure. To understand the event or process that is being referred to by linguistic content, we must simulate the event or process.

Simulation is not only involved in the surface understanding of a sequence of words, but also involved in the developing of rich inferences as language users identify the most relevant

meaning of the linguistic trigger in the context. As Bergen and Chang (to appear) describes it:

> "[T]he brain states [that are tapped and activated by linguistic content] may activate various related processes in much the same way as the actual perception or the performance of real actions, thus allowing comprehenders to enrich their understanding by drawing detailed, relevant inferences that are grounded in sensorimotor experience and sensitive to contextual conditions."

In other words, linguistic expressions are subjectively construed, in that the experiencer's unconscious perceptual and motor simulations allow her to simultaneously access the conceptual structures tapped by the linguistic content and the subjective feelings that the rich inferences give rise to. This is how interlocutors fully understand utterances in context.

Such simultaneous accessing of a variety of information is the same cognitive mechanism that is the foundation of the multilayer framework. For instance, whenever a speaker of Korean tries to construe tense information, she necessarily, automatically, and unconsciously accesses other information like aspect, modality, and/or evidentiality. How combinations of such information are grammatically encoded is language-specificity; my claim is that none of the verbal suffixes in Korean can be assigned to a single grammatical category, but should all be analyzed as having semantics that combine multiple grammatical categories.

Narayanan (1997) gives a convincing account of the internal structure of focal events in terms of computational model motivated by how actions are embodied in a neural system. In his approach, the internal structure of an event is intuitively represented in terms of different logical stages/phases of a situation; aspectual expressions are "[l]inguistic devices referring to schematized generalizations that recur in process monitoring and control (such as inception, interruption, termination, iteration, enabling, completion, force, and effort)" (Narayanan 1997:94). He describes the strength of this cognitive approach in the following statement:

> "[T]he semantics of aspect arise from the bi-directional interaction of the generalized controller with the specific underlying x-schema, a computational model of actions, for the verb phrase in question. This active model of aspect grounded in sensory-motor primitives is able to model cross-linguistic variation in aspectual expressions while avoiding paradoxes and problems in model-theoretic and other traditional accounts" (Narayanan 1997:94-95).

The central insight of this model is that simulating a described event necessarily relies on understanding its internal structure. Narayanan's x-schemas (execution schemas) are designed to clearly represent and capture how people understand and simulate an event or process referred to in an utterance.

An x-schema captures the flow of activation through the motor-control system responsible for the performance or simulation of a certain action. Understanding an utterance *The girl has walked 7 miles today* involves the activation of some of the same structure that is active when one is walking, see someone else walk, plan to walk, or imagine ourselves or someone else walking. Figure 4 gives an x-schema representation of the aspectual structures of *walk*, including the interaction with the generalized controller.

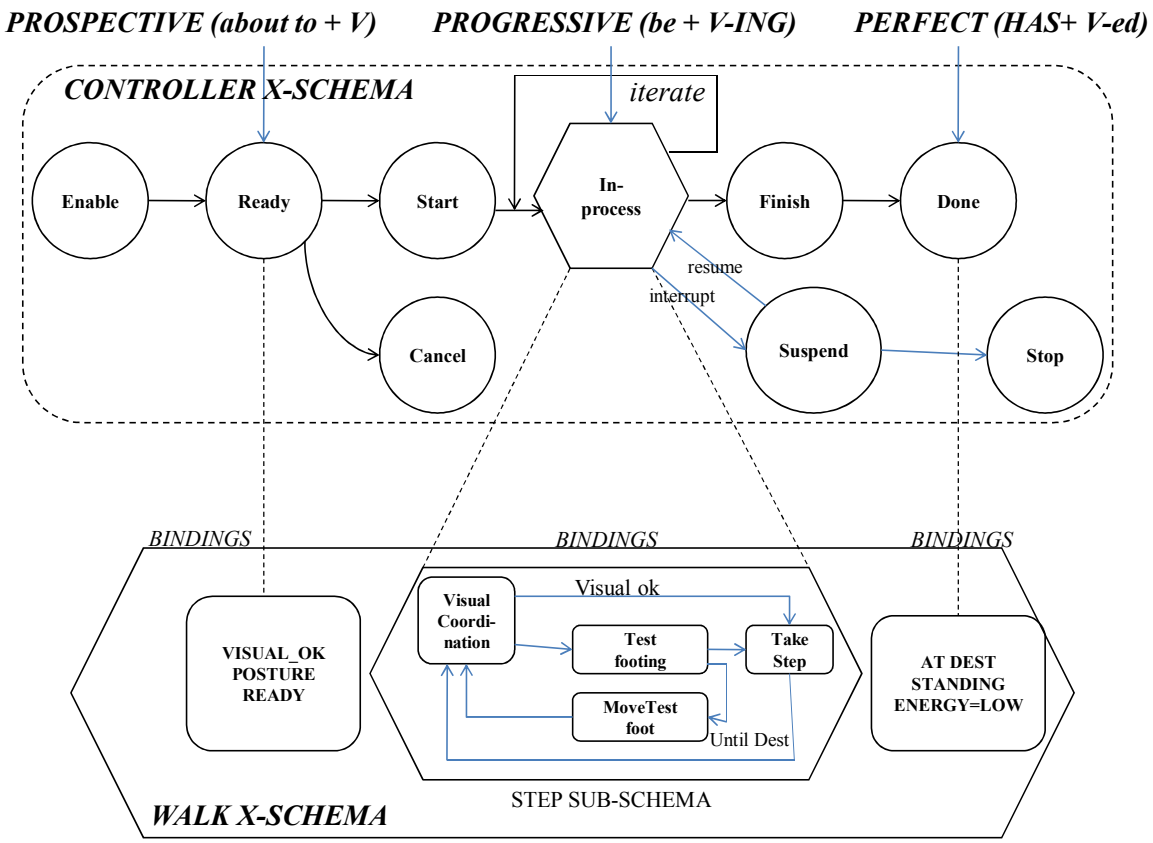

Figure 4. X-Schema of the Aspectual Structure of *WALK* (Narayanan 1997)

The internal structure of the event denoted by *walk* is shown in the large hexagon in the lower dotted box representing the x-schema of *walk*, which is linked to the In-Process hexagon in the upper dotted box representing the generalized controller schema. The inherent internal structure of *walk* is accommodated within a logical step of the controller schema, providing a basis for understanding aspects. Aspectual meaning arises from the dynamic binding of a specific activation state of the controller x-schema to a specific activation state in the verb-complex's x-schema (Narayanan 1997:102). For example, when we process the present-perfect sentence *The girl has walked*, the part of the action denoted by the utterance that is profiled is the 'Done' stage.

I incorporate Narayanan's x-schema framework into the multilayer approach to TAME in Korean as a means of representing the internal structure of the events or processes encoded by the linguistic content. Some portion of that internal structure is profiled, i.e., covered by the RT; in this way, the multilayer approach represents how a particular portion of the target event attracts more attention. In addition, my approach describes how temporal information is encoded in terms of the relationship between the speech-act time and the temporal information bound to the profiled portion of the focal event.

In a nutshell, this study argues that the cognitive approach can accommodate tense, aspect, modality, and evidentiality phenomena in an intuitive and elegant way in that it requires only the mechanisms of profiling and the scoping of active zones, which automatically zooms in and out and determines the best-fit scope of it. The term *best-fit* is used here to indicate that understanding a sentence involves finding the best match between what was spoken, what can be

inferred, and our current mental state (Feldman 2006:13). As with any other aspect of comprehension, the addressee's understanding of TAME information involves her constant cognitive effort to find the best match between what she observes (the linguistic stimulus) and what she knows (what is shared in the context, her neural state, etc.). The cognitive approach, including my multilayer approach to TAME, thus does not need to separately stipulate special pragmatic principles, as though the process of understanding utterances were independent from general human experience. The pragmatic constraints simply follow on the general mechanisms of cognition because they are consequences of how humans think.

Moreover, the cognitive approach can cope with some issues that are regarded as beyond the capacity of the formal approach. For example, defining utterance time for a given context is not a simple issue:

> "It is arguable, still, how narrowly this time is defined: … what, for example, is the utterance time of this monograph – is it the time at which it was written, or the time at which someone reads it? Does it shift from chapter to chapter, or even from sentence to sentence?" (Klein 1994:38)

Nor is the issue of so-called topic-time shift (Klein 1994:45) a problem for the cognitive approach, once we adopt the notion of an active zone that delimits the relevant best-fit scope – local or global – and the notion of viewpoint flexibly in context, in which viewpoint is tied to the origo's perception and/or assessment of the target processes.

In sum, the cognitive approach is a useful framework for accounting for tense, aspect, modality, and evidentiality systems in a more intuitive and motivated way, because it involves the cognizer's viewpoint and therefore can explain how subjective meanings arise from the system. Furthermore, it can explain the issue of topic-time shift in terms of the cognitive mechanisms of profiling and active zones. Language users unconsciously and automatically identify the focal event in a given context, determine the best-fit scope of the active zone that gets attention, and construe it.

The temporal reference points that have been used in the traditional approach are not incompatible with the cognitive approach I am taking because they are, at base, generalizations over human experiences and assessments of time and events. In the right framework, they can be used as a motivated parameter for analysis. Based on that starting point, this study uses the cognitive approaches of Cognitive Grammar and x-schemas to represent verbal aspect. My fundamental assumption is that we must always consider the embodiment of our viewpoint in our representation of how TAME information is construed.

6.2.4 Another Reference Point: Secondary Viewpoint Time

The Reichenbachian and (Neo-Reichenbachian) analysis is correct in arguing that we need a third temporal parameter – reference time – to distinguish the definition of tense from that of aspect. However, this sub-section argues that the traditional definition reference time or topic time lacks explanatory power because it is not cognitively motivated. Utterances are based on the origo's subjective experiences, including not only her assertions about the time in question, but also about the time at which she perceived the relevant event or a process. In fact, a speaker's assertion is necessarily based on her perception and assessment of relevant stimuli in a given context.

According to the Neo-Reichenbachian analysis, *topic time* is the time for which a particular utterance makes an assertion (Klein 1994:37). Klein uses the example in (7) to explain the

notions of situation time (equivalent to event time) and TT.

(7) The book was in Russian. (Klein 1994)

The proposition in question, that a particular book is in Russian, obtains during entire period encompassed by the situation time. In contrast, the topic time is limited to the specific period of time during which the speaker observed the book. The ST follows the TT, and so the tense of the utterance is past.

This argument seems intuitively plausible and convincing. However, things become more interesting when we considering that (7) can be uttered only after the speaker has realized the book was written in Russian, not in, say, English or Korean. If we posit that there are at least two relevant stages in the origo's perception, namely a stage where the origo has not yet realized that the book was written in Russian and another where the origo has realized this, we must also posit another relevant temporal point, namely, the time of the speaker's perception. This process of perception or assessment is relevant to the speaker's vouching for the truth of the proposition in question. Including another temporal reference point effectively elaborates the TT to allow for a more fine-grained level of meaning construal. This other temporal point is not only the time about which the speaker is making an assertion, but the time the experiencer is attending to in terms of belief, perception, epistemic assessment, etc.

Klein's explanation of the utterance in (8) describes the need to refer to the temporal point of the speaker's perception.

(8) Are you sure? – Oh yes, it WAS in Russian. The letters were Cyrillic. (Klein 1994)

According to Klein, what is being highlighted in (8) is neither the fact that the book's being in Russian obtained prior to the ST (as opposed to obtaining after the ST or simultaneous with the ST) nor the relationship of the RT to the ST. What is being highlighted is rather the claim that the situation obtains at the RT (Klein 1994:51). In other words, the past-tense *was* in (8) is not being used in the canonical function of profiling anteriority to the speech-act time, but to profile the anteriority of the speaker's perception and assessment to the ST. Klein himself does not explicitly acknowledge the need for the parameters of perception time and assessment time, but his explanation of the example above is obviously based on the intuition that there is something more than a temporal relationship between the RT and the ST in (8). I would like to suggest that we do, in fact, need to posit parameters for the times of the speaker's perception and assessment to analyze sentences such as that in (8) convey the process of the speaker's perception and vouch for an event having occurred or a property having obtained at a particular time.

This study argues that the construal of TAME constructions in general requires reference to another viewpoint than the speaker's deictic center (i.e. than the primary viewpoint). This secondary viewpoint time (SVT) is another conceptual anchorage on the time line; this viewpoint can either be the perspective of the perceiving origo or the perspective of the assessing origo. In my analytical framework, the SVT parameter can be instantiated as either perception time or assessment time, depending on the context.[76]

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[76] The SVT is conceptually similar to Sanders et al's (2009) notion of the Subject of Consciousness (SOC). *SVT* here refers to viewpoint that a construer empathizes with, that scans a particular portion of the encoded event regardless of the speaker's fixed viewpoint (deictic center). The SVT has a specific value when it is used in a particular context (Vandellanotte 2009, Davidse and Vandelanotte 2011, Fleichmann 1989, Sanders and Sweetser

The secondary viewpoint time plays a crucial role in defining the functions and meanings of the tense, aspect, modality, and evidentiality elements in Korean, as described in Chapter 3. In particular, the notions of AT and PT are useful for analyzing how modal and/or evidential readings arise from interactions between the understandings of tense and aspect. For instance, in the sentences in (9) and (10) (discussed in Chapter 3), the anterior marker *-ess-* and the non-past imperfective marker *-nun-* are each used with a future-tense adverbial.

(9) *ne-nun* *nayil* *cwuk-ess-ta*
you-Top tomorrow die-Ant-Decl
'Tomorrow, you'**re dead**.'

(10) *ne-nun* *nayil* *cwuk-nun-ta*
you-Top tomorrow die-Imprf-Decl
'Tomorrow, you'**re dying**.'

In (9), *-ess-* indicates the perfectivity of the focal event in the speaker's epistemic world, while in (10), *-nun-* indicates the imperfectivity of the focal event in the speaker's epistemic world. If we had assumed that *-ess-* simply marks past tense and tried to analyze it in terms of ET, RT, and ST, it would have been difficult to come up with a plausible explanation for the grammaticality of (9), because the futurity of the adverbial should clash with the past reading of *-ess-*. However, what *-ess-* indicates in (9) is that the speaker's subjective judgment regarding the event has already occurred in her epistemic world, i.e., in her mind. In other words, the speaker's assessment time immediately follows the RT in the irrealis epistemic domain, profiling the Done stage within the ET. It should be noted that AT and PT can never be prior to the RT because one cannot make an assessment or an observation before the focal event has taken place.

The use of *-nun-* in (10) also indicates that, in the speaker's epistemic world, the addressee's dying is happening at the ST. The cotiming of the speaker's assessment of the fact that the addressee will be dead (or at least punished) soon with the ST licenses the use of the non-past imperfective marker. If we posit a secondary viewpoint time, we can account for the effect of the speaker's epistemic judgment because the time at which the speaker makes that epistemic judgment belongs to an irrealis epistemic modal domain, not to a realis domain. The standard definition of topic time cannot capture cases like those in (9) and (10) where time the speaker is making an assertion about, i.e., the time of the focal event (in this case, tomorrow) but the target of the assertion is actually the time at which the speaker makes her assessment. In more general terms, the standard notion of topic time cannot capture cases where the aspect within the speaker's epistemic world is what is realized in an utterance, while the notion of secondary viewpoint time can capture these cases.

This study is not the first to have pointed out the need for something like an SVT in the analysis of tense, aspect, and modality. For example, Condoravdi (2002) uses the concept of *perspective time,* the time from which an eventuality is judged to be possible, probable, or necessary (cited in Cover 2010:37-39), to describe the modal properties that underlie the construal of tense and aspect.[77] In addition, Lewis (1979) proposes the parameter *believing time*

2009).

[77] Condoravdi (2002, cited in Cover 2010:50) also discusses *evaluative time*, the time at which an eventuality must be realized in order for a given sentence to be true. I believe that the functions of the RT can cover the function of the evaluative time.

in a similar context (cited in Cover 2010: 50). I believe that these notions are both similar to the notion of assessment time that I am proposing here. However, the concept of assessment time additionally presupposes the speaker's process of observing or perceiving some piece of information that forms the basis of their assessment. I therefore also propose that there is a separate perception time at which the focal information is processed into the origo's memory.

I believe that the notions of AT and PT can provide for a finer-grained analysis of the Korean temporal system. In general, secondary viewpoint time accounts for the interactions between tense, aspect, modality, and evidentiality categories in a conceptually motivated way, in that the secondary viewpoint gives rise to the semantics of subjectivity, including epistemic modality and evidentiality. Locating an event relative to some temporal point naturally involves the speaker's subjectivity; it is therefore likely to give rise to meanings involving varying degrees of speaker certainty, willingness to vouch for the truth, and sources of information.

6.3 A Construction-Grammar Analysis of the Korean Evidentiality Constructions

As I argued in detail in Chapter 5, the construal of the Korean evidential constructions requires simultaneous access to multiple aspects of events and to multiple viewpoints on those events. I have shown that purely syntactic formal approaches therefore fail to account for the perspective phenomena associated with these constructions.

The traditional generative paradigm has focused separately on the syntactic and semantic components, which it takes as mapped onto each other but in principle independent of each other; its proponents believe that both are parts of an autonomous human language faculty. However, understanding of language simply does not work that way. Generativist syntacticians have failed to account for the implicit semantic phenomena that are operating behind the scenes. At best, they account for evidentiality by arbitrarily creating another functional head in the syntactic tree to accommodate the evidential category and describing how that functional head interacts with other heads in terms of arbitrary syntactic operations (Speas 2008). Current formal semantic models are not structured to address the issues of viewpoint semantics which play such a large role in the construal of evidentiality. The deep semantics carried by the perspective phenomena found in the evidential constructions cannot be accounted for only in terms of syntactic operations, manipulations of disembodied symbols or theory-internal analyses of the relevant functional categories, this view of the relationship between forms and meaning is too unbalanced.

I therefore make the opposite assumption in this study: The meanings of both words and grammatical structures can affect grammaticality, and meaning should therefore be incorporated into grammatical representations (Bergen and Chang to appear).

We should analyze the perspective phenomena of evidentiality within a cognitively motivated theory where every level of construction, lexical, morphological, and syntactic, can contribute meaning to the construal of the whole. To understand how people encode and decode linguistic expressions, we must pay attention to both structure and meaning so we can explain how interlocutors simulate what a linguistic construction describes.

The aim of this section is to provide a motivated account of the evidential constructions in Korean within Construction Grammar (CxG) (Goldberg 1995, 2006, Fillmore, Kay, and O'Connor 1988, Kay and Fillmore 1999, Östman and Fried 2005). CG is the best-fit approach for analyzing the target constructions because it assumes that linguistics usages are pairings of forms and meanings and thus, that every form is construed within the frame(s) that it evokes.

Section 6.3.1 provides a schematic overview of the structure of the Korean evidential constructions and discusses how implicit viewpoint significantly affects their construal, including in the evocation of the crucial PERCEPTION frame. Section 6.3.2 gives detailed formal CG notations for the target constructions.

6.3.1 A Structural Overview of the Korean Evidential Construction

The evidential constructions are linguistic devices that primarily encode the source of the speaker's information. This definition carries a crucial implication: At least two events are involved in the construal of evidential construction, and therefore, at least two actors. The sentence in (11) is an example of a Korean evidential construction using the firsthand evidential marker *-te-*.

(11) *Ahrim-ika* *chayksang-eyse* *nonmwun-ul* *ilk-te-la*
Ahrim-Nom desk-Loc paper-Acc read-Ev.Fh-Decl
'Ahrim **was reading** a paper at her desk.'

At first glance, only one event seems to be involved in the construal of this example. However, when we consider that this utterance could not be made with *-te-* unless the speaker has witnessed the event, we see that the event of the speaker's observation/perception is also a necessary part of the addressee's conceptualization. In other words, the construal of the linguistic expression in (11) involves the conceptual superimposition of the two events, which allows them both to be accessed and construed. This conceptual binding is represented in Figure 5.

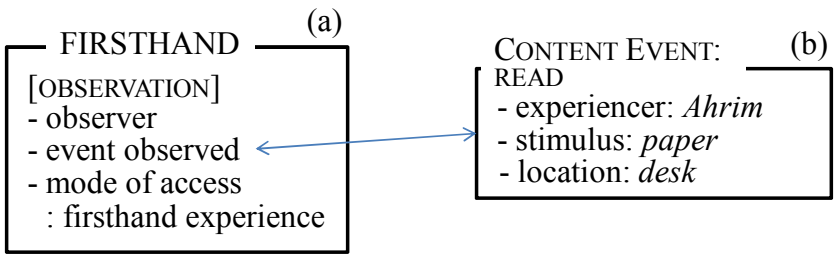

Figure 5. Conceptual Binding of Events in the Construal of Evidential CXN

In Figure 5, (a) and (b) represent the two events separately, namely, the event of the speaker's having observed that focal event and the focal event of Ahrim's reading a paper at the desk. In (a), the firsthand evidential marker *-te-* indicates the firsthand observation/perception of the implicit experiencing origo, who is distinct from the actor of the event in (b). The content event of reading (b) fills the role of event observed of the firsthand observation/perception event, which is demonstrated by the arrow between the events (a) and (b). In (b), the transitive predicate *ilk-* 'read' takes a stimulus *nonmwun* 'paper,' and an experiencer *Ahrim*. The utterance in (11) indicates that the two events are conceptually bound, representing the construal of the whole evidential construction.

The structure of the other evidential markers is quite similar to that of the firsthand evidential marker at this level. They all involve two major events, the focal event that is observed and the origo's observing event, with the observed event syntactically embedded in the origo's observing event. The mode of access that each construction encodes is marked by a different evidential

marker. In the sentence in (12), the inferential evidential marker *-napo-* differs from *-te-* only in that the mode of access is the speaker's inference:

(12) *Ahrim-ika* *chayksang-eyse* *nonmwun-ul* *ilk-napo-ta*
Ahrim-Nom desk-Loc paper-Acc read-Ev.Infr-Decl
'Ahrim **is reading** a paper at her desk.'

However, the reportive/ quotative evidential marker *-ay* is structurally different from the other two evidential markers in that, it is located in the sentence-terminal-suffix position in the verbal complex, as in the quotative example in (13).[78]

(13) *Jangmi-ka* *Ahrim-ika* *chayksang-eyse* *nonmwun-ul*
Jangmi-Nom Ahrim-Nom desk-Loc paper-Acc
ilk-nun-t-ay
read-imprf-Decl-Ev.Quot
'According to Jangmi, Ahrim is reading a paper at her desk.'

-Ay is also different from *-te-* and *-napo-* in that the embedding construction can have a disseminator (teller in Figure 6) on the surface, as it does in (13), instead of an implicit origo. This is because etymologically, the *-ay* construction comes from an expression meaning, "[disseminator] tells me that [focal information]." However, as Figure 6 shows, the *-ay* construction does share some aspects of its schematic event structure with the other two Korean evidential constructions, including the superimposition of the focal event (content event: read in Figure 6) and the event of the speaker's obtaining the information about the focal event ((a) in Figure 6).[79]

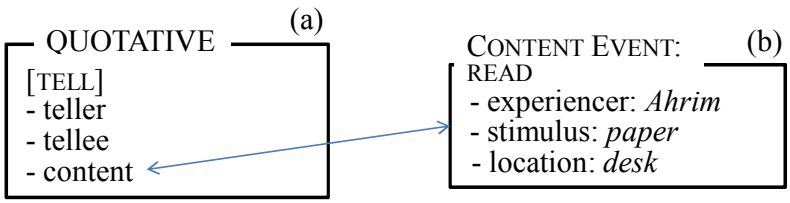

Figure 6. Conceptual Binding of Events in the Construal of (13)

[78] It might be the case that an indicative marker *-e* is phonologically weakened right after *-ay* or the case that the original construction of *-ay* contains an indicative marker. Thus, it is arguable that (13) actually has an indicative modal marker at the end and that *-ay* might not have to belong to the terminal suffix position. Considering that the declarative marker prior to *-ay* belongs to the embedded clause, however, it is obvious that the marker belongs to a different grammatical paradigm from where the other two belongs to. This study focuses on the marker's different grammatical status in the Korean verbal complex.

[79] Note that the evidential construction schematized in Figure 5 is distinguished from periphrastic evidential expressions such as complementizer-plus-experiential-predicate constructions (e.g. *I saw that…, I heard that…,* etc.), primarily because the event of the speaker's perception has a different informational status in the evidential construction. The fact that the speaker has obtained the focal information via a particular mode of access is backgrounded (or not at issue) in the evidential construction, while in the periphrastic construction, it is part of the foreground (for further discussion of these differences, see Chapter 5).

Note that the (a) sections of Figures 5 and 6 both indicate the semantic frame with relation to OBSERVATION/PERCEPTION. This frame contains several frame elements (FEs) such as OBSERVER, EVENT OBSERVED, MODE OF ACCESS, MEDIUM, INTENTION, INSTRUMENT, which correspond to the participants that are salient in the speech context. For instance, in (1), the speaker corresponds to the OBSERVER, the focal event (Ahrim's reading a book) to the EVENT OBSERVED, the origo's firsthand sensory experience (most likely visual) to the MODE OF ACCESS, and so forth. This semantic binding allows us to understand the evidential statement.

6.3.2 CG Notation for the Korean Evidential Construction

This sub-section elaborates the schematic overview of the Korean evidential constructions by exploring in further detail how their forms and meanings are bound together, describing the target constructions in terms of formal Construction Grammar notation, which makes reference to both constructional constraints and semantic frames. Figure 7 gives a CG constructional entry for the construction headed by the firsthand evidential marker *-te-*.

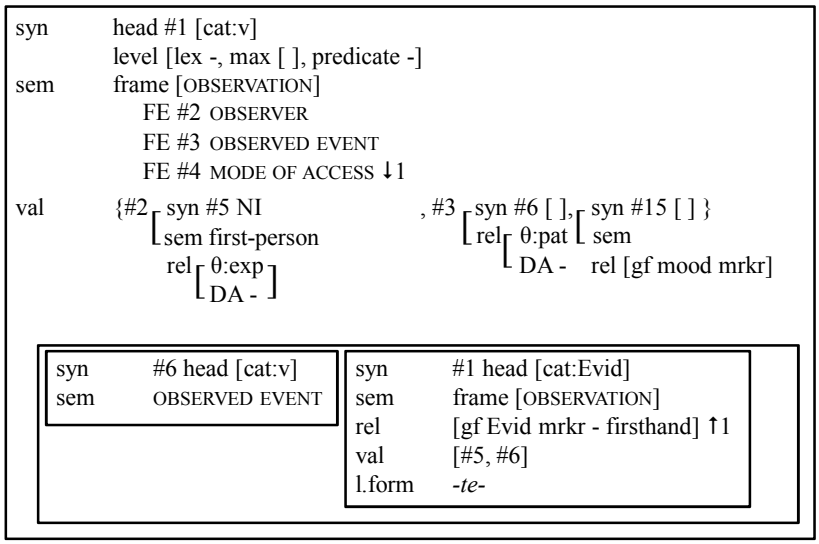

Figure 7. A CG Constructional Entry for the Firsthand Evidential *-Te-* Construction

Because this evidential construction has a predicating-type function, i.e. indicating that the speaker is recounting the focal event, it functions in some sense like a predicate with an argument structure and relevant semantic roles corresponding to the elements of that structure; its category (cat) is therefore represented as being verbal. The *-te-* construction evokes the semantic frame OBSERVATION, whose FEs include OBSERVER, OBSERVED EVENT, AND MODE OF ACCESS. Information about the semantic frame is also included in the box specifying the properties of the head (#1); the information in that box specifically describes the lexical item *-te-*. The description of the lexical item also specifies the type of evidentiality under rel, namely, the grammatical function (gf) of *-te-* in this construction is a firsthand evidential marker (Evid mrkr). The other types of evidential construction differ in which mode of access is specified; for example, the constructional entry for the inferential evidential marker *-napo-* would have a value of inference for its mode of access.

The valence specification (val) indicates how the frame elements are bound to the the

arguments. Figure 7 shows that FE#2, the OBSERVER, is bound to syntactic head #5, whose semantic role is that of an experiencer (exp). This element is obligatorily null (NI: null instantiation) in the *-te-* construction and refers to the speaker (first-person). It is not a distinguished argument (DA); it is not instantiated in the firsthand evidential construction, but functions as an implicit subject and origo in the construal. FE #3 the OBSERVEE, is semantically bound to the focal event that has been observed; because this event is conceptualized as entering the origo's perception, its semantic role is that of a patient or stimulus. Lastly, head #15 is the indicative marker that appears at the end of the verbal complex.[80]

The sentence in (12) is another example of the use of the firsthand evidential marker *-te-*.

(12) *Ahrim-ika* *nonmwun-ul* *ssu-te-la*
Ahrim-Nom paper-Acc write-Ev.Fh-Decl
'Ahrim **was writing** a paper.'

Again, the *-te-* construction in (12) cannot be construed without the semantic frame OBSERVATION. Figure 8 gives a formal description of the sentence in (12).

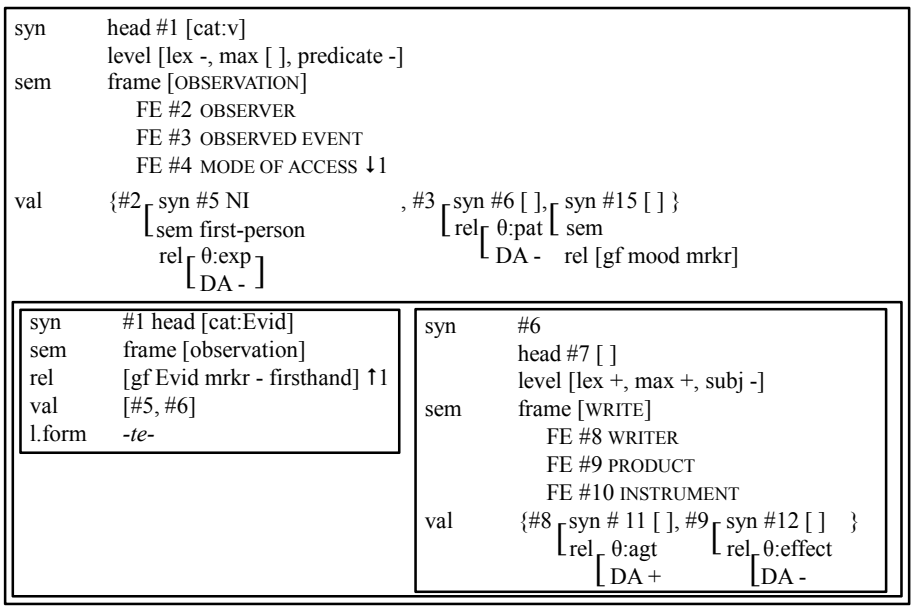

Figure 8. A CG Representation of (12)

In (12), the role of OBSERVER, FE#2, is bound to the speaker, the implicit subject (obligatorily null head #5). Its thematic role is that of experiencer (exp), as the construction refers to the speaker's firsthand experience. The thing observed, FE#3 is bound to the focal event of Ahrim's writing a paper (syntactic head #6), which in turn has its own internal structure and semantic frame, which is shown in Figure 9. Head #8 is a distinguished argument (grammatical subject) in

[80] Note that the CG representations provided in this thesis primarily focus on the evidentiality constructions, and do not contain any detailed discussion of a mood marker (e.g. #15 in Figure 7). To represent the constructional account of mood markers is not trivial; mood markers evoke the frame SPEECH ACT in that it determines the illocutionary force of an utterance. How to integrate the function of them into the CG representation calls for further research.

that it is explicitly instantiated and embedded in the evidential construction.

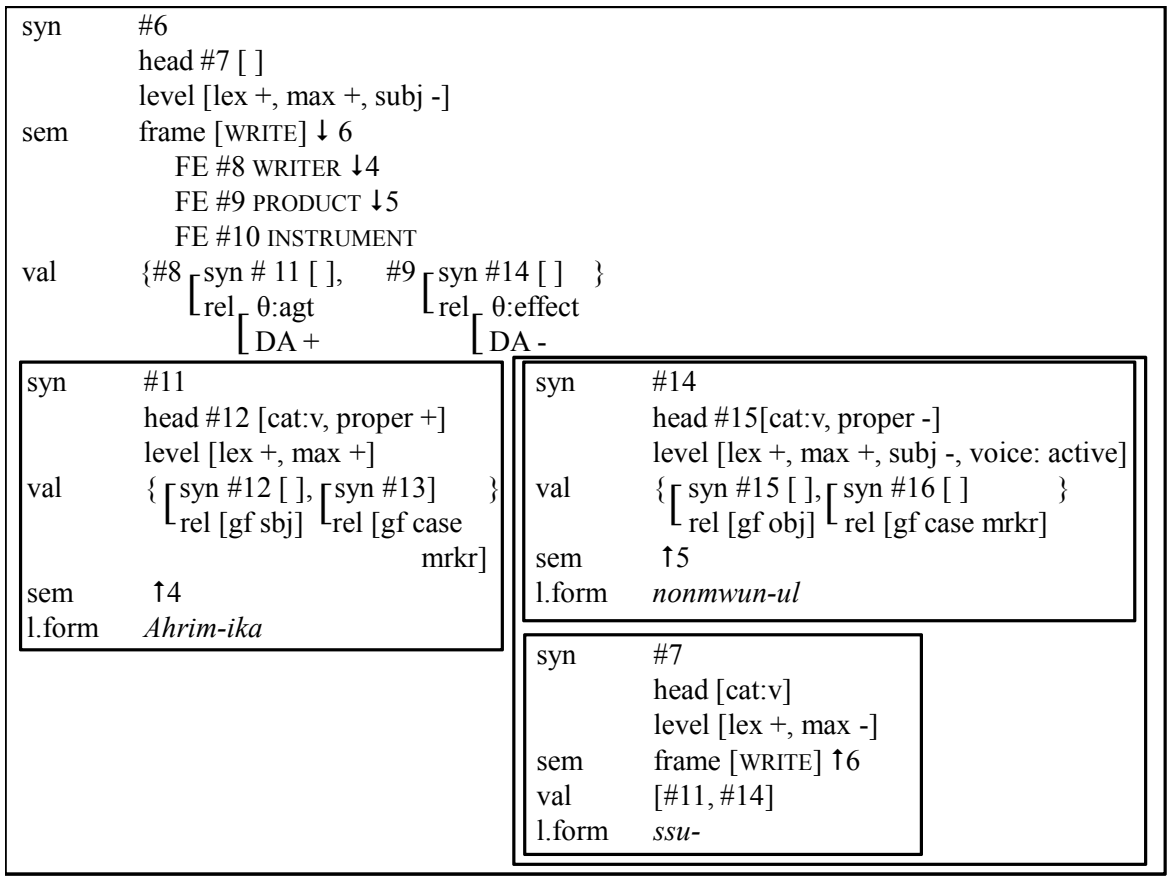

Figure 9. A CG Representation of the Thing Observed in (12): Head #6

Figure 9 is an elaboration of Head #6 in Figure 8, i.e., the observed event. The syntactic subject of the observed event is head #11, *Ahrim-ika* (DA +), its object is head #14, *nonmwun-ul*, and the predicate is head #7, *ssu-* 'write.' The syntactic elements are mapped to the FEs evoked by the semantic frame WRITING; the agent semantic role, which is bound to FE #8, WRITER, and head #14 is mapped to the effect semantic role, which is bound to FE #9, PRODUCT.

Having a clear system of notation for describing a construction's internal syntactic and semantic layout allows us to better describe the conjunct/ disjunct phenomena relevant to the evidential construction. The example in (12) and (13) are disjunct, in that FE#2, the OBSERVER, is not identical to FE #8, the WRITER. Conjunct evidential constructions can be represented by co-indexing of the two frame elements.

The reportive and quotative evidential constructions headed by *-ay* have a different structure and involve different semantic frames than the evidential constructions headed by *-te-* and *-napo-* because their historical predecessor contained the verb (*mal*)*ha-* 'say'/ 'tell'/ 'speak.' Although the *malha* construction has been grammaticalized into a monosyllabic marker, the TELLING frame is still at the core of its meaning. The sentence in (13) is an example of the quotative use of *-ay*.

(13)	*Chelswu-ka*	*Ahrim-ika*	*nonmwun-ul*	*ssu-n-t-ay*
	Chelswu-Nom	Ahrim-Nom	paper-Acc	write-Imprf-Decl-Ev.Quot

'According to Chelswu, Ahrim is writing a paper.'

Because of its historical origin, the *-ay* construction evokes the semantic frame TELLING, which includes the FEs TELLER, TELLEE, and CONTENT. The origin of the focal information is mapped to the teller, the speaker (the experiencing origo) to the TELLEE, and the focal information to the CONTENT. These semantic bindings are shown in the representation in Figure 10 of the quotative *-ay* construction.

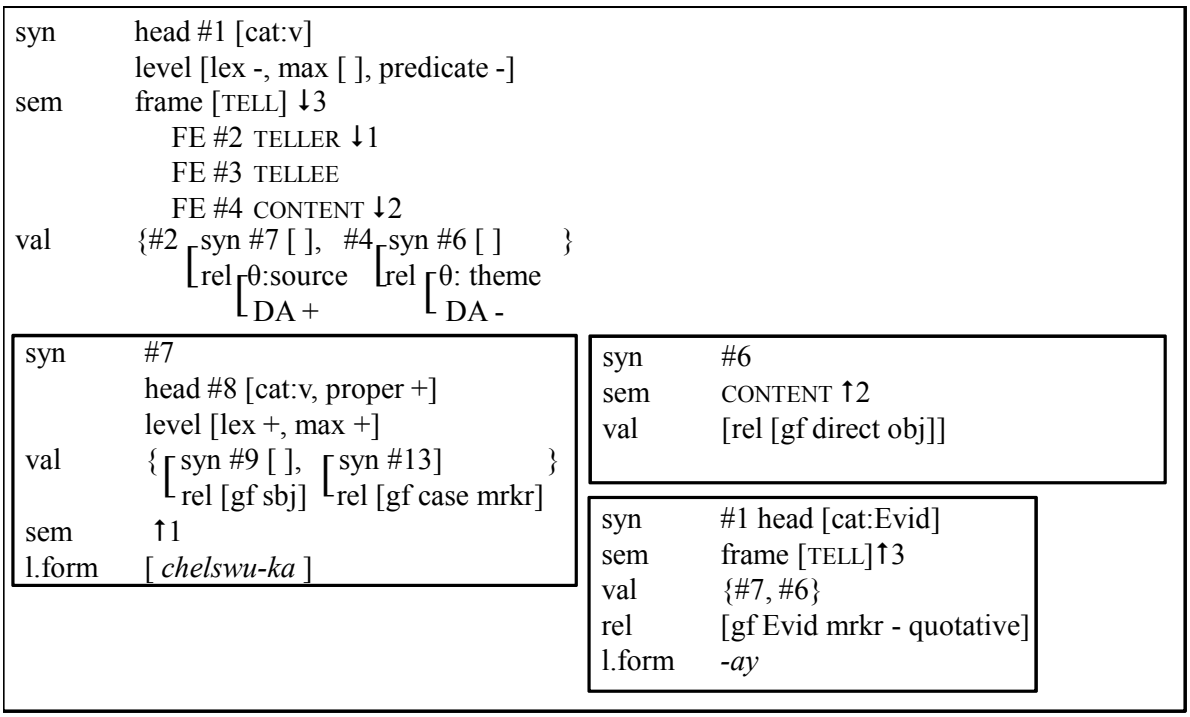

Figure 10. A CG Constructional Entry for the Quotative-vidential *-Ay* Construction

The word order of the surface form corresponds to the order of the elements in head #1's valence specification. The TELLEE FE of the TELLING frame is not instantiated in the construction. The TELLER FE of the TELLING frame is mapped to head #7 and expressed as a subject with nominative-case marking. The source is followed by the theme, bound to FE #4, CONTENT, which is mapped to head #6, i.e., the observed event. Finally, the head of the whole construction, the quotative marker *-ay*, is located at the end of the utterance.

As I discussed in previous chapters, the *-ay* can also head a reportive evidential construction in which the authorship of the focal information is not expressed. The notation above can be used to represent the difference between the quotative and the reportive constructions. By removing the box of the syntactic head #7 and specifying that the head #7 is obligatorily null in the valence of the overall construction, the reportive *-ay* construction can be represented with ease.

The *-ay* constructions differ from the *-te-* and *-napo-* constructions in that they evoke the semantic frame TELLING rather than OBSERVATION. The predicates involve different semantic roles than the firsthand and inferential evidential constructions, and the constructions are therefore structured differently. The origo's mode of access to the focal information is encoded indirectly because there is no overt FE MODE OF ACCESS in the semantic frame but a TELLEE FE

that is identical to the speaker.

In sum, semantic frames such as OBSERVATION and TELLING are evoked by the Korean evidential markers and can have a variety of relations with the frames evoked by the main verbs in the verbal complex; similarly, there can be a variety of relationships among their various thematic roles and frame elements including the roles and elements of experiencing origo, stimulus, speaker, observer, and so on. The markers are construed in terms of the frame semantics of observation or telling, and what is expressed by the constructions they head is understood by grasping the semantic bindings between the elements of those frames and the forms expressed on the surface. Figure 11 gives a schematic summary of the semantic bindings involved in the construal of the Korean evidential constructions.

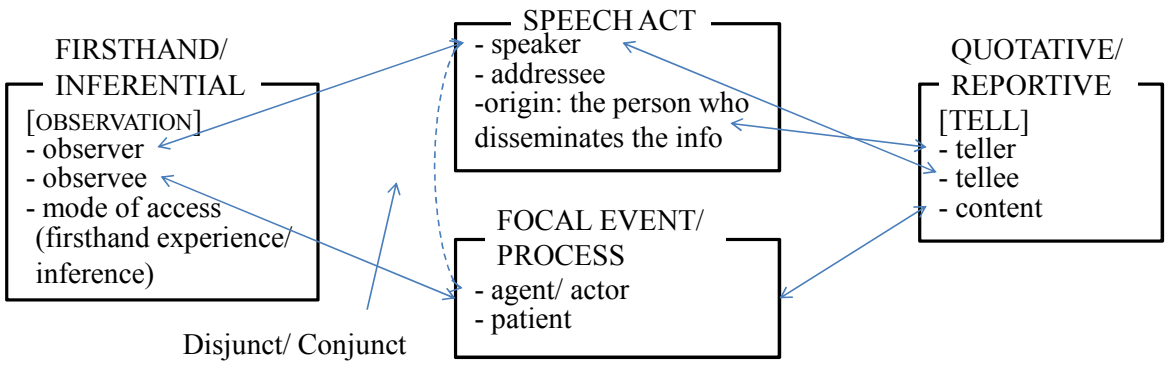

Figure 11. Semantic Bindings in the Korean Evidential Constructions

An evidential construction involves a relationship between a linguistic construct, a speech act in which that construct is produced, and a focal event or process referred to by the construct, with surrounding context. Figure 11 represents this relationship using four boxes: the central boxes contain the entities that enter into these relationships, and the boxes on the sides represent the two basic types of evidential construction in Korean. The semantic frames evoked by the constructions are enclosed in brackets. The double-headed arrows represent the semantic correspondences or bindings between the Fes evoked by the evidential constructions and the roles in the relevant events.

In the firsthand- and inferential evidential constructions, the FE OBSERVER and the role of speaker in the speech-act event are mapped to each other. The FE OBSERVEE corresponds to the whole focal event or process. The speaker role may or may not be bound to the agent role of the focal event; in other words, the evidential construct may by conjunct or disjunct.

The quotative and reportive *-ay* constructions are construed in terms of the semantic frame that they evoke. The frame TELLING evoked by the *-ay* construction includes the FEs TELLER, TELLEE, and CONTENT. The speaker in the speech-act event is bound to the ADDRESSEE of the TELLING frame. The origin in the speech-act event corresponds to the TELLER, and whether it is instantiated or not determines whether the *-ay* construction is quotative or reportive. The focal information is mapped to the content of the TELLING frame. The mode of access encoded in the *-ay* construction is represented in the label of the semantic frame; when the speaker has obtained the focal information from a statement originating from the TELLER statement, the salient mode of access is quotation or hearsay.

These different combinations of semantic bindings enable us to appropriately differentiate between the Korean evidential constructions. CG notation intuitively captures the distinctiveness

of each construction, and can also represent the distinction between conjunct and disjunct evidential constructions.

6.4 The Nature of Inferential Evidentiality

In Chapter 4, I claimed that Korean has a three-term evidentiality system that can express three types of information source. Indirect information sources such as report, quotation, hearsay are evoked by *-ay*, inference by *-napo-*, and firsthand experience by *-te-*. Korean does not seem to have a grammatical paradigm where the markers are all evidentials; rather, it has a scattered evidentiality system.

The categorization of languages in terms of their evidentiality systems presents some analytic difficulties. One of those difficulties, which I would like to tackle in this section, is the distinctions of inferential evidentiality from other types of evidentiality. Assuming that evidential markers are primarily concerned with the experiencing origo's processes of perception, a type of evidentiality that relies on the origo's inference processesis an exception. In a perception process, a stimulus enters an experiencing origo's cognition via one or more of her senses, while in an inference process, an origo who has already perceived a stimulus reasons about that stimulus. In short, inferential evidentiality concerns an inference process triggered by the origo's perception, while other types of evidentiality concern her perception directly.

The remainder of this section argues that, if we analyze the internal causal structure of inferential evidentiality, this difference can be captured quite clearly (Kwon 2010). After making some general observations about the causal structures of inferential evidentiality and epistemic modality, I examine in detail the Korean inferential elements, namely the inferential evidential marker *-napo-* and the presumptive/ volitive epistemic-modal marker *-keyss-*.

6.4.1 Evidentiality, Epistemic Modality, and Causal Event Structure

This section briefly introduces my (2010) causal-event-structure (CES) account of evidentiality and epistemic modality (EM). The CES account is a modified version of Sweetser's (1990) force-dynamic approach to understanding epistemic modality.

The English modal sentences in (14) and (15) are examples of the deontic and epistemic uses of *must*, respectively.

(14) *You must come home by ten. (Mom said so.)*
(15) *You must have been home.* (Sweetser:1990)

Note that the two kinds of modals share a common causal structure. In (14), some cause that is implicit in the given context or some implicit social authority which can be inferred from the cause on the part of the speaker compels the addressee to perform an action, and in (15), some piece of evidence that is implicit in the context compels the speaker to reason to a particular conclusion. In other words, the epistemic modality encoded in (15) requires that there be evidence on which the speaker's reasoning is based, just as the deontic modality encoded in (14) requires that there be some cause on which the speaker's authority is based. Figure 12 gives a schematic picture of the internal event structures encoded by these modal elements.

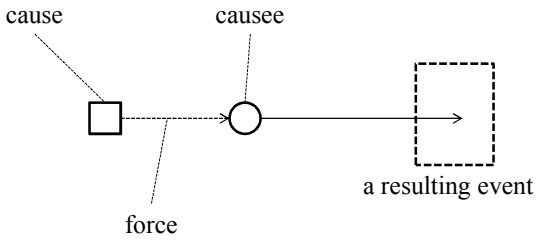

Figure 12. A Schematic Structure for Causality

The element CAUSE can be used to characterize the motivators of the FORCE, including whether it is self-propelled or triggered by an external factor. The element CAUSEE is the conceptual trajector that the FORCE is exerted on and that thus travels through conceptual space. The exertion of the FORCE is represented in Figure 12 to show how the CAUSE and the CAUSEE are linked in the event structure (also implied in Talmy 1981, 1988, 2000, Langacker 1987).

Using this schema, we can reanalyze the English modal examples in (14) and (15). Table 1 shows how causation works in each case. In both sentences, the CAUSEE is equivalent to the subject that the force is exerted on and the CAUSE is equivalent to the FORCE EXERTER in the force dynamics schema.

MUST	(14)	(15)
the subject the FORCE is exerted on	the addressee	The speaker's reasoning
FORCE EXERTER	the cause in the given context	the speaker's perception of evidence
FORCE	the causee's will, the speaker's authority	the speaker's inference process
BARRIER	None	None

Table 1. Frame Elements of the Causation Frame Evoked by *Must*

The fact that the motivator of the FORCE (i.e., the FORCE EXERTER) in (15) is the speaker's perception of evidence is critical here. Without evidence from some information source - firsthand, hearsay, report, inference, or something else – the meaning of strongly positive epistemic modality would not arise. The embedding of evidentiality in epistemic modality is represented schematically in Figure 13.

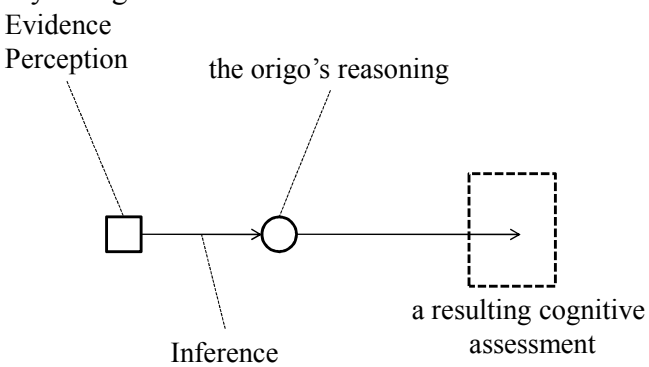

Figure 13. A Schematic Structure for Epistemic Modality

The representation of epistemic modality in Figure 13 differs from the general representation of causation in Figure 12 in several respects. Firstly, the speaker's perception of evidence in Figure 13 corresponds to the CAUSE in Figure 12. Without the implicit perception of evidence (called *assumed knowledge* Alkhenvald 2004) or the explicit perception of evidence (any via some kind of sensory perceptions), EM cannot be construed. Secondly, the origo's reasoning process about the focal event in Figure 13 corresponds to the CAUSEE in Figure 13. Because the origo has perceived some kind of evidence (that is either directly or indirectly relevant), she begins to reason about the focal event, and therefore reaches a stage where she can draw a conclusion. Lastly, the origo's inference in Figure 13 corresponds to the FORCE EXERTER in Figure 12. The strength of the origo's inference is closely related to the semantics of the linguistic form that indicates her assessment, which in turn is closely related to the epistemic-modal meaning of the construction.

The CES account shows that epistemic-modal semantics are a natural consequence of how evidentiality is construed, because they are part of the same causal event chain; if an origo perceives some piece of evidence, it will naturally lead her to reason about its implications. In the next subsection, I argue that examining the internal event structure of inferential evidentiality in particular can help us better understand its distinct nature.

6.4.2 Subcategories of Evidentiality: Inferential Evidentiality vs. Other Types of Evidentiality

Inferential evidentiality is different from other kinds of evidentiality in several ways. First, other types of evidentiality require that the experiencing origo perceive the target information, while inferential evidentiality requires that the origo have made an inference based on her perception. In other words, the information source encoded by other types of evidentials is primarily the origo's immediate sensory perception of some piece of evidence, while the information source encoded by inferential evidentiality is primarily to the origo's inference. Immediate sensory perception and inference are conceptually distinct in that perception is a source for the origo's knowledge while inference is part of the origo's process of thought and therefore belongs to the origo's knowledge domain (William F. Hanks p.c. August 2011).

Previous work in linguistics has noted the complex character of inferential evidentiality. For instance, Squartini describes the intermediate status of inferential evidentiality between epistemic modality and evidentiality:

> "[W]hile inferences correspond to a major semantic function in most classifications of evidentiality (from Willett 1988: 57 to Aikhenvald 2003), their role and status is still a much debated point affecting the boundaries between evidentiality and epistemic modality. Even those who stress the epistemic interpretation of inference (van der Auwera and Plungian 1988: 85-86), admit their intermediate status as a case of interaction with evidentiality" (2008: 921-922).

I believe this is a valid point. The speaker's construal of inferential evidentialiy relies not only on her inference, but also on her sensory perception, her assumed knowledge, and so forth. Interlocutors therefore have to access types of information in construing inferential evidential utterances.

Another way of describing this contrast is that the mode of access construed in the other types of evidentiality involves an indexical relationship between origo and referent, whereas that kind of indexical relation does not seem to be salient in the construal of inferential evidentiality.

Inferential evidentiality encodes a more abstract relationship between an experiencer and an event that enters the experiencer's cognition. Chapter 5 describes this special abstract relationship as the triggering of the speaker's conjecture by evidence in the context; the inference process is triggered only when the speaker is exposed to evidence.

Second, the inference is more complex than other modes of access, so inferential evidentiality cannot be analyzed in exactly the same way as the other types of evidentiality. There are many types of relationships between entities and/or events that can be built within our subjective mental capacitythat all fall under the category *inference*; some type of inference kicks in during most stages of our reasoning processes.[81]

One kind of inference is an inductive mental process based on external sensory evidence (Anderson 1986: 274); Squartini calls this kind of process *circumstantial* (2008: 922). (This type of process is described in detail in the discussion of *-napo-* in Chapter 4.) Another kind of inference is a process where there is no observable external evidence and the speaker is using only her reasoning processes; Squartini calls this type of process *conjectural* (2008: 922). (This type of process is described in detail in the discussion of *-keyss-* in Chapter 4.). As an example of inductive reasoning, let us consider the causal relationship between the two propositions: *p* 'the sun is very strong today' and *q* 'the laundry dries quickly.' If the consequence *q* is given in the context, we can identify the cause *p* using our inductive inference. Conversely, when we predict a consequence *q* based on our knowledge that the cause *p* obtains in the context, we are using deductive inference processes (also sometimes called abductive inference processes) to reason about the causal structure (Squartini 2008: 922). Furthermore, our conceptualization system can reverse cause-effect relationships in our epistemic worlds. If *p* is conceptualized as an effect, it is possible for *q* to be conceptualized as a cause in one's epistemic world, as in the sentence *The sun must be very strong today, since the laundry dried so quickly.* The overall conclusion here is that the complexity of the notion *inference* makes it difficult to judge whether it belongs to the semantic domain of the origo's perception or to the domain of the origo's knowledge. The semantic complexity of the concept of inference distinguished it from other types of evidentiality, which are primarily concerned only with the origo's perception.

With the clear grasp of the internal event structure of evidential and epistemic modal provided by the CES approach, we can understand the nature of inferential evidentiality. (With the exception of Squartini 2008, inferential evidentiality has never received a thoroughly treatment in the linguistics literature.) The next sub-section further explores the differences between inferential evidentials and other types of evidentials by examining the internal event structures of two Korean markers, the inferential evidential marker *-napo-* and the presumptive/volitive epistemic-modal marker *-keyss-*, which involve the semantics of inductive and deductive reasoning respectively.[82]

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[81] This might be the reason why the Korean volitive/presumptive/epistemic modal marker *-keyss-* is contested between inferential evidential marker and epistemic modal marker.

[82] Various kinds of relations between entities and/or events are bridged in terms of our subjective mental capacity, and the various kinds of relations merely fall into the label of 'inference.' What this study focuses on among the various kinds is narrowed down to two kinds: the one involved in inductive reasoning and that in deductive reasoning. Let us take a causal relation of two events: *p* 'the sunshine is very strong today' and *q* 'laundry gets dry well.' If a consequence *q* is given, what enables us to identify its cause *p* is our inference employed in the inductive reasoning. In contrast, when we make a guess of its consequence *q* out of a given cause *p*, we also need inference to reason about the causal structure and this is the one involved in the deductive reasoning.

6.4.3 The Causal Event Structures of Evidentiality

Let us take a look at a non-inferential evidential example first. The Korean firsthand evidential marker *-te-*, used in (16), indicates that the speaker's mode of access to the focal information is her firsthand experience.

(16) *pi-ka* *manhi* *o-te-la*
rain-Nom much come-Ev.Fh-Decl
'It **rained** hard.'

The causal chain underlying the construal of a firsthand evidential utterance such as that in (16) is represented schematically in Figure 14.

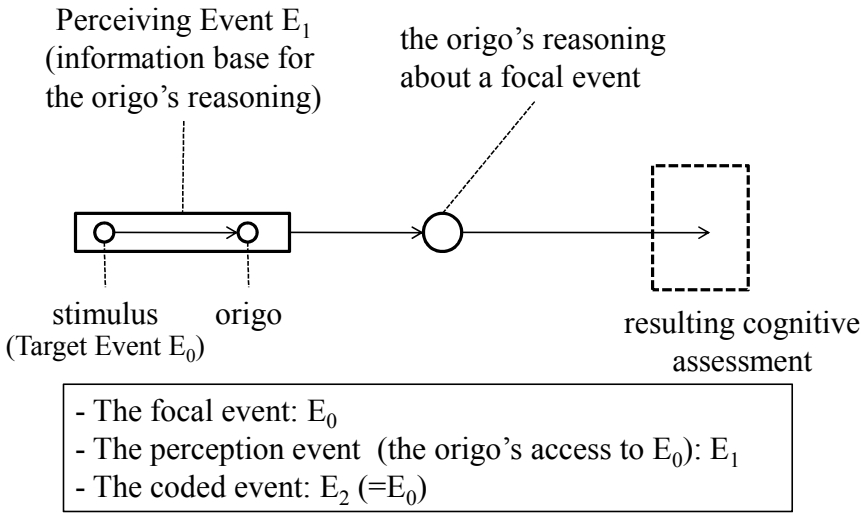

Figure 14. The Causal Event Chain Evoked by Firsthand Evidentiality (*-te-*)

For the sake of description, let us call the focal event, the speaker's perceiving event, and the event that is linguistically expressed on the surface E_0, E_1, and E_2, respectively. As the causal event begins, the stimulus E_0, in (16) an event of raining, has not yet been apprehended in the origo's cognition. Then, in the perceiving event E_1, the speaker directly perceives and apprehends the target event (E_0). (This situation of firsthand experience is categorized as an (indexically) direct mode of access (MOA), and is construed thus and encoded in an utterance with *-te-*. This encoded event E_2 is equivalent to the focal event E_0. This encoding gives rise to a meaning of strongly positive evidential modality because the speaker, having observed the event herself can vouch for the claim (namely, in (16), that it rained a lot).

The dotted arrow between the stimulus and the origo in Figure 14 represents a direct-access link. The figure shows how E_1 moves the origo's reasoning process into the stage where she makes an assessment. The force involved here is the information source, which is characterized as firsthand, as encoded by *-te-*.

The quotative or reportive semantics encoded by *-ay*, such as that in the sentence in (17) (quotative) and (18) (reportive) can be represented using a similar causal-structure diagram.

(17) *Chelswu-ka* *pi-ka* *manhi* *o-n-t-ay*
Chelswu-Nom rain-Nom much come-Imprf-Decl-Ev.Quot
'Chelswu (said to me) it**'s raining** hard.'

(18) *pi-ka* *manhi* *o-n-t-ay*
rain-Nom much come-Imprf-Decl-Ev.Rep
'it's **raining** hard.'

The main difference in the causal structure between *-te-* and *-ay*is that, with *-ay*, the origo's mode of access to E_0 is indirect.In the quotative use, the focal information about E_0 is conveyed to the origo by an identifiable person (or an identifiable medium, such as a newspaper); in the reportive use, the information about E_0 is conveyed by an unidentified disseminator. The conceptual event structuresencoded by the quotative/reportive marker *-ay* are represented schematically in Figure 15.

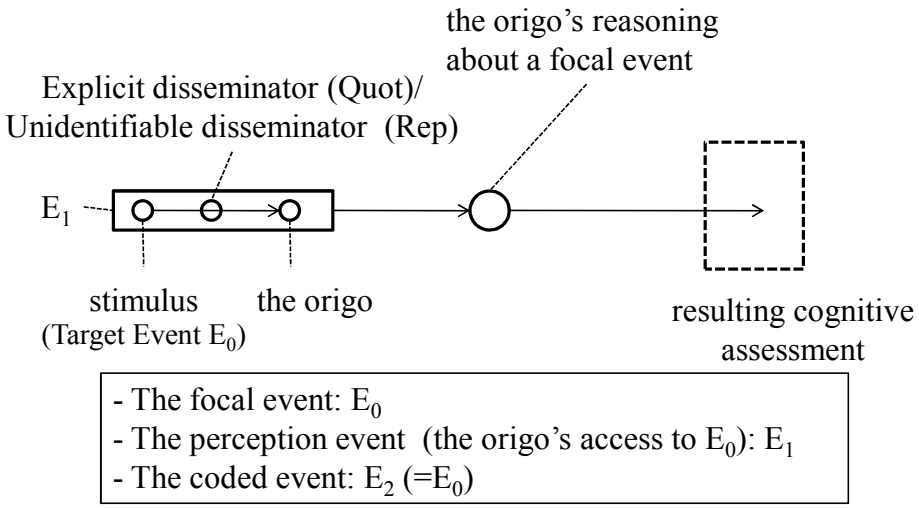

Figure 15. The Causal Event Chain Evoked by Quotative or Reportive Evidentiality (*-ay*)

As I noted in Chapters 4 and 5, quotative evidential semantics (17) and reportive evidential semantics (18) are covered by a single construction in Korean, the *-ay* construction. The only difference in their conceptual structure is whether the entity in the role of disseminator is explicit identified or not.

Inferential statements employing *-napo-* and *-keyss-* indicate that the speaker has not had direct indexical access to the focal information; inferential evidentiality encodes inference, not firsthand perception. The target of the inference is generally a series of events connected by a causal relationship. This observation is similar to Squartini's (2008: 917) distinction between "source of evidence" and "mode of knowing." According to his defitions, the source of evidence is the locus where the information is acquired (an internal or external source with respect to the speaker), whereas the mode of knowing is the process leading to the acquisition of the information (such as directly, vision, inference, or hearsay).

I claim that by examining the schematic structure of the events involved in the construal of inferential evidentiality, we can more intuitively capture its seemingly complex nature. An example of the use of the inferential evidential marker *-napo-* is given in (19) and a schematic

structure for *-napo-* is proposed in Figure 16.

(19) *nal-i* *kencoha-nkapo-a*
day-Nom be.dry-Ev.Infr-Indic
'The weather **is dry**.'

E_0: $E_{0\text{-RESULT}}$ [Laundry (dry.well)]
E_1: Perceive (Origo, E_{0R} via any MOA)
E_2: $E_{0\text{-CAUSE}}$
E_3: Infer (Origo, $E_{O\text{-CAUSE}}$ from $E_{O\text{-RESULT}}$)

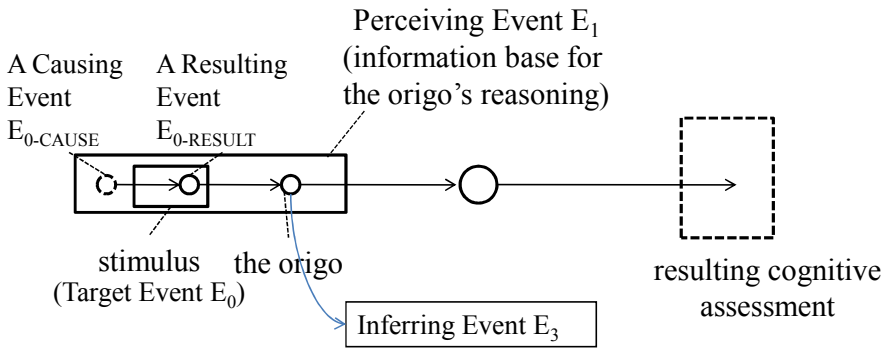

Figure 16. The Causal Event Chain Evoked by Inferential Evidentiality (*-napo-*)

The utterance in (19), where the use of *-napo-* encodes an inductive reasoning process, might be licensed in a context in which the speaker had observed that the laundry, which she had hung outside a little while ago, was already dry and she was guessing what the cause of this might be. In Figure 16, the events in the causal relation are represented by E_{0C} (the dry weather) and E_{0R} (the laundry's drying quickly). I represent E_{0C} with a dashed circle to indicate that the speaker does not have indexical access to the event. The event that actually enters the speaker's perception is E_{0R} the laundry's drying quickly. This initial perceptual subevent of evidence impinging on the origo's senses, E_1 may occur through any MOA, as the MOA of that subevent is not specified in the construal. The focal event that is linguistically encoded, E_2 is equivalent to the causing event E_{0C}.

Note that E_{0R}, the event that the speaker has direct perceptual access to, is not encoded on the surface. In addition, the construal of inferential evidentiality profiles the speaker's inferring event E_3 rather than the speaker's initial sensory access event E_1. The E_{0R} in Figure 16 corresponds to Squartini's (2008) source of evidence and E_3 to his mode of knowing.

In contrast, the epistemic-modal marker *-keyss-* encodes a deductive-reasoning process, in which the speaker has observed a potentially causal event and is guessing about the possible effect, as in the example in (20).

(20) *ppallay-ka* *cal* *malu-keyss-ta*
laundry-Nom well be.dry-EM-Decl
'The laundry should dry quickly.'

E_0: E_{0C} [Sun (strong)]
E_1: Perceive (Origo, E_{0C} via some MOA)
E_2: E_{0R}
E_3: Infer (Origo, E_{OR} from E_{OC})

In contrast with the sentence in (19) with *-napo-*, in (20), the speaker has drawn a conclusion that the laundry will dry quickly from, for example, an observation of how strong the sun is. In this case, the event that enters the speaker's perception (i.e., the source of evidence) is the causal event E_{0C} the strong sunlight. The event that is expressed linguistically on the surface is the resulting event E_{0R}, the laundry's drying quickly.

In the case of both *-napo-* and *-keyss-*, it is the speaker's inference process, i.e., E_3, that is profiled, not the speaker's initial sensory-accessing event, E_1. The indexical relationship between the speaker and the referent causal event chain E_0 that is accessed in E_1 is not profiled by the markers, but is construed in the context. The information source, the speaker's inference process, is triggered only by the perceptual access event where the evidence enters the speaker's attention.

In sum, both inductive and deductive inferential evidentiality differ from other types of evidentiality, which encode an indexical relationship between the origo and a stimulus. I have provided support for this argument by laying out schematic causal event structures for each of the types of evidentiality. The CES approach can be used to clarify the difference between the inferential evidentiality and firsthand evidentiality, namely, that inferential evidentiality profiles not E_1, the perceptual accessing of evidence, but E_3, the process of drawing inferences from that evidence.

6.5 Conclusion

In this chapter, I have discussed the following questions. First, what are the advantages of a multilayer framework in analyzing the Korean tense, aspect, modality, and evidentiality system, in comparison with previous approaches? Second, how can we most clearly represent the construal process for Korean evidential constructions? Third, what is the nature of inferential evidentiality and what distinguishes it from other types of evidentiality?

The answers to these questions have significant theoretical implications. The answer to the first is that the multilayer analysis is conceptually intuitive, and is superior to other formal frameworks for analyzing tense, aspect, modality, and evidentiality because it takes into account the cognitive perspective that language use is not mere symbol manipulation, but involves the complex construal of concepts evoked by linguistic constructions. I have answered the second question by using Construction Grammar notations to represent the Korean evidential constructions; CG provides a conceptual tool for enhancing the understanding of both the forms and meanings of these constructions. Answering the third question by closely examining the internal structure encoded by inferential evidentiality solves some analytical difficulties in regard to the typological categorization of languages in terms of their evidentiality and epistemic-modality systems. The answers to the three questions conspire to demonstrate the superiority of an embodied cognitive approach (Lakoff 2008, Dancygier and Sweetser 2005, Bergen and

Change 2005, to appear, Narayanan 1997) to other approaches that do not take into account the embodiment of cognition.

The multilayer approach is a useful framework for accounting for tense, aspect, modality, and evidentiality system because it analyzes each in terms of the cognizer's viewpoint, explaining issues like so-called topic-time shift in terms of cognitive mechanisms such as profiling and active zones. Cognizers unconsciously and automatically zero in on the target information in a given context, determine the best-fit scope for the active zone they should attend to, and construe it. These cognitive processes can be represented in terms of Cognitive Grammar (Langacker 1991) and Narayanan's (1997) x-schema. The framework I have developed in this study employs the key temporal reference points event time, reference time, and speech-act time, and posits that another temporal parameter is necessary for analyzing TAME phenomena, tha of secondary viewpoint time, which can be instantiated as perception time or assessment time.

This chapter also argues that, to develop an accurate, balanced analysis of the Korean evidential constructions, we must take into consideration meaning as well as form. I therefore use Construction Grammar as a framework for examining the semantic frames evoked by these constructions in conjunction with an analysis of their structure, providing formal CG description of the relevant constructions.

Finally, I have discussed the nature of inferential evidentiality, arguing that inferential evidentiality differs from other types of evidentiality in that it profiles the origo's inference process rather than the origo's sensory perception process. In other words, inference belongs to the domain of the speaker's knowledge, not that of the speaker's perception. I have argued that examining the internal causal event structures involved in the construal of evidential constructions can define the epistemic differences between their modes of access clearly, and used a causal event structure account (Kwon 2011a) to analyze and schematize inferential and other types of evidentiality.

Chapter 7
Conclusion

7.1 General Summary

The heart of my dissertation is the representation of the schematic conceptual structures associated with a variety of very basic, presumably universal experiences encoded by particular tense, aspect, modality, and evidentiality elements in the Korean verbal complex. These conceptual structures have been described using a variety of cognitive semantic approaches; the functional properties and distributions of the elements have been described using a multilayer framework, the covert semantics of subjectivity encoded by evidential markers have been described using Mental Spaces Theory, and syntactic and semantic representations of evidential constructions have been laid out in Construction Grammar.

This thesis has discussed how to define tense, aspect, modality, and evidentiality categories in Korean, in which the grammatical categories of the TAME elements have generally been contested, and how to describe how they are construed within cognitive semantics approaches. At the beginning I raised the following questions, describing the lack of a systematic cognitive-linguistics account of the Korean TAME system, especially its evidentiality system, in previous literature.

- What does the Korean TAME system look like as manifested in the Korean verbal complex?
- How can we analyze various markers in the verbal complex? What is the most appropriate theoretical tool for that analysis?
- Which elements of the KVC are evidential markers and epistemic-modal markers, and what is their status as a grammatical system (or systems)?
- What is the significance of viewpoint, which is essential to the construal of the elements of the KVC?

The cognitive semantic accounts of tense, aspect, modality, and evidentiality in the Korean verbal complex show that, ultimately, the key to answering these questions lies in recognizing the ubiquitous presence of the speaker's viewpoint and in understanding how that viewpoint interacts dynamically with other viewpoints, both explicitly and implicitly.

To answer the first two questions about the layout of the TAME system, this investigation has attempted to provide an embodied cognition explanation of tense, aspect, modality, and evidentiality systems, using contemporary Korean as a case study. Chapters 2 and 3 explored the relevant inventories of tense and aspect markers and their paradigmatic and syntagmatic relations in Korean, concluding that it is not a simple matter to assign them either purely to the tense category or purely to the aspect category. Rather, I believe they should be given a more motivated label that encompasses their hybrid and versatile functional properties. This study employed in the analysis a multilayer approach in which tense, aspect, modality, and evidentiality information can be simultaneously accessed and exploited by interlocutors. I claim that the multilayer approach is the right tool for analyzing these markers because tense and aspect information cannot be grasped without incorporating modality and evidentiality information. We as cognizers do not simply obtain and transmit information that is sitting out

there in the world waiting to be grasped, but actively construe tense and aspect information and convey it with our subjective stance on it. Tense, aspect, modality, and evidentiality thus cannot be fully understood without attempting to construe them in a unified way. Chapter 2 introduced key notions necessary for modeling the construal process in a cognitively motivated way, including temporal parameters that have previously been discussed in the literature, event time, speech-act time, and reference time, and positing a new temporal parameter, secondary viewpoint time (which can be instantiated as either assessment time, or perception time). This dissertation explored the roles and constraints of these temporal parameters and related them to the canonical definitions of the tense, aspect, modality, and evidentiality categories; I also discussed semantic tests needed for identifying TAME elements.

In Chapter 3, this thesis applied the multilayer framework to temporal suffixes in the Korean verbal complex, describing the two major groups of temporal elements, nonterminal temporal suffixes and nonterminal aspectual markers. The first group consists of four suffixes: the non-past imperfective marker *-nun-*, the anteriority marker *-ess-*, presumptive/volitive marker *-keyss-*, and the retrospective firsthand evidential marker *-te-*. The other group consists of two durative markers: the progressive marker *-koiss-* and the resultative marker *-eiss-*. I discussed their functions and distributions in detail and concluded that these markers cannot be regarded as mere tense or aspect markers, but that they involve semantics of modality and evidentiality.

With regard to the latter two questions, the second part of this study (Chapters 4, 5, and 6) provided an overall picture of the evidentiality and epistemic modality systems in Korean. This study explored the epistemic-modal and evidential markers in the Korean verbal complex and their constructional and functional properties. I also provided in-depth descriptions of the evidential markers: the firsthand evidential marker *-te-*, the inferential evidential marker *-napo-*, and the quotative/reportive evidential marker *-ay*. This dissertation highlighted the fact that they cannot be properly analyzed without understanding how the deictic settings of the origo's perception and assessment are construed – i.e., without acknowledging the ubiquitous presence of viewpoint. This point motivated my use of cognitivist frameworks in this study, including Mental Spaces Theory (Fauconnier 1997, Fauconnier and Turner 2002) and construction grammar (Fillmore et al. 1988, Kay and Fillmore 1999).

Chapter 4 discussed the systems of modality and evidentiality in the Korean verbal complex in detail. I focused on four major epistemic-modal terminal suffixes: the indicative *-e*, the committal marker *-ci*, the mirative marker *-kwun*, and the factive/realization marker *-ney*. Moreover, I showed that Korean can express three types of information sources in its verbal complex, using the direct/firsthand evidential marker *-te-*, the inferential evidential marker *-napo-*, and the reportive/quotative evidential marker *-ay*. Chapter 4 concluded that these epistemic-modal and evidential characteristics of verbal markers constitute systems of modality and evidentiality in contemporary Korean. I claim that, contemporary Korean has a typologically rare scattered three-term evidentiality system (contra K.-S. Chung 2005 and J.-M. Song 2007).

In Chapter 5, which I believe constitutes the major new contribution this dissertation makes to the field, this thesis has provided cognitive semantic accounts of the viewpoint phenomena associated with the three Korean evidentiality markers within Mental Spaces Theory. My claim is that in order to better understand how evidential markers are construed, we need to consider the deep semantics that the evidential constructions tap into in our minds. Specifically, in evidential constructions, the origo's viewpoint and the grammatical subject's viewpoint interact with each other, and various meanings can arise from the subjectivity generated by those interactions. In order to more clearly capture the conceptually different natures of the

experiences involved in the various constructions, this dissertation proposed two novel means of mental-space elaboration: backgrounded-information accommodation (BIA) and indirect epistemic-space triggering (IEST). I showed that these concepts help in clearly representing the different informational statuses of the mental spaces involved in evidential constructions, including such as the speaker's subjective-experience space and spaces related to the mode of access. In BIA, information that is backgrounded in the construal of the utterance, namely how the speaker accessed the focal information prior to the speech act, prompts the addressee to access and specify the previously underspecified speaker's subjective-experience space within her conception of the base space. IEST captures how speakers' reasoning processes or recognition of the content of hearsay are triggered by some piece of evidence in context, embedding a focal event in her subjective-experience space. This thesis argues that these novel means of space elaboration are indispensable for representing the Korean evidential constructions in terms of MST.

I have shown that the three Korean evidentiality markers share a syntactic/semantic characteristic in common: When an utterance employs one of these markers, the licensing of first- and nonfirst-person subjects is asymmetrical, depending on whether the predicate is an activity or an experiential predicate. The discussion in Chapter 5 also covers the distancing effects (Dancygier and Sweetser 2005) that the evidentiality constructions give rise to. The cognitive distance between the multiple viewpoints in the evidential constructions results in the idiosyncratic syntactic and semantic characteristics, including the aforementioned conjunct/disjunct phenomena. This study argued that these phenomena cannot be approached from a purely syntactic perspective; they are not a matter of formal syntactic rules per se, but a matter of the semantics that arise from the tension between the speaker and the experiencer of the focal event.

Chapter 6 argued that the cognitivist approach is superior to other formal frameworks in accounting for the tense, aspect, modality, and evidentiality system of Korean because it presupposes the presence of the cognizer's viewpoint, which is indispensable for understanding how the target constructions are construed. This dissertation claimed that the multilayer approach I have employed in this study is cognitively motivated, inheriting its theoretical framework from cognitively grounded theories such as cognitive grammar (Langacker 1991) and x-schemas (Narayanan 1997). To provide a better understanding of Korean evidential constructions, this study described them using formal Construction Grammar notations. Chapter 6 made explicit the structural relations and semantic bindings among the participants involved in the construal. Lastly, it tackled the issue of the nature of inferential evidentiality, which has not received much attention in the literature, claiming that we should examine more closely the internal event structures encoded by the construction and providing schematic structures for them.

7.2 Concluding Remarks and Suggestions for Future Work

Understanding the semantics of tense, aspect, modality, and evidentiality in Korean requires an appropriate theoretical framework, just as viewing the world requires an appropriate window. This study has shown that the cognitivist approaches I employed in this dissertation – multilayer analysis, Mental Spaces Theory, Construction Grammar, and metaphoric force dynamic accounts – are the most appropriate theoretical framework. They allow us to fruitfully to examine and represent 1) how interlocutors simultaneously access multiple layers of TAME information, 2) how mental spaces are evoked and/or elaborated in the construal of Korean evidential

constructions, 3) what the neural bindings of the semantic elements in the evidential constructions are, and 4) what the causal event structures of evidential are. Based on the cognitive models that I proposed, this dissertation has addressed how TAME information is construed in Korean and discussed the typological characteristics of its TAME system.

There is a major theoretical point that is relevant here: Grammatical and morphological markers in a language can encode commonplace experiences. It is possible that they are made up of complex concepts that are bound together in the brain to provide the conceptual structure of a simple, commonplace experience. The properties of these concepts are often discussed separately in empirical studies of the language, based on how they manifest in isolation in other languages, leading scholars analyses that are only partially correct. For example, there has been considerable disagreement about the correct analysis of *-te-* in Korean, with each scholar citing evidence for a distinct analysis and therefore labeling it differently (for example, 'deictic tense' in Chung 2005, 'retrospective' in H.-S. Lee 1991, or 'past firsthand evidential' in J. Lee 2010, D. Lim 2010, and J.-M. Song 1999, 2002, 2007). However, this study contends that the root problem in this scholarly dispute is not the analysis of *-te-*, but the tendency of many linguistic scholars to try to fit Korean into the mold of linguistic theories that simply do not fit Korean – theories that assume there can be a universal account of individual semantic primes and that there are universal syntactic categories that the elements of all languages must fit into (G. Lakoff, p.c. April 2010). In contrast, this dissertation has assumed that the functions of contested elements should be used as the basis for how they should be identified and described, and therefore focused on the functions and the conceptual structures that are evoked by the Korean TAME elements, and attempted to model those conceptual structures within the cognitivist approaches named above.

However, this dissertation has only scratched the surface of what must be understood to fully grasp how the TAME elements in the KVC work. The following subsections list just a few of the potential avenues for future investigation.

7.2.1 Neural/Experimental Approaches

The main reason I chose a cognitive approach for my analyses is that it is concerned with the embodiment of cognitive capabilities and how that interacts with language understanding – or in other words, it is concerned with how our language, mind, and brain work, not about how arbitrary symbols can be manipulated in a disembodied theory. In the few last decades, there have been numerous works that have demonstrated the reality of embodiment and the cognitive unconscious (Bergen and Chang 2005, to appear, Feldman 2006, Lakoff and Gallese 2005, Narayanan 1997, Lakoff and Johnson 1999, among many others). I believe that this dissertation can be an interface among various disciplines, including psychology cognitive science, and cognitive neuroscience as well as linguistics. I believe that my contribution in this study is demonstrating how covert semantics affects construal, using the case study of how TAME information is construed in Korean, and discussing how we can best represent the conceptual structures that are evoked by the covert semantics. It should be noted, however, that the models proposed in this study require further investigation on to determine whether the cognitive mechanisms they describe are grounded in neural reality.

The multilayer approach inherits the cognitivist assumption that language understanding relies on neural activations and simulation from Narayanan's (1997) work on x-schemas. There has also been some work that connects the Construction Grammar with neural theory, namely, in

the theory of Embodied Construction Grammar (Bergen and Chang 2005, to appear, Feldman 2006, Dodge 2010, among others). However, there has not been much attention to connecting Mental Spaces Theory with the other frameworks that I have made reference to; this is an area that needs further empirical investigation. Mental spaces are simulation spaces; without connecting them with frame semantics and simulation semantics (Feldman 2006, Bergen and Chang 2003), MST representations are not much more than combinations of dots, lines, and circles. I believe the MST models I have proposed can lead to the right explanations within the growing body of work on neural activations and simulations. Further modeling of the processes of neural simulation involved in the Korean evidential constructions will thus be valuable.

7.2.2 Grammaticalizations of the Evidentiality Markers in the Korean Verbal Complex

As I noted in Chapter 4, contemporary Korean has a system of evidentiality that consists of three markers: the firsthand evidential marker *-te-*, the inferential evidential marker *-napo-*, and *–ay*, which conveys the speaker's indirect access to the source of information. This scattered evidential system seems to be a consequence of complex grammaticalization processes that have occurred in the Korean verbal complex. Just as tense markers have historically arisen from aspect markers in Korean (H.-S. Lee 1991, 2010), evidential markers also seem to have arisen from complex grammaticalization processes triggered by interactions among various contiguous elements in the KVC.

Solid evidence of grammaticalization can be found in the different morphological statuses of the three markers; while *-te-* is monomorphemic, *-napo-* and *-ay* are not (see Chapter 4). This indicates that Korean may not have originally had a grammatical system for evidentiality. The monomorphemic firsthand evidential marker *-te-* may have been the first marker to take on an evidential function, because it inherently makes reference to the speaker's perception time and/or assessment time.

In this dissertation, I have focused on how contemporary speakers construe the linguistic constructions from a synchronic point of view. It would, however, considerably enhance our understanding of the grammatical system and conceptual structure of evidentiality in Korean if we could trace the origins of the evidential markers used in contemporary Korean, by examining historical data in a corpus study.

7.2.3 Application of the Proposed Models to Other Languages

The final outstanding question to be considered is whether we can apply the proposed models to analyzing TAME systems in other languages. My prediction is that these models will hold cross-linguistically. For example, I expect that the schematic conceptual templates I have provided for the multilayer analysis of TAME information are universal. Language processing is all about construing the meaning of a linguistic construct, including information that is overtly marked, covertly implied, and pragmatically evoked, and I believe that the conceptual structures that are tapped in the interpreter's mind by such constructs are the same cross-linguistically.

In particular, I expect that the conceptual structures that are involved in the construal of evidentiality are the same across languages. These conceptual structures have been discussed in this dissertation using a variety of cognitive approaches including Mental Spaces Theory, construction grammar, and the force-dynamic approach to causal event structure. I believe that the templates that have been employed in the analyses within each of these approaches will hold

cross-linguistically, including the proposed network mental spaces, the processes of backgrounded information accommodation and indirect epistemic-space triggering, the proposed layout and neural bindings of the semantics of evidential constructions, and the metaphoric force-dynamic analysis of their causal event structures. Further empirical research on this topic should be done to verify these proposals.

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