



## 저작자표시-비영리-변경금지 2.0 대한민국

이용자는 아래의 조건을 따르는 경우에 한하여 자유롭게

- 이 저작물을 복제, 배포, 전송, 전시, 공연 및 방송할 수 있습니다.

다음과 같은 조건을 따라야 합니다:



저작자표시. 귀하는 원저작자를 표시하여야 합니다.



비영리. 귀하는 이 저작물을 영리 목적으로 이용할 수 없습니다.



변경금지. 귀하는 이 저작물을 개작, 변형 또는 가공할 수 없습니다.

- 귀하는, 이 저작물의 재이용이나 배포의 경우, 이 저작물에 적용된 이용허락조건을 명확하게 나타내어야 합니다.
- 저작권자로부터 별도의 허가를 받으면 이러한 조건들은 적용되지 않습니다.

저작권법에 따른 이용자의 권리는 위의 내용에 의하여 영향을 받지 않습니다.

이것은 [이용허락규약\(Legal Code\)](#)을 이해하기 쉽게 요약한 것입니다.

[Disclaimer](#)

**Master's Thesis of Linguistics**

**Modal Semantics of  
Korean Bouletic Verbs**

한국어 소망 동사의 양상 의미론

**February 2019**

**Seoul National University Graduate School**

**Department of Linguistics**

**Min-Gyeong Choi**

# Abstract

Choi, Mingyeong

Department of Linguistics

The Graduate School of Seoul National University

The two bouletic verbs *pala-* ‘hope’ and *wenha-* ‘want’ in Korean provide rich evidence with regard to the semantic constraints on modal expressions. *Pala-* and *wenha-* show a certain parallelism with the English *hope* and *want* respectively. *Pala-* and *hope* convey the subject’s belief that the event denoted by the embedded proposition is possible. *Wenha-* and *want* do not require the subject’s belief state and the embedded proposition can refer to an inconsistent future event. This thesis aims to give a formal account of their modal semantics, which is based on Kratzerian modal base and ordering source.

The idea is that *pala-* and *wenha-* make use of two kinds of modal bases, epistemic and circumstantial one. One of crucial evidences is their temporal orientations. While *pala-* has both past and future orientations, *wenha-* only has a future orientation. Previous literature correlates the temporal orientations and the modal bases by giving temporal properties to the modal bases. Adopting previous generalization of temporal-modal restrictions, this thesis gives an account of temporal orientations of *pala-* and *wenha-* in terms of modal bases.

The other evidence is that *pala-*, unlike *wenha-*, is compatible with the epistemic non-commitment complementizer *(u)l-kka* and modal predicate *elyep-* 'hard'. *(U)l-kka* and *elyep-* are associated with epistemic backgrounds. So *pala-* is expected to provide the epistemic background which derives from its epistemic modal base while *wenha-* does not provide the appropriate background. Also, the 'epistemic uncertainty' of *pala-* requires uncertainty about self-efficacy. Thus *pala-* shows incompatibility with controllable situations where the subjects have a belief in their self-efficacy.

The simple formal analysis proposed in this thesis shows how Kratzerian theory derives the semantics of bouletic verbs. It also illuminates some unknown characteristics of Korean bouletic verbs in terms of their modality.

**Keyword:** hope, want, modality, bouletic ordering source, temporal orientation, modal base.

**Student Number:** 2015-22456

# Table of Contents

Abstract.....	i
Table of Contents.....	iii
List of Abbreviations .....	v
1. Introduction .....	1
1.1 Kratzer (1977, 1981)'s theory of modality .....	2
1.2 Modal semantics for bouletic verbs.....	4
2. Correlation between modal base and temporal orientations .....	8
2.1 Werner (2006): (non)Disparity principle .....	8
2.2 Klecha (2015): Futurate present and metaphysical future.....	1 3
2.3 Banerjee (2018): Epistemic future of <i>hope</i> .....	1 6
3. Modal semantics of <i>hope</i> and <i>want</i> .....	1 9
3.1 Doxastic worlds and the semantics of <i>want</i> .....	1 9
3.2 Epistemic possibility of <i>hope</i> .....	2 2
4. Modal semantics of Korean bouletic verbs.....	2 7
4.1 Temporal Orientation.....	2 8
4.2 Bouletic verbs with an <i>ul-kka</i> complement.....	3 2
4.2.1 <i>ul-kka</i> complement with epistemic uncertainty .....	3 2
4.2.2 Psych verbs and epistemic uncertainty .....	3 6
4.2.3 Distributions of <i>ul-kka</i> and <i>ki</i> complements.....	3 8

4.3 <i>elyep-/hintul-</i> ‘hard’ in a modal scale .....	4 1
4.4 Self-efficacy and performativity .....	4 6
4.4.1 Controllable situation and self-efficacy .....	4 6
4.4.2 Non-controllable situation and performativity .....	4 9
5. Conclusion .....	5 4
References .....	5 7
국문초록 .....	6 0

## List of Abbreviations

ACC	accusative particle
ADD	additive particle
AND	adnominalizer
ADV	adverbializer
CI	<i>ci</i> complementizer
CNJT	conjunctural modality
COMP	complementizer
CONJ	conjunctive ending
CONC	concessive particle or ending
COP	copula
CORN	cornitative case
DAT	dative case
DECL	declarative mood
EVI	evidential modality
GEN	genitive case
INT	interrogative mood
INST	instrumental case
KKA	<i>(u)l-kka</i> complementizer
LOC	locative case
NEG	negation
NOM	nominative case
NML	nominalizer
PL	plural marker
PST	past tense
TOP	topic

# 1. Introduction

Since Werner (2006), it has been noticed that there is a correlation between modal bases and temporal orientations. An epistemic modal base can have a past oriented proposition, as we can reason and assume about a past event. On the other hand, a circumstantial modal base can only have a future orientation and is related to deontic, bouletic, teleological modalities etc. Although there are some issues regarding how to define modal bases and regarding the future orientation of an epistemic modal, temporal orientations can provide important insights to different types of modality.

Modality of bouletic verbs, the other main topic of this thesis, has recently attracted much attention in the literature. *Hope* and *want* have been studied from a comparative perspective, which revealed their meanings with regard to a doxastic (or epistemic) component. There also exist similar differences between two Korean bouletic verbs *pala-* 'hope' and *wenha-* 'want.' Considering this similarity, we might expect there to be a parallel distinction between bouletic verbs among languages and therefore propose that their semantics should be analyzed in a formal theory. In this thesis, I propose such an analysis in terms of 'modal bases', which can explain the semantic differences between the verbs.



Modality, temporal orientation, and bouletic verbs are discussed together in this thesis. In this chapter, I will briefly introduce main issues and lay out the proposal of this thesis. At first, I will look at Kratzerian theory of modality below.

## 1.1 Kratzer (1977, 1981)'s theory of modality

Kratzer (1977, 1981)'s theory of modality has been the standard framework for modal semantics. According to this theory, modals have two context-dependent elements. The first is a modal base (MB), and the second is an ordering source (OS). For example, in the sentences below, each modal base, which is the set of worlds in which *must* is evaluated, has different characteristics from each other. The modal base of *must* in (1a) consists of the worlds in which the speaker's knowledge (or belief) is true, whereas the modal base in (1b) consists of the worlds in which the actual circumstance of the real world holds.

- (1) a. The book must have been checked out. (epistemic, doxastic OS)  
b. You must turn at the next light. (Circumstantial, teleological OS)  
c. I must have that painting. (Circumstantial, bouletic OS)  
d. We all must die. (Circumstantial, empty)
- (Portner 2009: (106))

These two kinds of modal bases consist of worlds satisfying following propositions of certain conversational backgrounds (Portner 2009: 54). A conversational background is given by a function  $f$  in a conversation which takes the real world  $w$  and return epistemic or circumstantial propositions.

(2) a. Epistemic conversational background.

$f(w)$ = The set of propositions which the speaker knows in  $w$ .

b. Circumstantial conversational background.

$f(w)$ = The set of circumstances holding in  $w$ .

However, modality is not interpreted only by a modal base. Modality is a gradable or comparable notion, such that each world in the modal base is ranked according to the degree to which it satisfies the propositions of ordering source. The characteristics of ordering sources might be doxastic, bouletic, or deontic according to the given context. For example, the modal base of (1a) consists of worlds that satisfy the facts currently known by the speaker, such as *Book is not in place*. However, in order to receive an ordering for these worlds, the speaker's beliefs (such as *the book is popular nowadays, all books are in place*, and etc.) can be the ordering source. The worlds satisfying these propositions the most are called 'best-worlds' where the epistemic modal is evaluated. If the modal gets a reading of

necessity, the modal proposition means that its prejacent is true in all best-worlds. The following definition is quoted from Portner (2009: 67). ( $v' \leq_{g(w)} v$  means that  $v'$  is more highly ranked than  $v$  by the ordering source  $g(w)$ ).

- (3) If  $N$  is a necessity modal,  $\llbracket N\beta \rrbracket^{cf,g} = \{w : \{v : v \in \cap f(w) \text{ and there is no } v' \in \cap f(w) \text{ such that } v' \leq_{g(w)} v\} \subseteq \llbracket \beta \rrbracket^{cf,g}\}$

## 1.2 Modal semantics for bouletic verbs

Epistemic and non-epistemic modals in Kratzerian theory show their own constraints in temporal orientations. These constraints come naturally from the properties of the modal bases. As we can see in (4) below, the speaker can reason about a past event, but a deontic or teleological proclamation is always about a future event.

- (4) a. The book must have been checked out.  
(Epistemic / doxastic ordering source)
- b. You must turn at the next light.  
(Circumstantial / teleological ordering source)

For the future condition of non-epistemic modal, Werner (2006) gives the following account: he defines the circumstantial modal base with the speech time, and according to him, all the worlds in a circumstantial modal

base should have same past histories until now. Then, given his disparity principle for modal claims, non-epistemic modal cannot be oriented to a past event because the past worlds are not disparate one another.

(5) Future orientation of non-epistemic modality comes from:

(i) circumstantial modal base:

the set of worlds which are alike up to now.

(ii) disparity principle:

If  $p$  is a embedded proposition of a modal, then  $p$  is true in some worlds in the modal base and  $\neg p$  is also true in some other worlds in the modal base.

Whereas this analysis correctly predicts the temporal orientation of circumstantial modal bases, his proposal does not give an explicit account of the future constraint of epistemic modal bases (see Ch 2.1). In the same line of Werner (2006), Klecha (2015), based on some evidence (Ch2.2), argues that some apparent future oriented propositions of epistemic modals are not truly future oriented, but are rather propositions which embed a 'schedule modal'. Klecha also points out that some apparent epistemic modals with a future orientation are actually non-epistemic 'stereotypical' modals.

However, their evidence against future orientation for epistemic

modals is not sufficiently conclusiv. This thesis provides compelling evidence which can prove the compatibility between an epistemic modal base and a future orientation. Our evidence is closely related to Banerjee (2018)'s claim that the bouletic verb *hope* can get a future oriented reading with an epistemic modal base (see Ch 2.3 & 3.3).

The thesis identifies several differences between two Korea bouletic verbs, *pala-* 'hope' and *wenha-* 'want', some of which could also be found between *hope* and *want* in English. First of all, the two verbs show a difference in temporal orientation.

- (6) ku-nun Mina-ka tasi tolao-ki-lul [pala-/wenha-]n-ta.  
 He-TOP M.-NOM again return-NML-ACC [hope/want]-PRES-DECL  
 'He hopes/wants Mina to come back.'
- (7) ku-nun Mina-ka tasi tolao-ess-ki-lul [pala-/wenha-]n-ta  
 He-TOP M.-NOM again return-PST-NML-ACC [hope/want]-PRES-DECL  
 'He hopes/?wants (that) Mina came back.'

Considering this difference in temporal orientations, this thesis proposes that two kinds of bouletic verbs –'hope' and 'want' in Korean and English- take epistemic and non-epistemic modal base respectively. The two kinds of modal bases further elucidate other semantic characteristics. For example, *hope* has a doxastic component (Anand & Hacquard 2013)

since the verb requires an epistemic modal base.

Our proposal also accounts for other differences between *pala-* and *wenha-* as listed in (8). We will see that the notion of modal base is critical in identifying semantic cues behind the differences listed in (8) (see Ch4).

(8) Differences between *pala-* and *wenha-*

1. temporal orientations
2. compatibility with *ul-kka* complementizer
3. compatibility with (un)controllable situations
4. compatibility with *elyep-* 'It is hard to'

## 2. Correlation between modal base and temporal orientations

### 2.1 Werner (2006): (non)Disparity principle

Werner (2006) observes that temporal orientations of a modal is related to its modal base. He argues that epistemic modals have a present and past orientation, while non-epistemic modals have a future orientation. His following sentences display an ambiguity between an attitude about a future event and a non-future event. If this event (or state) is non-future, the modal always has an epistemic meaning. On the other hand, if this event is future, the modal always has a non-epistemic meaning; either stereotypical, deontic, or circumstantial.

- (9) a. Jim might be late. (epistemic or stereotypical)  
b. That will be Jack. (epistemic or stereotypical)  
c. Jill may be seated. (epistemic or deontic)  
d. Janet must live in student housing. (epistemic or deontic)  
e. John can't be our representative. (epistemic or circumstantial)  
(Werner 2006: (1-5))

According to Werner, modal-temporal correlation comes from the

properties of modal bases and two principles for modal claims. As for the future constraint of non-epistemic modals, it comes from the ‘circumstantial modal base’ and ‘disparity principle.’ Circumstantial modal base, which he defines, consists of worlds that all have the same past until the speech time. The following diagram shows what the worlds of a circumstantial modal base look like (Portner 2009: Figure 5.1). The diagram appears tree-like because the worlds only diverge after the speech time.

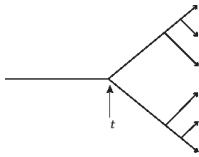


Figure 1: time-branching model for non-epistemic modality

Disparity principle is a principle for modal claims. For a modal claim  $M(p)$ , disparity principle requires its modal base to include a world where  $p$  is true and a world where  $\neg p$  is true (hereafter, I call it  $p$ -world and  $\neg p$ -world respectively)<sup>1</sup>. Given the disparity principle, non-epistemic modals

---

<sup>1</sup> Disparity principle sounds sensible as a condition for modal claims because modality is a gradable notion. However, strong modals which lack ordering sources can be an exception for disparity principle. (Banerjee 2018 (35))



should be about a future world because circumstantial modal bases cannot have two different past worlds.

(10) Future orientation of non-epistemic modality comes from:

(i) circumstantial modal base:

the set of worlds which are alike up to now.

(ii) disparity principle:

If  $p$  is an embedded proposition of a modal, then  $p$  is true in some worlds in the modal base and  $\neg p$  is also true in some other worlds in the modal base.

Epistemic modals, however, can take a past or present orientation because an epistemic modal base may have disparate worlds at the present or in the past. For the embedded proposition  $p$ , there can be both  $p$ -world and  $\neg p$ -world at present and past in the epistemic modal base. Portner (2009: Figure 5.2) depicts Werner's idea with the figure given below. As for non-epistemic modals, their past history up until the present must be homogeneous. But an epistemic modal base has non-homogeneous (disparate) worlds in its past history.

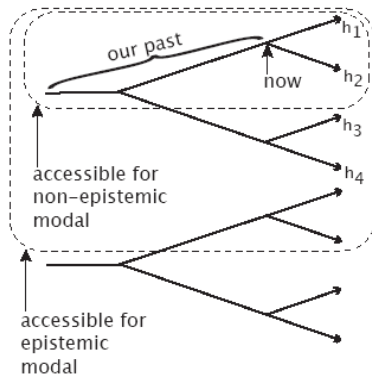


Figure 2: time-branching model for epistemic modality

What runs contrary to common intuition, however, is that another principle, the non-disparity principle, prohibits  $p$  from having different truth values among worlds which branch after the present<sup>2</sup>. Thus, an epistemic future is fixed from the present and gives rise to a present interpretation.

(11) Past and present orientations of epistemic modals come from:

(i) epistemic modal base:

the set of worlds where the propositions that subject believes are true.

(ii) disparity principle:

---

<sup>2</sup> In the circumstantial modal base, the disparity and non-disparity principles conflict each other, because there are only future disparate worlds in a circumstantial modal base. According to Werner, the disparity principle holds in this case because it is ranked higher than non-disparity principle.

If  $p$  is an embedded proposition of a modal, then  $p$  is true in some worlds in the modal base and  $\neg p$  is also true in them.

(iii) non-disparity principle:

If  $p$  is an embedded proposition of a modal, then  $p$  cannot have different truth values among the worlds branched from now.

Although Werner's analysis predicts correctly the future orientation of non-epistemic modals, his account is not so perspicuous in showing that epistemic modals cannot have a future orientation. He distinguishes between epistemic present interpretations and epistemic-like (stereotypical) future interpretations in everyday language. According to Werner, there are two kinds of epistemic uncertainty which can be made clear through a given context. For example, if John takes a train, then the train is certain to arrive at a certain time; the arrival time is already fixed. However, the speaker cannot know what train John is on, and therefore she may still say *John might be late*. Likewise, if John is driving a car in inclement weather, the speaker can say *John might be late*. In other words, the first example is uncertain about what is fixed, and the second example is uncertain about what has not yet been decided. Thus, the former is actually talking about the present and the modal has an epistemic modal base. The latter is talking about real future and has a circumstantial modal base. However, I consider this to be an insufficiently conclusive reason to

ban all epistemic future modals, because our belief or knowledge can still refer to an event in the future.

## 2.2 Klecha (2015): Futurate present and metaphysical future

Klecha (2015) argues that an epistemic modal base has non-future time interval worlds and a circumstantial modal base has future time interval worlds, which predicts the same temporal-modal correlation as Werner's. In this section, I will present the evidence he brings for the claim that epistemic modals only have past and present orientations.

He brings some evidence to demonstrate that epistemic future is just an apparent effect. First, he gives evidence to show that a seeming epistemic future is actually an epistemic present. In this case, the situations involve schedulable events.

(12) A: The ship leaves the Spanish harbor next Tuesday.

B: It has to/ must reach Athens next Friday (then).

(Klecha 2015: (16))

(13) A: The doctor will be in London either next week or the following week.

B: Actually, she will be at a conference in the US next week.

A: Oh, she must be in London the following week then.

(Klecha 2015: (17))

In (12-13), *has to* and *must* seem to make a claim about future event or state. However, Klecha argues that ‘covert schedule modals’ (Copley 2002) are embedded under the scope of *has to* and *must*. Therefore the epistemic modal is actually about a present schedule. This temporal orientation is also called ‘futurate present.’<sup>3</sup>

Next, he argues that a seemingly epistemic future is actually a metaphysical future. For example, he presents a restriction for *may* in (14c) which was considered as an epistemic modal in Condoravdi (2002)’s example:

- (14) a. John is going to meet either the provost or the dean.  
b. It has been decided who he will meet, but I don’t know who it is.  
c. ?He may meet the dean, and he may meet the provost.  
(Klecha 2015: (71))

He argues that (14c) cannot be permitted in the context of (14a-14b) where the future event of John’s meeting is already decided. His judgment

---

<sup>3</sup> Only schedulable future event can have a present tense. For example, ‘play tomorrow’ is schedulable but ‘win tomorrow’ is not.

- a. The Red Wings play tomorrow.  
b. #The Red Wings win tomorrow.  
(Klecha 2015: (19))

implies that *may* with future oriented *p* requires an open possibility for *p* in the circumstance from the present and requires the disparity principle to be applied to the circumstantial modal base (not epistemic modal base). This supports the argument that *may* with a future event is always non-epistemic.<sup>4</sup>

From the conclusion that a doxastic (epistemic) modal base cannot have a future orientation, Klecha (2015) further argues that *hope* with a past orientation has a doxastic modal base, whereas *hope* with future has a circumstantial modal base. This is to claim that the type of modal base can vary according to the temporal orientation. The following example in (15) and (16) show a clear contrast in the temporal orientations of *hope* and *think*. Hope can have a future orientation while think is restricted to a present or past orientation. If Klecha were right, *hope* should vary in its modal base while *think* should always have an epistemic modal base.

(15) Martina hoped Carissa got pregnant.

a. Martina hopes Carissa gets pregnant.

b. Martina hopes Carissa got pregnant.

---

<sup>4</sup> If *may* in (14c) were an epistemic modal, then (14c) would be permissible because whom John will meet is unknown to the speaker. The speaker's epistemic modal base could satisfy the disparity principle regardless of a settled future at the present circumstance.

(16) Martina thought Carissa got pregnant.

a. \*Martina thinks Carissa gets pregnant.

b. Martina thinks Carissa got pregnant

(Klecha 2015: (4-7))

However, considering that the meanings of lexical verbs are more specific and stabilized than grammatical modals, the claim that *hope* varies in its modal base depending on the temporal orientation of its complement is not a strong one. Furthermore, Banerjee (2018) shows that *hope* with a future orientation may involve an epistemic modal base.

### 2.3 Banerjee (2018): Epistemic future of *hope*

Banerjee (2018) argues that epistemic modals are not restricted to past and present orientations, which is contrary to the claims of Werner and Klecha discussed above. The evidence Banerjee brings against their claim is the case where *hope* gets an epistemic interpretation with a future orientation. The following situation and the report of *hope* show this.

(17) A situation of Yena:

An evil queen opened a fencing competition, having secretly in mind a plan to execute the winner (leaving herself as the best player). One of the participants, Yena, does not know the outcome of the victory and believe

that the victory will bring her fame and fortune. Then, the following sentence, which has an obvious future-orientation can be an appropriate report about Yena's state.

(18) Yena hopes to win the game.

*Hope* in (18) in the situation (17) must have an epistemic modal base, not a circumstantial modal base. According to Banerjee, the relevant circumstance of (17) is Queen's word. So, the circumstantial worlds where Yena wins are also the worlds where Yena dies, which would make (18) false if the modal base were circumstantial. Therefore, Banerjee (2018) claims that epistemic future is possible. However, there are also modals like *must* which cannot have an epistemic meaning with a future orientation. Stipulating that strong epistemic necessity modals like *must* cannot claim about a future<sup>5</sup>, his modal-temporal generalization is given below.

---

<sup>5</sup> He reasons that when the future event is predicted with high certainty, futurate present is used instead *must*. A futurate present is usually used for a schedulable event (Ch2.2), but a futurate present with a quite predictable event is also permissible, as the following demonstrates.)

%The storm makes landfall tomorrow near Yarmouth. (Banerjee 2018: (36))



(19) Temporal Orientation from Modal Base generalization

Strong non-root<sup>6</sup> necessity modals cannot be future-oriented.

Root modals must be future-oriented.

(Banerjee 2018: (38))

I will adopt (19) as a modal-temporal generalization, which predicts that the circumstantial modal base derives a future orientation and does not restrict temporal orientations of epistemic modal base (except strong epistemic necessity modal). In Ch4, looking at the temporal orientations of bouletic verbs in Korean, I will characterize their modal types in terms of the modal-temporal correlation.

---

<sup>6</sup> *non-root* means 'epistemic' and *root* means 'circumstantial'

### 3. Modal semantics of *hope* and *want*

As we saw in section 2.3, *hope* provides some evidence that an epistemic future is possible. Epistemic component in *hope* is more discernable than those in modal auxiliaries. Because, while the difference between an epistemic modal (an epistemic modal base) and an epistemic-like modal (a circumstantial modal base) is not easy to catch, a bouletic verb *hope* involves a preference as a fixed ordering source. This makes it easier to notice whether or not their modal base type is epistemic. In this respect, bouletic verbs are worth investigating in order to determine how two different kinds of modal bases play a role in modality. In this chapter, I will review the previous studies of *hope* and *want* in English, which can reveal the characteristics of their modal bases.

#### 3.1 Doxastic worlds and the semantics of *want*

One of most standard analysis for *want* until now was first given in Heim (1992). Her comparative analysis for *want* reflects the notion that *want* is evaluated on the subject's doxastic worlds. The following sentence of *want* shows this notion. In this situation, the event that the subject wants only occurs in his doxastic worlds.

(20) Patrick is under the misconception that he owns a cello, and he  
wants to sell his cello.

(Heim 1992: 183(2))

Her following analysis for '*a* want *q*' is that the doxastic worlds (of *a*)  
where *q* is true is preferable to the doxastic worlds where  $\neg q$  is true.<sup>7</sup>  
( $\text{Sim}_w(q)$  is the set of *q*-worlds most similar to *w*)

(21)  $\llbracket \text{want} \rrbracket(q)(a)(w)$  is defined iff  $\text{DOX}(a,w) \cap q, \text{DOX}(a,w) \cap \neg q \neq \emptyset$ .

If defined,  $\llbracket \text{want} \rrbracket(q)(a)(w) = 1$  iff

$\forall w' \in \text{DOX}(a,w). \text{Sim}_w(\text{DOX}(a,w) \cap q) <_{\text{DES}(a,w)} \text{Sim}_w(\text{DOX}(a,w) \cap \neg q)$ <sup>8</sup>

(Rubinstein 2017: (7))

However, Villalta (2008) shows that the worlds compared in the  
semantics of *want* should not be doxastic. As illustrated in (22) below, let  
us assume that the worlds I work Tuesday and Thursday next semester are  
the best worlds according to my preference, and I believe that such worlds  
are the worlds where I am working hard in the present. Then the best

---

<sup>7</sup> As a presupposition, the analysis also requires *q* and  $\neg q$  to be compatible with the doxastic worlds.

<sup>8</sup> While Heim's analysis compares *q* and  $\neg q$  worlds, other versions use modal bases and ordering sources. von Stechow (1999) presents such a Kratzerian modal-quantificational analysis.

worlds of the doxastic worlds are the worlds where I am working hard now, which makes invalid inference that *I want to work hard now*.

(22) a. I want to teach Tuesdays and Thursdays next semester.

b. I believe that I will teach Tuesdays and Thursdays next semester if and only if I work hard now.

c. Invalid inference: I want to work hard now.

(Villalta 2008: 478)

A revised semantics of *want* reflecting Villalta's solution is given below. Here,  $q$  and  $\neg q$  worlds are not compared on doxastic worlds, but on certain worlds related to the context,  $\cap f(w)$ .  $f(w)$  is the set of propositions that are specifically required in the context (Here, the proposition that I teach in the next semester could be included, so the worlds I do not work at all could be excluded). Thus, ' $a$  want  $q$ ' means that  $q$ -worlds related to the context are more preferable than  $\neg q$ -worlds in terms of the world ranking of the bouletic ordering source ( $\text{DES}(a, w)$ ).

(23)  $\llbracket \text{want} \rrbracket^{f, h}(q)(a)(w)$  is defined iff  $h(a, w) = \text{DES}(a, w)$ ,

$\cap f(w) \cap \text{DOX}(a, w) \cap q \neq 0$ , and  $\cap f(w) \cap \text{DOX}(a, w) \cap \neg q \neq 0$ .

If defined,  $\llbracket \text{want} \rrbracket^{f, h}(q)(a)(w) = 1$  iff  $\cap f(w) \cap q <_{h(a, w)} \cap f(w) \cap \neg q$

(Rubinstein 2017: (14))

Since  $\cap f(w)$  does not reflect the belief of the subject, it can include worlds where I teach on Tuesday and Thursday in the next semester without working hard now. This analysis can prevent the above situation from making the invalid inference *I want to work hard now*.

However even in this analysis for *want*, belief of the subject is involved in the presupposition. It requires  $q$  and  $\neg q$  to be compatible with doxastic worlds. Rubinstein (2017) claims that this assumption should be revised as well, since anyone can claim that they *want*  $q$  even if they believe that  $q$  is not possible, as in (24).

(24) I want this weekend to last forever. (But I know, of course, that it will be over in a few hours.)  
(Heim 1992)

Therefore, we can see that modal base for the semantics of *want* is not doxastic both in the comparison between worlds and in the presupposition of the subject's belief. This claim can be further supported by the previous discussion of comparing *hope* and *want*, as demonstrated in the next section.

### 3.2 Epistemic possibility of *hope*

Banerjee (2018) presented the situation where *hope* with future

orientation should have an epistemic modal base (Ch2.3). However, the epistemic component of *hope* is not restricted to a certain temporal orientation. Anand & Hacquard (2013) claim that *hope* has an epistemic component whereas *want* does not. To support this claim, they show that *hope* can let others know a speaker's state of belief and that *hope* can embed epistemic possibility modals.

The following data in (25) show what kind of predicates epistemic modals can co-occur with. According to previous arguments (Veltman 1996; Hacquard 2006, 2010; Yalcin 2007), epistemic modals in embedded clauses should be in reference to an attitude predicate in the matrix clause to receive the relevant modal background. Anand & Hacquard claim that these predicates should have a representational meaning, which is the case for 'acceptance attitudes' like *think*, *say*, and *discover* in (25)

- (25) a. John thinks that Paul has to be innocent.
- b. John said that Mary had to be the murderer.
- c. John discovered that Mary had to be the murderer.

Unlike the verbs in (25), preference-oriented verbs like *wish*, *want*, and *demand* cannot embed epistemic modals, as seen in (26).

- (26) a. John wishes that Paul had to be innocent.     \*epistemic  
      b. John wants Paul to have to be the murderer.   \*epistemic  
      c. John demanded that Paul have to be the murderer. \*epistemic

Unlike the verbs in (26), *hope* has a representational meaning as well as a preference meaning. It is checked by an epistemic modal appearing in the embedded clause of *hope*:

- (27) John hopes that Maria may have known her killer

But unlike the acceptance attitudes in (25), *hope* only permits possibility modals, not necessity modals. This is due to the preference component of *hope*. The preference component requires as a prerequisite that there are both  $p$  and  $\neg p$  worlds in the doxastic alternatives.

This additional meaning of *hope* in contrast to *want* is also observed in another kind of data. In situations where someone is asking yes-or-no questions, a sentence with *hope* can be an answer unlike a sentence with *want*, as shown in (28). This is because a sentence with *hope* conveys that the subject believes the event is possible. In contrast, *want* only carries the meaning of preference about the event.

(28) A: Kommt Peter heute?

comes Peter today

'Is Peter coming today?'

B: Ich hoffe/\*will, dass er heute kommt.

I hope/\*want that he today comes

'I hope/\*want that he is coming today'

(Scheffler 2008)

Consider the following in (29-30). If the speaker confirms the event of raining, he cannot make a claim with *hope* about raining (or not raining), since 'not raining' is excluded from his doxastic alternatives (both  $p$  and  $\neg p$  worlds should exist due to the comparative meaning). On the other hand, since *want* does not require that 'not raining' is in his doxastic alternatives, the speaker can make a *want* statement.

(29) It is raining.

a. # I hope it is raining/#that is what I hope.

b. "I want it to be raining/"that is what I want.

(30) It isn't raining.

a. # I hope it is raining/#that is not what I hope.

b. "I want it to be raining/"that is not what I want.

(Scheffler 2008)



To capture the above representational meaning of *hope*, I assume that *hope* has an epistemic modal base and a bouletic ordering source, and that *want* has a circumstantial modal base and a bouletic ordering source. That *hope* requires that the subject believes both  $p$  and  $\neg p$  is possible should derive from *hope*'s epistemic modal base and disparity principle (Ch2.1) for modal claims.

In the next chapter, I will show that Korean bouletic verbs also show this contrast in epistemic meanings, which will support the claim that the semantics of the two bouletic verbs is to be identified in terms of distinct modal bases.

## 4. Modal semantics of Korean bouletic verbs

As I discussed in the previous chapter, the epistemic component and preference scale of a bouletic verb seems to derive from independent levels of its background. First, the epistemic state of *hope* refers to the possibility of the embedded proposition. On the other hand, the preference component of the embedded proposition is not about a possibility but is rather about the event of the embedded proposition. Second, *hope* and *want* show different temporal orientations, which means that their background worlds are accessible in fundamentally different ways.

Therefore, I suggest that the differences between *hope* and *want* should be accounted for in terms of a distinct level of modality (modal bases), thus not being just a matter of their bouletic ordering source. In this chapter, I will apply this modal base account to the semantics of *pala-* and *wenha-*. This account will explain their several differences, which will be illustrated in the chapter.

Finally, the epistemic diagnoses in the following sections 4.2-4.5 mostly involve future orientated propositions and thus they suggest that the epistemic modal base of *pala-* is retained in future orientations as well as past orientations (regarding the issue of the epistemic temporal-modal correlation in Ch.2).

## 4.1 Temporal Orientation

We saw in ch1&2 that there is a correlation between the types of modal bases and their temporal orientations. While epistemic modals can be about a past event, circumstantial modals cannot. So the non-epistemic *must* in (31b) and *keyss-* in (32b) always makes a claim about a future event. According to Werner (2006), this future constraint of non-epistemic modals derives from their circumstantial modal bases and the disparity principle (see Ch 2.1).

(31) a. Mina must have returned yesterday. (epistemic)

b. You must return to home. (deontic)

(32) a. Mina-ka ecey tolao-ess-keyss-ta.

M.-NOM yesterday return-PST-CNJ-T-DECL.

‘Mina might have come back yesterday.’ (epistemic)

b. na-nun icy ey cip-ey ka-keyss-ta.

I-TOP now home-DAT go-VOL-DECL

‘I will go to home now’ (volition)

Of all the differences between *pala-* and *wenha-*, their difference in temporal orientation is most noticeable and it provides an important insight regarding their modal types. As shown below, *pala-* can have a past orientation as well as a future orientation, whereas *wenha-* can only have

a future orientation.<sup>9</sup>

- (33) a. emeni-nun Mina-ka wus-ess-ki-lul [pala-/?wenha-]n-ta.  
Mother-TOP M.-NOM laugh-PST-NML-ACC [hope/want]PRES-DECL  
'Mother hopes/?wants that Mina laughed'
- b. emeni-nun Mina-ka wus-ki-lul [pala-/wenha-]n-ta.  
Mother-TOP M.-NOM laugh-NML-ACC [hope/want]PRES-DECL  
'Mother hopes/wants that Mina laughs'

We need to be aware, however, that of the many complement types for bouletic verbs, only the *ki* complement can have a finite tense and shows a full range of temporal orientations. Even though the *kes* complement with

---

<sup>9</sup> Occasionally, some speakers might accept a sentence of *wenha-* with a past oriented complement, even though its occurrence is rare in the corpus. In such a case, however, the verb denoting a past event should have an aspectual characteristic of result state and the interpretation of the past oriented complement would be slightly different from that of *pala-*. For example, in the following where *wenha-* goes with the past event of getting pregnant, the subject of *wenha-* seems to focus on the result state of Mina being pregnant, whereas the subject of *pala-* focuses on the past event of being pregnant itself.

emeni-nun Mina-ka imsinha-ess-ki-lul [pala-/?wenha-]n-ta.  
Mother-TOP M.-NOM get.pregnant-PST-NML-ACC [hope/want]PRES-DECL  
'Mother hopes/?wants that Mina got pregnant'

a perfective denotes a past event, it cannot combine with *pala-*. As I will point out in the next section, this is because perfective *kes* complements only co-occur with predicates which induce a factive presupposition.<sup>10</sup>

- (34) a. ku-nun    Mina-ka    imsinha-n                      kes-ul  
              he-TOP    M.-NOM    get.pregnant-PRF.ADN    thing-ACC  
              [?pala-/?wenha-]n-ta.  
              [?hope-/?want-]PRES-DECL
- b. ku-nun    Mina-ka    imsinha-n                      kes-ul  
              he-TOP    M.-NOM    get.pregnant-PRF.ADN    thing-ACC  
              al-ess-ta  
              know-PST-DECL

On the other hand, the *kes* complement with the imperfective *nun* denotes a non-past event and can combine with *pala-* and *wenha-*.

---

<sup>10</sup> Therefore, I consider *ki* complementizers to be the most revealing of the semantics of the two bouletic verbs. For the remainder of this thesis, I mostly deal with sentences with *ki* complements. More comprehensive research on other complementizers with bouletic verbs is a topic I recommend for later research.

(35) ku-nun    Mina-ka    imsinha-nun                    kes-ul  
          he-TOP    M.-NOM    get.pregnant-IMPRF.ADN    thing-ACC  
          [pala-/wenha-]n-ta.  
          [hope-/want-]PRES-DECL

A noun as a complement of bouletic verbs always denotes a future event so (36) cannot mean that he wants a past success.

(36) ku-nun            Mina-uy    sengkong-ul    [pala-/wenha-]n-ta.  
          he-TOP            M.-GEN    success-ACC    [hope-/want-]PRES-DECL

A contrast in temporal orientations between the two bouletic verbs is also checked in English, for *hope* and *want*. While *hope* can have a past or future orientation, *want* cannot have a past orientation.

- (37) a. Jim hopes Marry laughs.  
       b. Jim hopes Marry laughed.  
       c. Jim wants Marry to laugh.

In light of the above example, I claim that the two verbs have different modal bases, following the temporal-modal restrictions that we discussed in the above sections on previous studies. I associate a circumstantial modal base to *wenha-* because it only has a future orientation. (If *wenha-*

had an epistemic modal base, its inability to get a past orientation should be explained somehow.) And for *pala-*, I associate to it an epistemic modal base because *pala-* can have a past orientation, which is a common temporal orientation of epistemic modals.

This proposal for the modal bases of the two bouletic verbs will be supported in the remaining of the thesis. Furthermore, there is also disagreement regarding whether a future orientation for an epistemic modal is possible. According to Klecha (2015), for example, epistemic modal cannot have a future orientation. For this reason, he employs both modal bases for *hope*; that is, an epistemic modal base when *hope* takes a past complement, and a circumstantial modal base when it takes a future complement (see Ch2.2). In the following sections, however, I will show that *pala-* always has an epistemic modal base, regardless of its temporal orientation.

## 4.2 Bouletic verbs with an *ul-kka* complement

### 4.2.1 *ul-kka* complement with epistemic uncertainty

This thesis mainly discusses *ki* complements for two bouletic verbs. The two verbs, *pala-* ‘hope’ and *wenha-* ‘want’ show a critical difference with

regards to *(u)l-kka* complementizers<sup>11</sup>, as shown below. In this section, I will give an account of their different ranges of complements in terms of the modal types discussed in the previous section.

- (38) ku-nun hok Mina-ka ttena-lkka<sup>12</sup> [pala-/?wenha-]ko iss-ta.<sup>13</sup>  
 he-TOP maybe M.NOM leave-KKA [hope/?want]CONJ PROG-DECL  
 ‘He hopes (that) Mina maybe leave.’

In Kang and Yoon (2018), *(u)l-kka*, is labelled as a ‘subjunctive interrogative complementizer’ (SUBJ.Q-Comp). They reveal the meaning of *(u)l-kka* via the following examples, while comparing it with the ordinary interrogative complementizer *ci* (Q.Comp). In (39-40), while *ci* can co-occur with the verbs *mwulepo*-‘ask’ and *al*-‘know’, *(u)l-kka* cannot.

---

<sup>11</sup> (U)l-kka is also a typical question marker in sentence endings.

Mina-ka ttena-lkka?  
 M.NOM leave-INT?

<sup>12</sup> (U)-kka with the negation of the embedded verb can be used without change in the meaning. It shows polarity of embedded proposition in the epistemic level.

Mina-ka [ttena-lkka/ ttena-ci anh-ulkka] pala-ko iss-ta.  
 M.NOM [leave-KKA/leave-CI NEG-KKA] hope-CONJ PROG-DECL

<sup>13</sup> Although *pala-* with *(u)l-kka* complementizer is acceptable, it requires an appropriate prosody of intonation and phrasing.



(39)a. Mina-nun ku-ka phathi-ey o-nun-ci mwulepo-ass-ta.

M.-TOP he-NOM party-DAT come-ADN-CI ask-PST-DECL

‘Mina asked whether he would come to the party.’ **(inquiry verb)**

b. #Mina-nun ku-ka phathi-ey o-lkka mwulepo-ass-ta.

M.-TOP he-NOM party-DAT come-KKA ask-PST-DECL

Intended: ‘Mina asked if he might come to the party.’

(40)a. Mina-nun ku-ka phathi-ey o-nun-ci al-ko iss-ess-ta.

M.-TOP he-NOM party-DAT come-ADN-CI know-CONJ exist-PST-DECL

‘Mina knew whether he would come to the party.’ **(knowledge verb)**

b. #Mina-nun ku-ka phathi-ey o-lkka al-ko iss-ess-ta.

M.-TOP he-NOM party-DAT come-KKA know-CONJ exist-PST-DECL

Intended: ‘Mina knew if he might come to the party.’

Instead, *(u)l-kka* can combine with the inquisitive verb *kwungkumha-* ‘wonder’, as in (41b). Further, unlike *ci*, *(u)l-kka* can combine with the polysemous verb *siph* as seen in (42), which contributes a ‘conjecture’ reading to the prejacents complement.

(41)a. Mina-nun ku-ka phathi-ey o-nun-ci kwungkumha-ess-ta.

M.-TOP he-NOM party-DAT come-ADN-CI wonder -PST-DECL

‘Mina wondered whether he would come to the party.’

b. Mina-nun ku-ka phathi-ey o-lkka kwungkumha-ess-ta.

M.-TOP he-NOM party-DAT come-KKA wonder-PST-DECL

‘Mina wondered if he might come to the party.’

(42) Mina-nun ku-ka phathi-ey o-[#nun-ci/lkka] siph-ess-ta.

M.-TOP he-NOM party-DAT come-[ADN-CI/KKA] conjecture-PST-DECL

‘Mina doubted if he might come to the party.’

Observing this restricted distribution of *(u)l-kka* with several verbs, Kang and Yoon (2018) claim that “by using *(u)l-kka*, the speaker makes the non-commitment to the truth of the embedded proposition” (nonveridicality effect) and that “it gives rise to epistemic uncertainty or doubt interpretation.” They also attribute this effect to the ‘non-homogeneous epistemic state’ of the subject with regard to the embedded proposition, which requires both *p*-world and  $\neg p$ -world to be epistemic alternatives.

I adopt their analysis for the *(u)l-kka* complementizer, arguing that it gives rise to ‘epistemic uncertainty’ which derives from subject’s non-homogeneous epistemic state. In the section below, I will show the epistemic uncertainty of *(u)l-kka* with regards to psych predicate, which can extend the discussion.

This section, adopting their claim, will characterize the difference between *pala-* and *wenha-* in terms of the ‘epistemic uncertainty’ of the *(u)l-kka* complementation.

## 4.2.2 Psych verbs and epistemic uncertainty

The epistemic uncertainty of *(u)l-kka* is also identifiable when it combines with a psych predicate. Some psych predicates which do not presuppose the factivity of the embedded proposition, such as *twulyep*- ‘fear’ and *uysimha*- ‘doubt’, can embed *(u)l-kka* complements. In (43), the subjects do not commit himself to the veridicality of the embedded propositions and the sentences give rise to a reading of epistemic uncertainty.

(43) a. ku-nun Mina-ka ttena-lkka twulyew-ess-ta.

he-TOP M.-NOM leave-KKA fear-PST-DECL

‘He feared (that) Mina might leave.’

b. ku-nun Mina-ka ttena-ci anh-ulkka uysimha-ess-ta.

he-TOP M.-NOM leave-CI NEG-KKA doubt-PST-DECL

‘He doubted (that) Mina might leave.’

Psych predicates which derive factive presuppositions, however, cannot embed *(u)l-kka* complements, as shown in the following. The subjects of these predicates give a clear commitment to the truth of the embedded propositions, which entails that their epistemic state should be homogeneous with regards to the embedded propositions.

(44) a. #ku-nun Mina-ka ttena-lkka kipp-ess-ta.

he-TOP M.-NOM leave-KKA glad-PST-DECL

Intended: 'He was glad (that) Mina might leave.'

b. #ku-nun Mina-ka ttena-ci anh-ulkka sewunha-ess-ta

he-TOP M.-NOM leave-CI NEG-KKA sad-PST-DECL

Intended: 'He was sad (that) Mina might leave.'

Rather, factive psych predicates can embed the perfective complementizer, *(u)n-kes*. In the following sentences, the subjects believe the occurrences of past events and have psychological experiences toward them. This interpretation of factive psych predicates contrasts again with that of *twulyep*- 'fear'. Even in the situation where the subject of *twulyep*- believes the past event in the embedded proposition, they do not seem to have direct psychological experience of the event itself. Rather the subject of *twulyep*- seems to have an attitude for uncertain future events related to the past event, which seems to be intended by the subjective epistemic uncertainty of *twulyep*-.

(45)a. ku-nun Mina-ka ttena-n kes-i kipp-ess-ta.

he-TOP M.-NOM leave- PRFADN thing-NOM glad-PST-DECL

'He was glad (that) Mina left.'

b. ku-nun Mina-ka ttena-n kes-i sewunha-ess-ta

he-TOP M.-NOM leave- PRFADN thing-NOM sad-PST-DECL

‘He was sad (that) Mina left.’

c. #ku-nun Mina-ka ttena-n kes-i twulyew-ess-ta.

he-TOP M.-NOM leave- PRFADN thing-NOM fear-PST-DECL

Intended: ‘He feared (that) Mina might leave.’

#### 4.2.3 Distributions of *ul-kka* and *ki* complements

Considering the above observation that *(u)l-kka* complements co-occur with verbs like *kwungkumha-* ‘wonder’ and *twulyep-* ‘fear’, which entail epistemic uncertainty, *pala-* ‘hope, just like the psych verbs discussed above, induces epistemic uncertainty when combined with the *(u)l-kka* complement. It again contrasts with *wenha-* ‘want’ which cannot embed a *(u)l-kka* complement. Instead the verb takes a *ki* complement which does not induce epistemic uncertainty.

*Ki* is a complementizer which gives only non-factive readings, as shown below. Unlike *ko*, *kes*, and *um*, it cannot combine with *mit-* ‘believe’, *al-* ‘know’, *incengha-* ‘admit’, and *hwaksinha-* ‘be certain’ – that is, verbs which presuppose subjective commitment to the veridicality of the embedded proposition.

- (46) a. ku-nun Mina-ka ttena-ess-ta-ko mit-ess-ta  
he-TOP M.-NOM leave-PST-CONJ believe-PST-DECL

- b. ku-nun Mina-ka ttena-n kes-ul mit-ess-ta  
 he-TOP M.-NOM leave- PREFADN thing-NOM believe-PST-DECL
- c. (?)ku-nun Mina-ka ttena-ess-um-ul mit-ess-ta.  
 he-TOP M.-NOM leave-PST-NML believe-PST-DECL
- d. \*ku-nun Mina-ka ttena-ess-ki-lul mit-ess-ta.  
 he-TOP M.-NOM leave-PST-ki-ACC believe-PST-DECL

It can naturally combine with psych verbs, directive verbs, modal predicates, etc.

- (47) a. ku-nun Mina-ka ttena-ki-lul [pala/wenha]-ess-ta.  
 he-TOP M.-NOM leave-KI-ACC [hope/want]-PST-DECL  
 'He hoped/wanted Mina to leave.' **(preference predicate)**
- b. ku-nun Mina-wa ket-ki-ka cilwuha-ess-ta.  
 he-TOP M.-CORN leave-KI-NOM bored.PST-DECL  
 'He was board to walk with Mina.' **(psych predicate)**
- c. ku-nun Mina-wa ket-ki-ka twulyew-ess-ta.  
 he-TOP M.-CORN leave-KI-NOM fear.PST-DECL  
 'He feared to walk with Mina.' **(epistemic psych predicate)**
- d. ku-nun Mina-wa ket-ki-lul mwuseweha-ess-ta.  
 he-TOP M.-CORN leave-KI-ACC fear.appear.PST-DECL  
 'He showed fear to walk with Mina.' **(showing psych predicate)**
- e. ku-nun Mina-ka ttena-ki-lul yokwuha-ess-ta.  
 he-TOP M.-CORN leave-KI-ACC demand.PST-DECL

‘He demanded that Mina to leave.’ (Directive predicate)

f. sewul-un    cihachel-ul    iyongha-ki-ka    swip-ta.  
seoul-TOP    subway-ACC    use-KI-NOM    easy-DECL

‘Seoul is easy to use the subway.’ (Evaluative predicate)

Thus, *ki* has a relatively broader distribution than *(u)l-kka* which combines with *pala-* and *twulyep-* in the above list. Instead, since *ki* is not an interrogative complementizer, it does not combine with inquisitive verbs such as *kwungkumha-* ‘wonder’, or with dubitative verbs such as *uysimha-* ‘doubt’.

(48) a. #ku-nun    Mina-ka    ttena-ki-ka    kwungkumha-ess-ta.

he-TOP    M.-NOM    leave-KI-NOM    wonder-PST-DECL

Intended: ‘He wondered If Mina might leave.’

b. #ku-nun    Mina-ka    ttena-ki-ka    uysimha-ess-ta.

he-TOP    M.-NOM    leave-KI-NOM    doubt.PST-DECL

Intended: ‘He doubted If Mina might leave.’

Considering the above discussion, the semantics of the two aforementioned non-commitment complementizers, *ki* and *(u)l-kka* can be given as follows. *Ki* is an ordinary non-commitment complementizer which can combine with a range of predicates. On the other hand, *(u)l-kka* is an epistemic non-commitment complementizer which can only combine with

predicates that convey a subjective (non-homogeneous) epistemic state.

Following this, the reason *pala-* can take both complementizers while *wenha-* can only take the *ki* complementizer becomes clearer. *Pala-* conveys a subjective epistemic state for the embedded proposition, as well as the preference of the subject for it, while *wenha-* only conveys a subjective preference for the event referred to in the embedded proposition.

### 4.3 *elyep-/himitul-* ‘hard’ in a modal scale

Korean adjectives *elyep-/himitul-* ‘hard’ which take various attitudinal complements contribute a scalar reading to the modal semantics of the embedded predicate. First, I will discuss *elyep-* combining with epistemic predicates, and show the different behavior of the two bouletic verbs *pala-* and *wenha-* when embedded under *elyep-*.

As shown below, *elyep-* can be found with a diverse range of attitude or psych predicates in its embedding complement, and it expresses a negative attitude of the speaker regarding the event denoted by the complement. For example, in (49), the speaker shows his judgment of the embedded event: i.e., it is highly restricted to believe, to make a promise, or to demand etc. Also, the speakers in (50) show their negative attitude about the events of Mina coming back or winning.



- (49)a. Mina-ka tolao-l kes-i-lako mit-ki elyep-ta.  
M.-NOM return-ADN thing-COP-CONJ believe-KI hard-DECL  
‘It is hard to believe that she would come back.’ (**knowledge predicate**)
- b. Mina-eykey tolao-keyss-tako yaksokha-ki elyep-ta.  
M.-DAT return.will-CONJ promise-KI hard-DECL  
‘It is hard to promise Mina that I would come back.’ (**commissive predicate**)
- c. Mina-eykey tolao-ki-lul yokwuha-ki elyep-ta.  
M.-DAT return-KI-ACC require-KI hard-DECL  
‘It is hard to require Mina to come back.’ (**directive predicate**)
- d. Mina-eykey tolao-lako malha-ki elyep-ta.  
M.-DAT return-CONJ say-KI hard-DECL  
‘It is hard to say to Mina to come back.’ (**assertion predicate**)
- (50)a. Mina-ka tolao-ki elyep-ta.  
M.-NOM return-KI hard-DECL  
‘Mina is unlikely to come back.’
- b. Mina-ka 1tung-ul ha-ki elyep-ta.  
M.-NOM first.place-ACC do-KI hard-DECL  
‘Mina is unlikely to get first place.’

Here, we notice that non-attitude predicates combined with *elyep-* always bring up epistemic worlds. Out of several types of modal worlds (epistemic, commissive, directive, etc.), these sentences always take the speaker’s epistemic worlds from the context. Therefore, (50) cannot mean that the speakers have difficulty in ‘promising’ or ‘commanding’ Mina to

come back or win. For *elyep-*, then, I define its condition for receiving a modal background from its context<sup>14</sup> as follows:

(51) [Modal backgrounds for *elyep* attached to a predicate]

1. When the predicate is associated with a modal background, *elyep-* is interpreted with it.
2. When the predicate is not associated with a modal background, *elyep-* is interpreted with the epistemic background given in its context.

In Korean, a bouletic verb *pala-* can combine with *elyep-*. This construction also conveys a subject's negative attitude regarding the content of its complement. What is novel here is that the negative attitude is not of subject's preference even when *elyep-* combines with a bouletic verb. This negative attitude is rather similar to the one we found in (49a). So (52) conveys that the speaker believes that Mina's coming back is not likely to happen, not that Mina's coming back is not the speaker's preference.

---

<sup>14</sup> Predicates receiving a modal background from their context is not a novel idea. As an example, Mari and Portner (2018) analyzed the subjunctive as a mood which selects two modal backgrounds, and proposed that the common ground can be the second argument of the subjunctive when not provided by the verb, as in Italian,

- (52) Mina-ka nayil            tolao-ki-lul      pala-ki    elyep-ta.  
       M.-NOM tomorrow    return-KI        hope-KI    hard-DECL  
       ‘It is unlikely that Mina would come back tomorrow.’

It is perfectly natural to draw out an epistemic reasoning from (52), and the speaker’s bouletic preference does not play a role here. For example, even if someone believes Mina will not come back, he could still want Mina to come back tomorrow. However, in this situation, he should not be certain or believe that Mina will come back tomorrow.

- (53) *elyep-* does not take a bouletic modal background.

Therefore, the reason why *pala-* in combination with *elyep-* has an interpretation that the speaker has some difficulty with the attitude of belief or knowledge, and why it implies that it is not likely to happen, is clear. *Elyep-* takes the epistemic modal background of *pala-* rather than a bouletic one. And this observation supports that *pala-* is a bouletic verb with an epistemic background.

While *palaki elyep-* constructions are frequently used in casual speech, *wenhaki elyep-* constructions are extremely marginal. Thus, (54b) sounds very awkward.

(54)a. Mina-ka tolao-ki-lul pala-ki elyep-ta.

M.-NOM return-KI hope-KI hard-DECL

‘It is unlikely that Mina would come back tomorrow.’

b. ?Mina-ka tolao-ki-lul wenha-ki elyep-ta.

M.-NOM return-KI want-KI hard-DECL

Intended: ‘It is unlikely that Mina would come back tomorrow.’

As shown in (55), however, *wenhaki elyep-* seems to become acceptable when the sentence contains the appropriate contextual information. That is, the phrase ‘ilen sanghwang-eyse-nun’ (‘in this case’) introduces a specific state of the utterance context.

(55)(?)ilen sanghwang-eyse-nun Mina-ka tolao-ki-lul wenha-ki elyep-ta.

this circumstance-LOC-TOP M.-NOM return-KI want-KIhard-DECL

‘In this case, it is unlikely that Mina would come back.’

I claim that (55) might be acceptable since the contextual information of the phrase provides the epistemic background, which is required for the semantics of ‘*elyep-*.’ In other words, I assume that *elyep-* in (55) takes speaker’s epistemic background from the context, whereas the adjective in (54a) should take the speaker’s epistemic background provided by the embedded epistemic predicate. This analysis can also be supported by (51);

when the predicates do not provide modal backgrounds, *elyep-* can take the epistemic background from the context. Therefore, this analysis for the contrast between *wenhaki elyep-* and *palaki elyep-* reveals that *wenh-* requires a circumstantial modal base, but not an epistemic modal base.

## 4.4 Self-efficacy and performativity

### 4.4.1 Controllable situation and self-efficacy

In the previous section, it was pointed out that *pala-* entails a subjective epistemic state, specifically ‘epistemic uncertainty.’ (Subject of *pala-* should believe that both *p* and  $\neg p$  is possible.) Thus, the subjects of *pala-* should be uncertain about the ‘outcome’ of the event. However, it seems that *pala-* further requires an uncertainty in ‘self-efficacy’<sup>15</sup> to bring the positive outcome.<sup>16</sup> If the events are so controllable that subjects are certain of their self-efficacy, they do not go with *pala-*.

---

<sup>15</sup> The term ‘self-efficacy’ here means one’s belief that he can achieve his goal. Bandura (1982) defines the self-efficacy as follows.

“Perceived self-efficacy is concerned with judgments of how well one can execute courses of action required to deal with prospective situations.”  
(Bandura 1982: 147)

<sup>16</sup> Miceli & Castelfranchi (2010) also point out that two kinds of uncertainty are needed in *hope*, as follows.

“...uncertainty (both about the positive outcome and one’s self-efficacy in bring it about) is needed in hope.” (Miceli & Castelfranchi 2010: 257)

(56)a. #na-nun khephi-lul com masi-ki-lul palay. (He then drinks coffee)

I-TOP coffee-ACC some drink-KI-ACC hope.

Intended: 'I hope to have some coffee' (He then drinks coffee)

b. na-nun khephi-lul com masi-ki-lul wenhay. (He then drinks coffee)

I-TOP coffee-ACC some drink-KI-ACC want.

'I want to have some coffee' (He then drinks coffee)

In the above situation, the subject shows her preference by an utterance and her desire can be satisfied immediately by her action. In this readily self-achievable or controllable situation, the sentence (56a) seems odd whereas the sentence (56b) sounds natural.

Also, it is odd for *pala-* to be used in a situation where subject's desire can be achieved soon in the near future. In the following situation, the subject expresses her desire while expecting that the event will happen soon.

(57)a. #na-nun sanchayk-ul ha-ki-lul palay. (while going out for a walk)

I-TOP walking-ACC do-KI-ACC hope.

Intended: 'I hope to go out for a walk' (while going out for a walk)

b. na-nun sanchayk-ul ha-ki-lul wenhay. (while going out for a walk)

I-TOP walking-ACC do-KI-ACC want.

'I want to go out for a walk' (while going out for a walk)

The contrast illustrated in (56-57) shows existence of a restriction on the use of *pala-* with a controllable event. The subjects here have a belief in their self-efficacy regarding a controllable event and this certainty is not consistent with *pala-*.

This difference between two bouletic verbs in controllable situations is also observed in English. *Hope* which is analogous to *pala-* show a similar restriction in its usage.

Miceli and Castelfranchi (2010) wrote:

*In agreement with McGeer (2004), we suggest that hope implies one's confrontation with the limitations of one's agency. A **distinguishing feature of hope is exactly this "faith" in forces that are (or may be) beyond one's control**: Mary may hope that tomorrow the weather is fine, or that she wins a lottery prize, or that John spontaneously remembers the date of her birthday. Even when the hoped-for event is connected to one's agency, uncontrollable forces still play a significant role in one's perception.*

Miceli and Castelfranchi (2010: 257)

They also compare *hope* and *intend* with respect to their implications.

(58) A: "I intend to leave" implies:

"I want to leave"

"I will do some action aimed at this result"

"I believe I will be able to achieve my goal."

B: I hope to leave” implies:

“I will try to leave”

“I don’t know if I will be able to achieve my goal.”

In these examples, *hope* implies that the subject confronts and is conscious of the fact that the situation is uncontrollable. On the other hand, *want* does not imply the subject’s inability to control the situation, as we can see from the fact that “*I want to leave*” is compatible with “*I will do some action aimed at this result.*”

Treating *hope* as a modal verb requiring an epistemic modal base, like *pala-* in Korean, it can be seen that its oddness in a controllable situation is due to the lack of uncertainty (because of a belief in self-efficacy) needed in *hope*. Inversely, since *want* has a circumstantial modal base which does not require the subject’s uncertainty, the speaker can always make a claim about her preference regardless of the situation.

#### 4.4.2 Non-controllable situation and performativity

There are various uncontrollable events such as ‘raining tomorrow’ or ‘having a good chance.’ There can be no belief in self-efficacy in these kinds of events, which guarantees the uncertainty condition required by *pala-*.

Therefore, when talking about someone’s unknown future or the weather tomorrow, both *pala-* and *wenha-* can be used, as shown below. But (59b) and (60b) seem to be self-ascribed utterances, while (59a) and



(60a) seem to be more acceptable utterances. I believe this slight difference between these utterances is related to another level of speech, i.e., performativity.<sup>17</sup>

- (59)a. aphulo            ney-key   coh-un   il-man   iss-ki-lul   palay.  
           in.the.future   you-DAT   good-ADN thing-onlyexist-KI-ACC   hope  
           ‘I hope there are only good things to you in the future.’
- b. aphulo            ney-key   coh-un   il-man   iss-ki-lul   wenhay.  
           in.the.future   you-DAT   good-AND thing-onlyexist-KI-ACC   want  
           ‘I want only good things to happen to you in the future.’
- (60)a. na-nun nayil            nalssi-ka            coh-ki-lul            palay.  
           I-TOP   tomorrow   weather-NOM   good-KI-ACC   hope  
           ‘I hope the weather is fine tomorrow.’
- b. na-nun    nayil            nalssi-ka            coh-ki-lul            wenhay.  
           I-TOP    tomorrow   weather-NOM   good-KI-ACC   want  
           ‘I want the weather to be fine tomorrow.’

According to the previous discussions of performativity, epistemic modality is related to proffering or making shared possibility of the proposition which is overlooked by the addressee (Swanson 2006a, 2006b, 2007; von Stechow and Gillies 2007b; Portner 2007a). On the other hand,

---

<sup>17</sup> I here define performativity as any type of speech act other than an assertion (Portner 2009; 4.2.3).

non-epistemic (priority) modality (deontic, teleological, bouletic etc.), is related to commanding or making to-do-list (Ninan 2005; Portner 2007b).<sup>18</sup>

In these uncontrollable situations where one cannot command or direct an action, the two bouletic verbs cannot have a directive performativity. Instead, following the discussion in the literature, the epistemic modal verb *pala-* could proffer a proposition to the addressee. Thus *pala-* in (59a) and (60a) could proffer or make shared possibility of the embedded propositions. On the other hand, non-epistemic *wenha-* could not have this performativity, which is the reason why (59b) and (60b) sound more self-ascribed.

The uncontrollable situations in (59-60) involves the events that are not controllable and not affected by anyone's agency. However, there are also cases of events potentially affected by someone's agency, even though the situation is not completely controllable. For example, 'to get a good grade in the exam' requires an 'agent of the event' even though this agent does not guarantee the outcome. Thus, the concept of controllability may be represented as a scale.

---

<sup>18</sup> The following imperatives show that their interpretations are associated with the meanings of diverse priority modals (Portner 2009: (242)).

- a. Sit down right now! (deontic interpretation)
- b. Have a piece of fruit! (bouletic interpretation)
- c. Talk to your advisor more often! (teleological interpretation)

(61) scale of controllability (1>2>3)

1. high controllability (self-efficacy)
2. low controllability (affected by one's agency)
3. no controllability (not affected by one's agency)

The second case of the above scale, situations of 'low controllability', also guarantees the possibility of the use of *pala-* because here the subject does not possess full self-efficacy. Furthermore, all sentences in (62-63) have a directive performativity, which is associated with bouletic meanings. It contrasts with (59-60) where the events are not affected by someone's agency and thus not commanded. So, *wenha-* in (62-63) contrasts with (59-60) due to having a directive performativity. Additionally, *pala-* can have another kind of performativity (directive) in (62-63), whereas it only has a proffering performativity in (59-60).

(62) a. na-nun    ney-ka    choysen-ul    ta    ha-ki-lul    palay.

I-TOP    you-NOM    the.best-ACC    all    do-KI-ACC    hope

'I hope you do your best.'

b. na-nun    ney-ka    choysen-ul    ta    ha-ki-lul    wenhay.

I-TOP    you-NOM    the.best-ACC    all    do-KI-ACC    wawnt

'I want you to do your best.'

- (63) a. emma-nun ney-ka kongpwu-lulyelsimhi ha-ki-lul palay.  
           mom-TOP you-NOM study-ACC hard do-KI-ACC hope  
           'I(Mom) hope you study hard.'
- b. emma-nun ney-ka kongpwu-lulyelsimhi ha-ki-lul wenhay.  
           mom-TOP you-NOM study-ACC hard do-KI-ACC want  
           'I(Mom) want you to study hard.'
- (64) a. na-nun ipen sihem-ul cal chi-ki-lul palay.  
           I-TOP this exam-ACC well do-KI-ACC hope  
           'I hope to do well on this exam.'
- b. na-nun ipen sihem-ul cal chi-ki-lul wenhay.  
           I-TOP this exam-ACC well do-KI-ACC want  
           'I want to do well on this exam.'

However, (64) does not induce command because the subject of the event is the speaker himself. Instead, the sentences may imply the speaker's intention to do something, which again contrasts with the situation of (59-60) where there is no controllability.

## 5. Conclusion

This thesis has provided a new semantic analysis of the Korean bouletic verbs *pala-* ‘hope’ and *wenha-* ‘want’. The semantic differences between *pala-* and *wenha-* derive from their different modal bases - epistemic and circumstantial. Unlike *wenha-*, *pala-* requires an epistemic modal base, which means that the subject is conscious of the possibility of the embedded proposition. Our proposal is based on Kratzerian semantics – specifically on its concepts of a modal base and an ordering source.

This thesis shows that this proposal accounts for a set of semantic facts associated with these two bouletic verbs. First, the analysis can predict two verbs’ temporal orientations in terms of temporal-modal correlation. The future condition of a circumstantial modal base gives the reason for why *wenha-* only has a future orientation. On the other hand, epistemic modal base has no restriction in terms of temporal orientations, which explains why *pala-* can take on all temporal orientations. Second, that *pala-* has an epistemic modal base also accounts for its compatibility with *(u)l-kka* complementizer and *elyep-* ‘hard’. *(U)l-kka* conveys subjective epistemic uncertainty and so it can only occur with *pala-* which can reflect subjective epistemic state. *Elyep-* can be interpreted within various modal domains, including epistemic worlds, but cannot be interpreted with a preference, and therefore does not permit *wenhaki*

*elyep-* ('hard to want'). Third, the epistemic uncertainty of *pala-* also involves uncertainty regarding self-efficacy as well as uncertainty regarding the event itself. Thus, *pala-* cannot be compatible with controllable situation where the subject has a belief in his or her own self-efficacy.

Several predictions of the analysis can be applied to the English counterparts of *wenha-* and *pala-*, *hope* and *want*. *Hope* conveys subjective epistemic state that the embedded proposition might be true, while *want* does not. *Want* can be compatible with an unrealistic event while *hope* usually cannot. Their temporal orientations are also predictable by this thesis. While *want* only has a future orientation, *hope* can have both past and future orientations. Further, *hope* implies that the subject is in an uncontrollable situation, which is also the case of *pala-*.

However, even if *pala-* and *hope* are analyzed in this thesis as modals with an epistemic modal base, they do nevertheless show some contrasts. In Korean, *elyep* 'hard', as a modal scale, can naturally combine with *pala-*; however, 'it is hard to hope' is not natural in English. Furthermore, while *pala-* cannot take *ko* complements, another attitude verb *mit-* 'believe', can. In English, however, both *hope* and *believe* can take *that* complements. In French, *esperer* 'hope' can take an indicative complement as well as a subjunctive one. In this respect, *pala-* is far from *mit-* in Korean, whereas *hope* and *believe* in English is more similar to each other.

This thesis has focused on the semantics of Korean bouletic verbs, but further crosslinguistic comparative study of bouletic verbs should reveal various modal characteristics and their variations in natural language.

## References

- Anand, Pranav & Valentine Hacquard (2013). Epistemics and attitudes.  
*Semantics and Pragmatics* 6, 1–59.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American psychologist* 37(2), 122-147.
- Banerjee, Neil (2018). Trouble with attitudes and the future, In *Proceedings of the 35th West Coast Conference on Formal Linguistics*, 1-17.  
Somerville, MA.
- Condoravdi, Cleo (2002). Temporal interpretation of modals: Modals for the present and for the past. In Beaver, David, Stefan Kaufmann, Brady Clark & Luis Casillas (eds.), *The Construction of Meaning*. Stanford: CSLI Publications.
- Copley, Bridgett (2002). The semantics of the future. Ph.D. thesis, MIT.  
Cambridge, US.
- Hacquard, Valentine (2010). On the event relativity of modal auxiliaries.  
*Natural Language Semantics* 18, 79-114
- Heim, Irene (1992). Presupposition projection and the semantics of attitude verbs. *Journal of semantics* 9, 183-221.
- Kang, Arum & Suwon Yoon (2018). Subjunctive complementizer in Korean: the interaction of inquisitiveness and nonveridicality, In



- proceedings of 2018 Seoul Linguistics Forum*, 50-59. Seoul.
- Klecha, Peter (2016). Modality and embedded temporal operators. *Semantics and Pragmatics* 9, 1–49.
- Kratzer, Angelika (1981). The notional category of modality. In Hans-Jürgen Eikmeyer & Hannes Rieser (eds.), *Words, worlds, and context* 6, 38-74. Walter de Gruyter.
- Miceli, Maria, and Cristiano Castelfranchi (2010). Hope: The power of wish and possibility. *Theory & Psychology* 20(2): 251-276.
- Ninan (2005). Two puzzles about deontic necessity. In *MIT Working Papers in Linguistics* 51, 149-178.
- Park, Jae-Yeon (2004). Hankwuke Yangthay Emi Yenkwu (A study of modal endings in Korean), Ph.D. thesis, Seoul National University.
- Portner, Paul (2009). *Modality*. Oxford surveys in semantics and pragmatics. Oxford: Oxford University Press.
- Rubinstein, Aynat (2017). Straddling the line between attitude verbs and necessity modals. In Arregui, Ana, María Luisa Rivero & Andrés Salanova (eds.), *Modality across Syntactic Categories*, 610-633. UK: Oxford University Press.
- Shim, sang-wan (1995). hankwukeuy cepsokpep pomwunso '-ki'ey tayhan yenkwu (A study on the Korean subjunctive complementizer '-ki'), *Language research* 31(1), 55-85.
- Swanson, Eric. (2011). Language of Subjective Uncertainty. In Egan, Andy

- and Brian Weatherson (eds.), *Epistemic modality*, 249-267.  
Oxford: Oxford University Press.
- Um Jung-ho. (1999). VP Complement in Korean. *Journal of Korea Linguistics* 33, 399-428.
- Villalta, Elisabeth (2008). Mood and gradability: An investigation of the subjunctive mood in Spanish. *Linguistics and Philosophy* 31, 467-522
- von Fintel, K. and Anthony S. Gillies (2007b). An opinionated guide to epistemic modality. In Gendler, Tamar Szabó & John Hawthorne (eds.), *Oxford Studies in Epistemology* 2. Oxford: Oxford University Press.
- Werner, Tom (2006). Future and non-future modal sentences. *Natural Language Semantics* 14, 235–255.
- Yalcin, Seth (2007). Epistemic modals. *Mind: A Quarterly Review of Philosophy* 116, 983-1026.

# 국문초록

서울대학교 대학원 언어학과

최민경

한국어의 소망 동사인 ‘바라다’와 ‘원하다’는 양상에 있어서 이들의 다양한 의미론적 제한을 보여준다. ‘바라다’, ‘원하다’는 각각 영어의 hope, want와 유사성을 드러낸다. ‘바라다’와 hope은 삽입 명제가 가리키는 사건이 가능하다는 주체의 믿음을 전달한다. ‘원하다’와 want는 주체의 믿음 상태를 필요로 하지 않으며 삽입 명제는 비일관적인 미래 사건을 가리킬 수도 있다. 이 논문은 두 동사의 양상 의미론에 대해 형식적 설명을 제공하고자 하며, Kratzer의 양상 기반(modal base)과 순서 기반(ordering source)에 기초한다.

이 논문의 견해는 ‘바라다’와 ‘원하다’가 각각 인식(epistemic)과 비인식(circumstantial)의 양상 기반을 이용한다는 것이다. 주요한 근거 중 하나는 이들의 삽입 명제의 시제 지향성(temporal orientation)이다. ‘바라다’는 미래와 과거를 가리키는 명제를 취할 수 있는 반면 ‘원하다’는 미래를 가리키는 명제만을 취한다. 이에 대한 선행 연구는 양상 기반에 시간적 속성을 부여함으로써 양상 기반과 시제 지향성을 연결시켰다. 이 논문은 시간-양상 제약에 대한 기존의 일반

화를 받아들여 ‘바라다’와 ‘원하다’의 시제 지향성을 양상 기반의 측면에서 설명한다.

또 다른 근거는 ‘원하다’와는 다르게 ‘바라다’가 인식적 보문 표시인 ‘을까’와 양상적 표현인 ‘어렵다’와 함께 쓰인다는 것이다. ‘을까’와 ‘어렵다’는 주체의 인식적 배경과 관련되어 있다. ‘바라다’는 인식적 양상 기반에서 도출되는 인식 배경을 제공하는 것으로 여겨지며, ‘원하다’는 적절한 배경을 제공하지 못하는 것으로 여겨진다. 또한 ‘바라다’가 요구하는 ‘인식적 불확실성’은 자기 효험(self-efficacy)에 대한 불확실성을 포함한다. 따라서 ‘바라다’는 주체가 자기 효험을 갖게 되는 통제적 상황(controllable situation)에서 쓰일 수 없다.

이 논문에서 제안된 형식적 분석은 어떻게 Kratzer의 양상이론이 소망 동사들의 의미론을 제공하는지를 보여준다. 이 분석은 또한 한국어 소망 동사들의 알려지지 않은 양상적 특징들을 밝힌다.

**주요어:** 바라다, 원하다, 소망 동사, 양상, 시제 지향성, 양상 기반, 한국어

**학번:** 2015-22456