SECOND LANGUAGE ACQUISITION
OF KOREAN EVIDENTIALITY
IN EXPRESSIONS OF PSYCHOLOGICAL STATE OF MIND

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ABSTRACT

This study examines the second language acquisition of the evidentiality requirement in the Korean psychological state of mind expressions. When an experiencer of the psychological state of mind is different from the speaker, Korean language requires an evidential expression to the psychological predicate so that the speaker indicates the source of information of someone else’s inner state of mind.

Three types of variables were tested in a series of experiments: 1) Learner variables included whether their native language has the similar evidentiality requirement (Japanese versus English), proficiency (High versus Low). 2) Linguistic variables were evidentiality agreement (1st and 3rd person subjects were used with or without evidential marking), and the types of psychological predicates (sensory adjectives versus desiderative adjectival phrase). 3) Lastly, one experiment employed two different contexts where the information of psychological state of mind was obtained by the speaker (See versus hearsay condition).

Experiment 1 had participants watching a short video where one character had a contact with another character and then made a comment including psychological state of mind. Participants were asked to choose which one had experienced the emotion based on the comment. Experiment 2 was Grammaticality Judgment Test based on listening to a sentence in a context, where the experiencer is clearly either the subject or someone else. Experiment 3 was an open-ended picture-description production task. Participants were given a series of pictures of people showing various emotions and encouraged to report their feelings to a third party.

The results showed all the variables had significant effects on learners’ performance. Especially, the Japanese learners whose native language had the similar evidentiality requirement significantly outperformed the English-speaking learners.
whose native language without such constraints, regardless of their proficiency levels. The GJT showed even larger gap between two native speaker groups, whereas there was no difference in accuracy between low-proficient English speakers and highly proficient English speakers.

Despite the English-speaking participants’ overall inferior performance in receptive skill tasks, these learners showed surprising evidentiality strategies in the production tasks. English speakers produced much more, attempted to employ valid evidentiality strategies.
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CHAPTER 1
INTRODUCTION

This dissertation will empirically investigate adult language acquisition of the requirement of the evidentiality expressions for Korean expressions of psychological state of mind, testing learner variables, linguistic variables, and a contextual variable.

Evidentiality strategies refer to various verbal categories that express or imply about the type of information source on which a statement is based. The types of information sources include whether the speaker saw what is mentioned, or heard it, inferred it from evidence, or learned it from someone else (Aikhenvald, 2004). In Korean, there is a required context for such an evidentiality marking where psychological predicates are used. Korean psychological predicates express one’s psychological state of mind, and majority of these predicates are sensory adjectives and desiderative phrase –ko siph-ta ‘to want to (do something)’ (Sohn, 1999). When someone else’s unobservable psychological state of mind is expressed, it is required to mark the psychological predicate with an evidentiality strategy. Such a marking can be any of the evidentiality strategies, including past tense, perfect aspect, resultative, epistemic modality, nominalization, verb phrases, or quotations. Among the various Korean evidentiality strategies, the –e-hata construction has been explicitly taught in the KFL/KSL (Korean as a Foreign Language/Korean as a Second Language) curriculum, along with the desiderative expression. The examples of a plain psychological predicate used for the 1st person experiencer and its counterpart used with the –e-hata construction for a 3rd person experiencer are below (Sohn 1999: 286-7).
Studies on evidentiality acquisition has a short history, and very little is known. However, there have been child language acquisition studies on Korean language. The results from these studies are showing possibilities of a certain linguistic feature, i.e. having grammaticalized evidentiality, might have facilitated the language speakers’ cognitive development. In other words, human language development and cognitive development might get affected by the features of one’s native language such as sensitivity to evidential concept. If such an influence of language on one’s mind is true, and if one’s native language has kept affecting his/her sensitivity to the concept of source of information, and further influencing one’s second language acquisition of the target language’s obligatory grammaticalized expression of evidentiality, the investigation of how adult language learners of Korean would learn the evidentiality of psychological predicates will provide a meaningful testing ground of such grand inquiries.

In this dissertation, in order to see what specific factors make a difference in adult learners’ learning the evidentiality of Korean, the effects of learner variables, linguistic variables, and a contextual variable are employed in the experimental design. The learner variables included learners’ first language (L1) background and L2
proficiency. In order to see L1 background effect, i.e. whether a learner’s L1 with the similar evidentiality requirement for expressions of psychological state of mind could affect the learning, two groups of learners of Korean were recruited for the study, namely, Japanese native speakers and English native speakers. L2 proficiency is measured by means of a cloze test. The linguistic variables were the types of psychological predicates and the types of evidentiality agreement. The context variable was the types of evidence provided in the speech context. There were two types of predicates with which the participants’ performance are to be compared: sensory adjectives and desiderative expression –ko siph-ta ‘to want to (do...); to be feeling like (doing...)’ Two types of evidentiality agreements were compared: 1st person experiencer without any evidentiality marking and 3rd person experiencer with an obligatory evidentiality marking. The types of evidence had two settings, one is where a speaker personally had a face-to-face encounter with someone else and obtains the information about the other’s psychological state of mind, and the other is where a speaker obtains the information through a reported speech over the phone. Both types of evidence are applicable to the context that requires an evidential expression like the –e-hata construction.

This paper is organized into three parts: Chapter 2 will review the literature on evidentiality, Korean psychological predicates and evidentiality acquisition. Chapter 3 will present research questions, three experiments to test the variables in acquisition of Korean evidentiality for psychological predicates, and their results. Finally last chapter, I will draw conclusion based on the present studies and further implications.
CHAPTER 2
BACKGROUND

This chapter discusses characteristics of evidentiality as a grammatical category, evidentiality in Korean expressions of psychological state of mind, and research on acquisition of evidentiality. First, I will summarize literature on evidentiality and classification of evidentials based on their meaning and the function. I will also summarize the types of evidentiality strategies, that is, non-evidential categories that function like an evidential. The acquisition study of this dissertation is about evidentiality strategies that are not fully grammaticalized into evidential props, yet showing practically the same semantic characteristics of evidentiality. Then, I will discuss Korean predicates of psychological state of mind which require evidential marking in a certain context and the semantic and syntactic changes that addition of evidentiality brings to these psychological predicates. Lastly, I will review research on evidentiality acquisition.

2.1 Evidentiality and evidential strategies

2.1.1 Evidentiality and evidentiality systems

Evidentiality refers to a grammatical category that marks the type of information source on which a statement is based, i.e., whether the speaker saw what s/he is mentioning, or heard it, inferred it from direct or indirect evidence, or learned it from someone else (Aikhenvald, 2003, 2004). Every language has ways to express source of information, but not all the languages have developed grammaticalized evidentials. English is known to have only lexical means to specify the information source using verb
complementation, as in ‘I heard him singing,’ ‘I saw him leaving,’ adverbs such as ‘allegedly,’ ‘seemingly,’ or ‘reportedly’, or introductory clauses, such as ‘I was told,’ ‘I heard,’ or ‘I guess,’ etc. On the other hand, all the members of the Quechua language family, such as Cuzco Quecha (Feller 2002, 2006) or Wanka Quecha (Aikhenvald, 2004), have a grammatical category of evidentials that are mandatory suffixes with three evidentiality specification, namely, direct evidence (-mĩ), inferred (or conjectural) (-chi, chr(a)), and reported (-shi). Like Quecha languages, some languages with grammaticalized evidentials often have multiple choices of evidentiality. In such a language, omitting evidentials results in ungrammaticality or the sentence becomes highly unnatural.

The following examples are from Tariana, an Arawak language in northwest Amazonia (Aikhenvald, 2006), which has five different evidentiality specifications of visual (-ka), non-visual sensory (-mahka), inferred (-nihka), assumed (-sika) and reported (-pidaka). All the examples are interpreted into ‘José played football’ in English, but the speakers of Tariana specify whether they saw the event happened, or heard the sound of it, or made a general assumption, or made a very plausible guess based on visual and specific pieces of evidence, or learned about it because someone told them.

(1) Juse irida di-manika-ka
José football 3person.masculine.singular-play-RECENT.PAST.VISUAL
‘José played football (we saw it).’
(The speaker saw José playing football herself/himself.)

(2) Juse irida di-manika-mahka
José football 3person.masculine.singular-play-RECENT.PAST.NONVISUAL
‘José played football (we heard it).’
(The speaker had just heard the noise of a football game but could not see what was happening.)
Languages with multiple choices of grammaticalized evidentiality are classified into groups. According to Willet's (1988) cross-linguistic survey on types of evidence expressed in evidentials, there are direct ('attested') and indirect types of evidence, and the indirect types of evidence are then classified into reported types and inference. Aikhenvald (2004) provides a more in-depth classification of grammaticalized evidentiality based on how many information sources acquire such grammatical markings.

The following tables summarize their classifications. Aikhenvald's evidentiality system generally confirms a previous Willett’s evidentiality classification except for few minor differences\(^2\), and she provides fine and exhaustive framework using semantic

---

1 Aikhenvald (2003) calls –niňka in Tariana ‘specific inferred evidential’ and analyzes as grammaticalized from anterior aspect marker –ndi combined with non-present visual -ka (in example 1), referring to something one has not seen, but with obvious specific visual evidence.

2 Some of the few differences between Willet (1988) and Aikhenvald (2004) include distinction between a secondhand reported marking and a thirdhand reported marking in Willet, Aikhenvald’s term ‘firsthand’ that covers visual and auditory, whereas Willet has separate ‘visual’
parameters in Table 2.2 to define the types of evidence (Aikhenvald, 2004: 63 – 64).

Table 2.1 Types of Evidence (Willet, 1988:57)

<table>
<thead>
<tr>
<th>Types of Evidence</th>
<th>Direct</th>
<th>Attested</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Visual</td>
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<td></td>
<td></td>
<td></td>
<td>Auditory</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Other sensory</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Reported</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Second-hand (hearsay)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Third-hand (hearsay)</td>
<td></td>
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<tr>
<td></td>
<td>Indirect</td>
<td>Inferring</td>
<td></td>
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<td></td>
<td>Folklore</td>
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<td>Results</td>
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<td>Reasoning</td>
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Table 2.2 Semantic Parameters

<table>
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<tr>
<th>Semantic parameters</th>
<th>I. VISUAL</th>
<th>Covers information acquired through seeing</th>
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<tr>
<td></td>
<td>II. NON-VISUAL SENSORY</td>
<td>Covers information acquired through hearing, and is typically extended to smell and taste, and sometimes also to touch</td>
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<tr>
<td></td>
<td>III. INFERENCE</td>
<td>Based on visible or tangible evidence, or result</td>
</tr>
<tr>
<td></td>
<td>IV. ASSUMPTION</td>
<td>Based on evidence other than visible results: this may include logical reasoning, assumption, or simply general knowledge</td>
</tr>
<tr>
<td></td>
<td>V. HEARSAY</td>
<td>For reported information with no reference to those it was reported by</td>
</tr>
<tr>
<td></td>
<td>VI. QUOTATIVE</td>
<td>For reported information with an overt reference to the quoted source</td>
</tr>
</tbody>
</table>

and ‘auditory’ under ‘direct’ evidence. Kashaya (Oswalt, 1986: 34-42), like Tariana example in 2), also has an auditory marking which means the speaker has known of what is stated because s/he heard the sound of the action without seeing it. Aikhenvald treats Kashaya as one of the languages with more complex terms with 5 or more choices with Tariana (p.60-61).
Table 2.3 Semantic Parameters in Evidentiality systems (Aikhenvald 2004: 65)

<table>
<thead>
<tr>
<th></th>
<th>I. VISUAL</th>
<th>II. SENSORY</th>
<th>III. INFERENCE</th>
<th>IV. ASSUMPTION</th>
<th>V. HEARSAY</th>
<th>VI. QUOTATIVE</th>
</tr>
</thead>
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<tr>
<td>2 choices</td>
<td>A1</td>
<td>Firsthand²</td>
<td>Non-firsthand</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A2</td>
<td>Firsthand</td>
<td>Non-firsthand</td>
<td></td>
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<tr>
<td></td>
<td>A3</td>
<td>Firsthand</td>
<td>Non-firsthand</td>
<td>Differed system or &lt;no term&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A4</td>
<td>&lt;no term&gt;</td>
<td>Non-visual</td>
<td>&lt;no term&gt;</td>
<td>Reported</td>
<td></td>
</tr>
<tr>
<td>3 choices</td>
<td>B1</td>
<td>Direct</td>
<td>Inferred</td>
<td>Reported</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B2</td>
<td>Visual</td>
<td>Non-visual</td>
<td>Inferred</td>
<td>&lt;no term&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B2</td>
<td>Visual</td>
<td>Non-visual</td>
<td>Inferred</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B3</td>
<td>Visual</td>
<td>Non-visual</td>
<td>&lt;no term&gt;</td>
<td>Reported</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B4</td>
<td>&lt;no term&gt;</td>
<td>Non-visual</td>
<td>Inferred</td>
<td>Reported</td>
<td></td>
</tr>
<tr>
<td>4 choices</td>
<td>C1</td>
<td>visual</td>
<td>Non-visual</td>
<td>Inferred</td>
<td>Reported</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C2</td>
<td>Direct</td>
<td>Inferred</td>
<td>Assumed</td>
<td>Reported</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C3</td>
<td>Direct</td>
<td>Inferred</td>
<td>Reported⁴</td>
<td>Quotative</td>
<td></td>
</tr>
<tr>
<td>5 or more choices</td>
<td>D1</td>
<td>visual</td>
<td>Non-visual</td>
<td>Inferred</td>
<td>Assumed</td>
<td>Reported</td>
</tr>
</tbody>
</table>

Aikhenvald views that Japanese may have and A3 system, or what is called

³ Aikhenvald (2004) explains some of the cover-terms as follows. “‘Firsthand’ and ‘non-firsthand’ have been reserved for systems with two choices in opposition to each other. (Alternatives found in the literature include ‘experienced’ and ‘non-experienced,’ ‘eyewitness’ and ‘non-eyewitness,’ and ‘confirmative’ and ‘non-confirmative.’ (p.25) ... ‘Firsthand’ may cover information obtained through any physical sense: vision, hearing, smell, taste, and touch. (p.23) ... ‘Non-firsthand’ covers information acquired in some other way; it may include inference, logical assumption, etc. (p.27) ... If a language has a ‘non-firsthand’ form without its opposing value, it is called ‘non-firsthand.’ (Alternative terms in the literature include ‘non-eyewitness,’ ‘inferential,’ ‘non-confirmative,’ ‘indirective,’ and ‘mediative. (p.25)”

⁴ Aikhenvald (2004) distinguishes the terminologies of ‘reported’ and ‘quotative’ as follows. “The evidential whose meaning is ‘verbal report’ is termed ‘reported’; alternative terms are hearsay and quotative. Here ‘quotative’ is reserved for a reported evidential which involves exact indication of who provided the information. (p.25)”
‘scattered evidentials’ that are scattered in the morpho-syntactic classes, meaning evidentiality is not one unitary grammatical category. She considers one reported form (soo-da), three ‘inferential’ forms (yoo-da, rasi-i, and soo-da) (Aikhenvald 2004: 81). However, she doubts that Korean has evidentials. She takes Korean retrospective suffix –te- that might be viewed as an evidential, and discusses that the main meaning and function of –te- is validating the speaker’s past perception, observation, or experience, rather than establishing the information source (Aikhenvald 2004: 129). As Aikhenvald views, however, Korean may not have grammaticalized evidentials and only has evidential strategies that will be discussed in the following section. Nevertheless, it is certain that a group of Korean predicates, namely, psychological predicates, require evidentiality, and numerous Korean evidential strategies are employed to meet such a requirement. Also, there are paradigmatically grammaticalized reported/hearsay forms in Korean that may potentially be viewed as evidentials. A comprehensive survey on Korean evidential forms has not been achieved, and such endeavor should be much enlightening, yet it is not a scope of this discussion.

2.1.2 Evidentiality strategies

According to Aikhenvald’s (2004) comprehensive survey of evidentiality, about 25 per cent of world’s languages have grammaticalized evidentiality, and ‘evidential propers’ are in the forms of bound morphemes, clitics, and words which belong to full grammatical word classes, such as prepositions, preverbs, or particles, and may form an obligatory inflectional system. However, an evidential should not refer to a lexical item, and evidentials’ primary meaning and function should be source of information.
Grammatical category of evidentiality is not a subcategory of any modality, mood or tense-aspect (Aikhenvald 2004; Anderson, 1986; de Haan, 1999; Lazard 1999, 2001; for different views, i.e. evidentiality as a subcategory of, or same as epistemic modality, see Bybee, 1985; Palmer, 1986; Chafe, 1986; Matthewson, 2011). According to Aikhenvald (2004), other verbal forms and grammatical categories often develop evidential-like meanings as a ‘side-effect.’ She calls such forms with evidential-like overtones ‘evidential strategies’ or ‘evidential extensions’\(^5\)

Among evidentiality strategies are non-indicative moods, some modalities like conditional and irrealis, future, perfectives and resultatives, past tenses, passives, nominalizations, complementations, conjunct-disjunct person-markings, demonstratives, and reported speech. These forms acquired evidential overtones that are somehow related with source of information, but such overtones are not inherent to the constructions’ core meaning or function (2004: 106). Except for demonstratives and person-marking strategies, all the evidentiality strategies showed development into a small grammatical evidential system by going through reanalysis like de-subordination, etc. Table 2.4 shows types of evidentiality extensions, their evidential meanings based on Aikhenvald (2004: 112-120).

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\(^5\) This dissertation is taking Aikhenvald’s view to evidentiality as a grammatical category of its own right and her view to define evidentials. It is are certainly important and valid to ask questions like whether evidentiality and epistemic modality are different categories, whether Korean has evidentials, i.e. grammaticalized evidentiality, and/or whether a certain verbal forms in Korean should be considered as evidentials, nevertheless, they are not in the scope of this dissertation. For the purpose of discussion and analysis throughout the dissertation, though, I take Aikhenvald’s account to view a verbal construction functioning like an evidential as an evidential extension, or evidential strategy.
Table 2.4 Summary of Evidential strategies and evidential extensions (Aikhenvald, 2004)

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Evidential meaning</th>
<th>Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-indicative moods, modalities: Conditionals, irrealis, future, interrogative</td>
<td>Non-firsthand</td>
<td>• Dependent clause goes through de-subordination  &lt;br&gt;• Marked event is unreal, potential, guessed, assumed or predicted, for which a speaker cannot vouch  &lt;br&gt;• Non-firsthand meaning with epistemic extension is developed</td>
</tr>
<tr>
<td>Past tense, perfect, resultative</td>
<td>Non-firsthand</td>
<td>• Event or process in the past become related to present time with inference that there are traces or results from the past  &lt;br&gt;• Non-firsthand meaning with inference, especially based on visual/hearsay evidence is developed</td>
</tr>
<tr>
<td>Passives</td>
<td>Non-firsthand</td>
<td>• Passives often have resultative connotations  &lt;br&gt;• Non-firsthand meaning with inference that the speaker has visible or tangible evidence is developed</td>
</tr>
<tr>
<td>Nominalization</td>
<td>Non-firsthand Firsthand</td>
<td>• Any de-verbal nominals with a resultative or past reference develops either non-firsthand or firsthand observation</td>
</tr>
<tr>
<td>Complementation with verbs of cognition or perception</td>
<td>Perceptual meaning</td>
<td>• Some types of complementizers of verbs of perception and cognition provide distinct information source  &lt;br&gt;• E.g. English verbs perception taking –ing complement</td>
</tr>
<tr>
<td>Conjunct-disjunct participant person-marking</td>
<td>Non-firsthand</td>
<td>• When a locutor (or a speaker in statements, a listener in questions) experienced the event directly, a story is told in first person (conjunct, or congruent)  &lt;br&gt;• When a locutor is used with disjunct, so-called ‘first person effects’ occurs (see below §2.3).  &lt;br&gt;• Japanese and Korean sensory adjectives have obligatory conjunct-disjunct marking</td>
</tr>
</tbody>
</table>
Table 2.4 (Continue) Summary of Evidential strategies and evidential extensions

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Evidential meaning</th>
<th>Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstratives</td>
<td>Visual or auditory</td>
<td>• Some languages’ demonstrative systems developed obligatory distinctions of visibility and non-visibility, varied distance from a speaker, etc.</td>
</tr>
<tr>
<td>Reported speech</td>
<td>Reported meaning</td>
<td>• Reported speech has similar functions to reported evidentials, and often give rise to incipient evidentials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• They may also develop epistemic overtones similar to reported evidentials</td>
</tr>
</tbody>
</table>

Despite the categorical differences between grammatical evidentiality and other grammatical categories or other verbal forms with evidential extensions, evidential strategies are semantically not much different from their evidential proper counterparts. Evidential strategies bring the same meanings and effects to a sentence. For instance, an evidential strategy (e.g. reported discourse) and a grammatical evidential (e.g. reported evidential) coexist in a language and ‘essentially do the same jobs’ with only subtle differences (2004: 135-137). When it comes to interaction with person, an evidentiality

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6 Aikhenvald (2004, 2006) points out the following features of evidentials are distinctive from other grammatical categories. First, the information source can be marked more than once in a clause. These two sources can be different yet somehow linked, or they could completely be distinct from each other. Second, an evidential can be within the scope of negation. Third, an evidential can also be questioned. Fourth, the truth value of an evidential may be different from that of the verb in its clause. Lastly, an evidential can have its own time reference, distinct from the time reference of the event.

7 Aikhenvald (2004: 137-140) points out that there still are fine difference between reported evidentials and reported speech, but they are semantic nuances and very subtle. For instance, reported evidentials simply expresses source of information is someone else, whereas reported speech may add epistemic overtones of even lower reliability or facticity than its evidential proper counterpart. In addition, reported speech has an obvious function of specifying the exact
extension used with a first person has the same connotation as its evidential proper counterpart (see §2.2.3). As Aikhenvald points out, it is also typical that an evidentiality strategy develops into a grammatical evidential. For instance, a small evidentiality system can arise through reanalysis of perfects, resultatives, passives, nominalizations, de-subordinated complements of verbs of speech, and reported speech markers (2004: 146). In Korean, there also are grammaticalized reported sentence enders, incipient reported evidential expressions that are going through grammaticalization, and grammaticalized sentence enders where retrospective suffix –te- is fused in. In other words, in a language there is more than one form that meets a certain evidentiality requirement. The choices to choose from may include an evidential proper, if any, evidentiality strategies ranging from modal expressions with matching evidential overtones to incipient evidentials that are going through reanalysis, and a lexical item or a verbal complementation.

Given that evidentiality strategies have no problem functioning to satisfy evidentiality requirement, and that there are multiple evidential options in various forms from various categories, it can cast serious challenges to language learners. It is important and very relevant questions to raise how language learners, first or second, learn to understand and use a proper evidential form in a required context, in addition to having to learn that there is a requirement to mark source of information in a certain ways. These inquiries will be discussed in §2.3 and the acquisition study of this dissertation.

author of the information (Tewa, Tamil). Also, if a language’s reported evidential has developed epistemic overtones of creating ‘distance,’ i.e. the speaker’s unwillingness to bear responsibility for the fact, or conveying attitude, i.e. interpreting or evaluating of someone else’ evidence, the reported speech will be employed if the speaker would like to avoid such effects of reported evidential (in Tariana, Bularian). Also, Yet, the evidential meanings and functions of both forms are the same: the ultimate source of information is someone else other than the speaker.
2.2 Evidentiality for Korean psychological predicates

In this chapter I discuss characteristic of Korean psychological predicates, in particular, the requirement for evidentiality and evidentiality expressions. Among various evidentiality expressions that can be used with a psychological state of mind, especially –e-hata verb construction will be dealt with in detail. Korean -e-hata verb construction comprises a predicate that denotes one’s internal psychological state of mind and hata, a verb meaning ‘to do/be.’ Then I will discuss –e-hata verb construction as an evidentiality strategy as well as its syntactic and semantic changes it brings to psychological predicates. Lastly, I will discuss how person interacts with evidentiality, focusing on the evidentiality of Korean psychological expressions.

2.2.1 Korean psychological predicates

The majority of Korean predicates expressing psychological state of mind are sensory adjectives, including desiderative sensory adjectival phrases –ko siph-ta ‘to want to (do something)’ (Sohn, 1999), and some intransitive and transitive verbs (S. Kim, 1994; Chang, 1998, 1999; Rhoades-Ko, 2006). Korean psychological predicates express an experiencer’s unobservable internal state of mind. These unobservable internal states of mind include emotions (e.g. happiness or sadness), subjective evaluations of value of an object (e.g. good or bad, easy or difficult), or inert metal activities (e.g. getting mad, being puzzled, feeling reluctant). There are sensory-only adjectives, such as pwulepta ‘be envious,’ that cannot take non-human subject. Some Korean adjectives can be both sensory and descriptive, such as chwupta ‘be cold,’ cohta ‘be good, be fond of’ or mwusepta ‘be scary, be scared,’ depending on whether the subject is a human or non-
human (Sohn 1999: 285-7). When these adjectives are taking a human subject, they
denote an unobservable internal state of mind of an experiencer. Sensory adjective siphta
‘be feeling like…, be desirable’ is a bound adjective that should follow a complement
verb clause. When siphta is preceded by a verb clause ending in –ko suffix, it forms a
desiderative adjectival phrase meaning ‘to want to (do something).’ These predicates of
feelings or sensations can only be used for a locutor, that is, a first person in a statement
or a second person in a question as in the following examples, since only experiencer is
supposed to access the information of the internal psychological state of mind expressed
in such predicates.

(6) Plain psychological predicate (Sohn 1999: 286)

a. na-nun simsimha-ta.
   I-Top bored-Dec
   ‘I am bored.’

b. ne-nun simsimha-ni?
   You-Top bored-Q
   ‘Are you bored?’

c. ?ne-nun simsimha-ta.
   you-Top bored-Dec
   ‘You are bored.’

When expressing a feeling or a sensation of someone else other than a locutor,
the sentence should be marked for evidentiality, which denotes that the speaker of the
sentence somehow obtained the information of someone else’s internal state of mind. In
Korean there are various evidential means to indicate that the source of information is not
the speaker. These evidential means are considered as evidentiality strategies, or
evidentiality expressions, following Aikhenvald’s definition. Sohn (1999) also explains a
simple past tense can lift such requirement since the past tense has the connotation that
the speaker may have heard about the subject referent’s internal feeling or sensation. He also mentions epistemic modal expressions, such as an infix –keyss- ‘it must be that…’, and –nun/(u)n/-/u)l moyang-i-ta ‘it seems/looks like that…’, and -e-hata ‘to show (a sign of…)’ verb construction have the same effect of ‘lifting the constraints’ (of requirements of having an evidential marker). In this paper, all these evidential means are called evidential strategies for Korean predicates expressing psychological state of mind of someone else than the speaker.

(7) Evidentiality strategies for Korean psychological predicates

a. past tense

halmeni-nun ecey simsimha-sy-ess-e.
grandma-Top yesterday bored-Sub.Hon-Past-Int.Dec ‘My grandma felt bored yesterday.’

b. -keyss- ‘must/may be’ epistemic suffix

halapeci-nun nayil kippu-si-keyss-e.yo.
grandpa-Top tomorrow happy-Sub.Hon-may-Pol.Dec My grandpa may be happy tomorrow.’

c. (Relative clause) moyang-ita ‘it seems’ epistemic construction

ne-nun cikum sulphu-n moyang-i-kwun.
you-Top now sad-Rel appearance are-App ‘You appear to be sad now!’

d. -e-hata ‘to show the sign of’ construction; verb complementation

Inho-nun cikum acwu kipp-e-hay-yo.
Inho-Top now very happy-INF-do-Pol.Dec ‘Inho is very happy now.’

(Sohn 1999: 286-7)

In addition to the above means, Korean deploys all the evidentiality strategies surveyed in other languages by Aikhenvald. There are other epistemic modal constructions, starting with the most common –(u)n/-/u)l/nun kes kathta ‘it seems that…’
or –(u)n/-(u)l/-nun tus hata, or –(u)n/-(u)l/-nun ci moluta ‘it seems that…’ and some of these epistemic modal constructions go through de-subordination or main-clause-deletion (Sohn, ms.). Aikhenvald is classifying such strategies as non-indicative modality strategy, and such de-subordination results in developing evidential meanings of potential, guessed or assumed information.

(7) e. (Relative clause) kes kathta ‘it seems’ epistemic construction

\[ Inho-nun \text{ cikum acwu kipp-n kes kath-a.yo. } \]
Inho-Top now very happy-Rel fact same-Pol.Dec
‘Inho seems to be very happy now.’

(7) f. Non-indicative modality strategy: main clause deletion from epistemic construction

\[ Inho-nun acwu kipp-n ci, manh-un salam.tul-hanthey cenhwa.hay-yo. \]
Inho-Top very happy-Rel Nom many-Rel people.PL-to phonecall.do-Pol.Dec
‘Inho makes phone calls to many people, probably/seemingly because he is very happy.’

Most of the epistemic constructions in Korean listed above are already involving nominalization strategies, as in –nun/(u)n/-(u)l moyang-i-ta ‘it seems/looks like that…,’ where moyang is a full-fledged noun meaning ‘shape.’ Korean has also abundance of so-called defective nouns that must be preceded by a relative clause (Sohn, 1999: 205), including tus ‘likelihood, seeming’ that form an epistemic construction.

(7) g. nominalization

\[ Inho-nun cikum acwu kipp-n pyoceng-i-e.yo. \]
Inho-Top now very happy-Rel facial expression is-Pol.Dec
‘Inho has a very happy face now; he seems to be very happy now.’

(7) h. (Relative clause) tus hata ‘it seems’ epistemic construction

\[ Inho-nun cikum acwu kipp-n tus hay-yo. \]
Inho-Top now very happy-Rel likelihood be-Pol.Dec
‘Inho seems to be very happy now.’
Also, there are more verb phrasal constructions –*e poita* and –*key poita* ‘to look (like being in a state),’ and –*e tullita, -key tullita* ‘to sound (like being in a state).’

(7) i. *-e-poita* ‘to look’ construction; verb complementation

```
Inho-nun       cikum       acwu       kipp-e       po.i-e.yo.
Inho-Top       now          very       happy-INF    be seen-Pol.Dec
‘Inho looks very happy now.’
```

Lastly, there are hearsay sentence enders in various speech levels in Korean, and all of them are interpreted into ‘I heard that…,’ or ‘(one) says that…’

(7) j. reported speech; grammaticalized sentence enders

```
Inho-nun       cikum       acwu       kippu-tay/tay-yo/tap.ni.ta.
‘Inho says he is very happy now (in speech levels of Intimate, Polite, and Deferential),’ or ‘I heard that Inho is very happy now.’
```

(7) k. reported speech

```
Inho-nun       cikum       acwu       kippu-ta-ko     hay-yo.
Inho-Top       now          very       happy-Dec-Qt     say-Pol.Dec
‘Inho says he is very happy now.’
```

These expressions of evidentiality involve different mechanisms to imply evidentiality and convey different meanings of source of information. However, when they are used with a psychological predicate, they all imply that the internal thought or feeling has been somehow made available to a third party, the speaker, by means of words, facial expressions or behavior etc. The following Table 2.5 below summarizes Korean evidentiality strategies for predicates expressing psychological state of mind discussed so far.
Table 2.5 Summary of Evidential strategies for Korean psychological predicates

<table>
<thead>
<tr>
<th>Evidentiality Strategies</th>
<th>Example forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epistemic modality</td>
<td>-(u)l kes-ita (relative clause) kes kathta</td>
</tr>
<tr>
<td></td>
<td>(relative clause) moyang-ita (relative clause) tus hata</td>
</tr>
<tr>
<td>Non-indicative modal (main clause deletion from epistemic modal constructions)</td>
<td>(relative clause) ci</td>
</tr>
<tr>
<td>Past tense / perfect, resultative</td>
<td>-ess/-ass-</td>
</tr>
<tr>
<td>Passives</td>
<td>-key toita</td>
</tr>
<tr>
<td></td>
<td>-e/a-cita</td>
</tr>
<tr>
<td>Nominalization</td>
<td>(relative clause) kes/salam/pyoceng ...</td>
</tr>
<tr>
<td>Complementation with verbs of cognition or perception</td>
<td>-e/a hata</td>
</tr>
<tr>
<td></td>
<td>-e/a poita</td>
</tr>
<tr>
<td>Reported speech</td>
<td>-(n/nun)-tay(yo)/-tapnita/-tanta⁸</td>
</tr>
<tr>
<td></td>
<td>-(n/nun)-ta-ko hay(yo)/hapnita/hanta</td>
</tr>
</tbody>
</table>

There are exceptional contexts where this evidential marking requirement does not have to be met; According to Sohn (1999), when a speaker who expresses someone else’s mind is in a position to naturally know the experiencer’s feeling or sensation, the psychological predicate does not have to have an evidential marking. For instance, if a

⁸ The examples show the reported speech sentence enders and quotative constructions where only declarative sentences are quoted. When interrogative, propositive or imperative sentences are quoted, instead of -(n/nun)-ta-, different quotative suffixes, -nya-, -ca- or -(u)la- are used, respectively.
speaker is assumed to have a natural access to someone else’s feeling or emotion, like being in a kinship relationship, or having privilege to express the experiencer’s feeling or emotion, the speaker may express the internal state of mind without marking evidentiality. One example would be a third person omniscient narrator who can describe a character’s internal state of mind without having to linguistically mark how s/he acquired the knowledge of the character’s internal state of mind. Such a narrator is assumed to possess the privilege to direct knowledge of the character’s sensation or feelings.

Also, it seems that the semantic properties of a psychological predicate, such as the degree of agentivity or stativity, may affect the evidentiality requirement. If someone’s state of mind is already externally observable, it should not make a sentence unnatural or ungrammatical even if the predicate is not marked for evidential meaning.

The speaker may optionally add the evidential meaning, but it should not be mandatory. All the Korean sensory adjectives are stative and lack agentivity, but there are also transitive and intransitive verbs that express a state of mind, such as manchokhata ‘to feel satisfied,’ kkelita ‘to feel reluctant,’ or yenyenhata ‘to cling to, stick to’ (S. Kim, 1994; Chang, 1999). Even though there are varying degrees, these verbs inherently have some degree of [+agentive]. Corpus surveys on types of psychological predicates attached to the –e-hata construction (Chang 1999; Rhoades-Ko, 20069) reveal that the majorities (87%) of the evidentially marked psychological predicates are sensory adjectives10. Among the verb phrases, the majority of them (9.3%) are intransitive verb

---

10 About half of the sensory adjectives are in derivational forms of –pta or –sulepta (47%), and 15.4% are desiderative expressions –ko siphta. Most of the verb phrases are in clausal forms or
phrases, and there are few transitive verb phrases (3.6%). As S.Kim (1994: 84-86) proposes that –e-hata construction has a semantic function of SHOW in the lexical conceptual structure, he explains that –e-hata can be attached to some descriptive adjectives, such as pissata ‘to be expensive,’ kilta ‘to be long,’ or sita ‘to be sour,’ if the context is presented right. If the context is clearly presenting that experiencer’s evaluation of the theme is what s/he is internally feeling without any volition, the descriptive adjective can be used like a sensory adjective. In the following section, I will discuss the syntactic and semantic characteristics of the –e-hata construction, the contrast from its plain psychological predicate, and its evidential meaning.

2.2.2 The –e-hata construction

When –e-hata is attached to a predicate denoting a psychological state of mind, it forms a transitive verb phrase that doesn’t only bring about semantic changes but also some syntactic changes to the plain psychological predicate. Compare the following examples of a plain psychological predicate and its –e-hata construction.

(8) a. na-nun ku kongpho yenghwa-ka mwusep-ta
   1-Top that horror movie-Nom scary-Ind.Dec
   ‘I am scared of the horror movie.’

   b. Mary-nun ku kongpho yenghwa-lul mwusew-e-ha-n.ta
      Mary-Top that horror movie-Acc scary-INF-do-Ind.Decl
      ‘Mary fears the movie (Mary shows the sign that she was scared).’

These two sentences are syntactically different in that (8)a takes a nominative case marker and (8)b takes an accusative case marker. The plain sensory adjective has become fixed negative phrases, such as him.tulta ‘to feel difficult, feel hard’ (a nominative case marker is omitted from a sentence him-i tulta ‘energy is being used’), or eccel cwul moluta ‘to be puzzled, not to know what to do’ (Rhoades-Ko, 2006).
a verb in –e-hata construction that takes an object.

The –e-hata verb phrase also behaves like a regular Korean verb in terms of its morphological properties. Korean verbs take different non-past indicative suffix –n- before declarative sentence ender -ta as in (8)b, whereas Korean adjectives does not have non-past indicative –n- before declarative –ta as in (8)a. Other than these two differences, below table summarizes other morphological features, where the function of imperative clausal ender is repeated in the following syntactic feature table. The –e-hata construction only shows verbal morphological behaviors.

Table 2.6 Morphological properties of verbs and adjectives (adopted from Sohn 2004)

<table>
<thead>
<tr>
<th>Morphological features</th>
<th>Verbs</th>
<th>Adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plain-level non-past Indicative suffix</td>
<td>-nun after C, -n after V</td>
<td>zero</td>
</tr>
<tr>
<td>Non-past indicative suffix before RL</td>
<td>-nu</td>
<td>zero</td>
</tr>
<tr>
<td>Past RL (relativizer)</td>
<td>-un after C, -n after V</td>
<td>N/A</td>
</tr>
<tr>
<td>Intensifier suffix -ti</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Function of clause-ender –ala/-ela</td>
<td>Imperative</td>
<td>Exclamatory</td>
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(9) Verb-like morphological behavior of the –e-hata verb construction

a. Mary-ka mwusew-e-ha-nu-n kongpho yenghwa
   Mary-Nom scary-Inf-do-Ind-Rel horror movie
   ‘The horror movie that Mary is scared of’

b. Mary-ka mwusew-e-ha-n kongpho yenghwa
   Mary-Nom scary-Inf-do-Pst.Rel horror movie
   ‘The horror movie that Mary got scared of’

c. Mwusep-ti mwusew-n kongpho yenghwa
   scary-Intens scary-Rel horror movie
   ‘The horror movie that is very much scary’
d. *Mwusew-e-ha-ti mwusew-e-ha-n kongpho yenghwa
   Scary-Inf-do-Intens scary-Inf-do-Rel horror movie
   ‘The horror movie that (someone) got scared of very much (?)’

The following Table 2.2.2 shows Korean verbs and adjectives’ syntactic features where they show differences along with the –e-hata construction’s behaviors in the last column.

Table 2.7 Syntactic properties of verbs and adjectives (adopted from Sohn 2004)

<table>
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<tr>
<td>‘Purposive’ complement for ‘endeavor/try’-type verbs: –ki wihay, -(u)lyeko, -(u)le, -koca ‘in order to…’</td>
<td>Make</td>
<td>Can’t make</td>
<td>Can’t make</td>
</tr>
<tr>
<td>Admonitive formation: –(u)lla</td>
<td>Make</td>
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<td>Desiderative formation: –ko siphta</td>
<td>Make</td>
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<td>Make</td>
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<tr>
<td>Progressive formation: -ko issta, -nun cwung.ita ‘be …ing, be in the middle of …ing’</td>
<td>Make</td>
<td>Can’t make</td>
<td>Make</td>
</tr>
<tr>
<td>Resultative formation: -e/a issta</td>
<td>Make</td>
<td>Can’t make</td>
<td>Can’t make</td>
</tr>
<tr>
<td>Case marking of object</td>
<td>-(l)ul</td>
<td>ka/i</td>
<td>-(l)ul</td>
</tr>
</tbody>
</table>

* marks the variation in acceptability by lexical items

Many of these features are actually relevant to a predicate’s aspecual and semantic properties. Korean predicate’s aspect can be tested using progressive –ko issta.
formation, resultative –e/a issta formation, and compatibility with duration adverbials, such as han sikan-tongan/man-ey ‘for an hour’ or han sikan-man-ey-ya ‘(finally) in an hour.’ If a predicate is [+stative] or [+punctual], it cannot form a progressive. If a predicate is atelic, without an inherent end-point of the event, it cannot occur with a resultative form –e issta, or a telic duration adverbial. If a predicate is [+agentive], it can make a propositive, an imperative, a promissive, a ‘purposive’ complement, an admonitive, or a desiderative. Another testing device for agentivity is formation of complement clause with –tolok that complement verbs like force, ask, demand, or persuade (Y. Kim 1990).

The general syntactic behavior of –e-hata construction also shows that it is a verb phrase. The –e-hata construction rejects the possibility of being stative by forming progressive in –ko issta and –nun cwung-ita. The –e-hata construction cannot be used with inherent telic elements nor can form a resultative, thus it is active.

(10) Verb-like morphological behavior of the –e-hata verb construction (Y. Kim 1990)

a. mincwucwuuy-uy cwuk-um-ul sulph-e-ha-la!
democracy-Gen die-NL-Acc sad-Inf-do-Imp
‘Grieve over the death of democracy!’

b. ku-uy sengkong-ul kipp-e-ha-ca!
he-Gen success-Acc delightful-Comp-do-Prop
‘Let’s be delightful with his success.’

Y. Kim (1990) explains that –e-hata has [+agentive] feature in the lexical conceptual structure that has a DO or a CAUSE clause. With its [–stative] feature of the construction, it makes it possible to assign the accusative case marking. Her analysis on psychological predicates has explanatory power between the semantic feature and the syntactic behavior. Despite of its pervasive stative meaning which is almost like a plain
adjective, the –e-hata construction adds semantic properties of agentivity and volition to an almost volition-free psychological predicate, which also affects its grammatical relations in a sentence.

In addition to such semantic and syntactic changes to a plain psychological predicate, the –e-hata construction brings in another core function as an evidential expression, since it externalizes what used to be only internal and unobservable to the eyes of the speaker. As –e-hata construction forms, an inference is made that an experiencer’s internal, inert status of mind has become available for visual observation or hearsay to an observer, the speaker. It can be translated into ‘to show the sign of being (in the psychological state of mind)’ (Sohn, ibid.), ‘to show typical behavioral signs (of the emotional state)’ (Y. Kim, 1990), or generally ‘to seem to be (in an internal state of mind based on external observation).’ Yet, it should be interpreted from the speaker’s perspective, rather than from the experience’s ‘intentional showing.’ For instance, applying intentional and volitional showing to the following example makes the interpretation rather awkward.

(10) ku salam-un atul-uy cwuk.um-ul sulph-e-ha-n.ta
The person-Top son- Gen die-NL-Acc sad-Inf-do-Ind.Dec
‘he grieves over the death of his son’

It is not completely implausible; one might deliberately act sad in such a situation. However, the sentence is hardly the case where the sad father is ‘acting like he is sad’ or ‘showing the sign of grief.’ This sentence should be interpreted that ‘(based on the speaker’s observation or a hearsay) he is sad; he seems to be sad,’ or ‘(the speaker notices that) he shows the typical behavioral signs of being sad.’ Therefore, the meaning of the -
The e-hata construction should be considered as ‘(the speaker notices that) one shows the typical signs of (being in the state of…),’ or ‘to show the sign of (being…, based on the speaker’s observation or hearsay).’

Also, the evidential connotation of the -e-hata construction should rather be limited to direct evidence, and cannot include inference or conjecture based on indirect evidence. For instance, the following sentences are different types of evidentiality expressions used with pappu-ta ‘to be busy.’ Sentence (11) uses an epistemic modal expression –(u)n moyang.i-ta ‘it seems/looks like…’ and sentences in (12) have the –e-hata construction.

(11) (yocum twumwunpwulchwul-i-nikka) ku salam-i pappu-n moyang-i-ta
(nowadays not-showing-up-is-because) that person-Nom busy-Rel appearance-is-Ind.Dec
‘(Since (he) does not show himself nowadays,) he must/seems to be busy.’

(12) a. ku salam-i papp-a-ha-n.ta
The person-Nom busy-Inf-do-Ind.Dec
‘He seems busy; he (acts like he) is busy.’

b. ?yocum twumwunpwulchwul-i-nikka ku salam-I papp-a-ha-n.ta
nowadays not-showing-up-is-because the person-Nom busy-Inf-do-Ind.Dec
‘(Since (he) does not show himself nowadays,) he seems busy; he (acts like he) is busy.’

The epistemic modal expression in (11) denotes that the speaker might have personally seen or heard someone else being busy, or the speaker made a conjecture based on circumstantial evidence. On the other hand, the speaker of (12)a has to have direct evidence that is personally obtained by the speaker in order to use the -e-hata construction and say ‘(based on my observation) he acts busy.’ The circumstances of direct, personally obtained evidence can be either visual or hearsay, including an instance where the speaker has seen a facial expression of the experiencer, been told in person that the experiencer was busy, or noticed that the experiencer’s behavior revealed the
evidence of the internal state of being busy. It may still not be clear specifically how the source of information has been made available to the speaker, yet the information has to be personally obtained information not by inference based on indirect evidence, which is the case of (12)b. The sentence (12)b reflects the speaker’s logical assumption or inference based on indirect evidence. For instance, the speaker would not say (12)a using –e-hata while looking only at a messy office desk with a pile of workload where no one is there. Therefore, I suggest that the meaning of the -e-hata construction should be redefined as ‘(the speaker personally notices that) one shows the typical signs of (being in the state of…),’ or ‘to show the sign of (being…, based on the speaker’s personal observation or hearsay s/he personally heard).’

2.2.3 Person and evidentiality of psychological predicates

Lastly, the -e-hata construction has different from other evidential expressions, in that it is less restricted by the person of the sentential subject. Other evidentiality strategies like hearsay or epistemic modal expressions are unnatural if the subject is the first person, since a first person subject naturally does not guess or utter a second hand report about his/her own feeling. On the contrary, an –e-hata construction can take any person as the subject of a sentence. When the speaker expresses his/her own psychological state of mind using –e-hata for herself/himself, it denotes that s/he objectifies his/her own internal state of mind or it is his or her own volition to express such an inner state of mind. Let’s first review the general person effects on evidentiality.

Most evidentially marked sentences, either by an evidential or an evidentiality strategy, inherently presuppose, explicitly or implicitly, that the ‘I’ is the observer in the
sentence. So, it seems it is counterintuitive to use a non-firsthand evidential when talking about one’s own action. But when such evidentials or evidential strategies are used with a first person subject, the sentence adds additional overtones, often mirative, or implies that the speaker has not had a full control or responsibility of the event or action, etc. These additional meanings are called ‘first person effects.’ (Aikhenvald, 2004: 219). The following examples are in Jarawara, where the firsthand refers to information acquired through vision (or hearing or other senses), and non-firsthand means everything else, including inference, assumption, hearsay or quotation (Aikhenvald, 2004: 221).

(13) **Jarawara with a firsthand evidential**

\[ \text{o-hano-}\text{hara o-ke} \]
\[ 1sg.s-be.drunk-ImmediatePAST.FIRSTHAND.fem. 1sg-DC.fem. \]
‘I got drunk (deliberately).’ (speaker is aware of what happened)

(14) **Jarawara with a non-firsthand evidential**

\[ \text{o-hano-}\text{hani o-ke} \]
\[ 1sg.s-be.drunk-ImmediatePAST.NONFIRSTHAND.fem. 1sg-DC.fem. \]
‘I got drunk (and I don’t recall it).’ (speaker has no memory of what happened)

The first person effects are not limited only to evidential propers. The following Korean examples are using evidentiality strategies and having the similar effects of evidentials on a first person. When a firsthand evidential expression is used with a first person in both Jarawara and Korean sentences, the speaker was fully aware of the event that s/he is talking about. In Jarawara, it also means the speaker’s action is carried out purposefully.

(15) **Korean: with a firsthand evidentiality strategy, –te-**
(na-nun) eceyspam cam-i ppalli tul-te-kwun\textsuperscript{11}.
1sg-TOP last night sleep-NOM quickly be in-te-APP
‘(I noticed that) I was falling asleep quickly last night.’
(the speaker was aware of falling asleep)

(16) \textbf{Korean: with a non-firsthand evidentiality strategy, -(u)n moyang-i-ta}

nay-ka eceyspam cam-i ppalli tu-n moyang-i-ya
1sg-NOM last night sleep-NOM quickly be in-RL appearance-COP-DC
‘I guess I fell asleep quickly last night.’
(the speaker was not aware of falling asleep, but in the next morning s/he figured out s/he had fallen asleep early based on the circumstances)

Aikhenvald also finds conflicting implications in different languages where visual of direct evidentials are used for first person. In one type of languages, if ‘I’ say I saw my own action or state, it only implies that the action was intentional or ‘I’ was fully aware of the situation. In the other type of language, if ‘I’ say I saw myself doing something, it may have implication that the action was done by mistake or unintentional. The latter cases are often used with non-volitional predicates, such as yawning or smelling, to mean the event was completely out of control of ‘me.’ Korean evidentiality for psychological expressions applies to the first case. When used with a first person subject, evidential strategy –e-hata verbal construction for psychological state of mind has an implication that the speaker had an intention to reveal the feeling or was fully aware and in control of the feeling. In the following examples in (17) b, ‘I’ say ‘I’ deliberately showed my annoyed feeling by using –e-hata construction, accordingly, the sentence becomes unnatural since the following clause contradicts the intentional performance in the preceding clause.

\textsuperscript{11} An apperceptive Korean sentence ender –kwu(n) is considered as a mirative marker that functions as an evidentiality strategy in this study.
(17) a. ce-nun weyithe-ui mwulyeyha-n thayto-ka kipwun napp-ass-ciman, kipwun nappu-n maum-ul tulenay-ci anh-ass-eyo
   I-Top waiter-Gen rude-Rel attitude-Nom feel bad-Past-but, feeling bad-Rel mind-Acc reveal-NL not-Past-Pol.Dec
   ‘I felt annoyed at the rule attitude of the waiter, but I didn’t reveal my annoyed feeling.’

(17) b. *?ce-nun weyithe-ui mwulyeyha-n thayto-lul kipwun napp-a-ha-yss-ciman, kipwun nappu-n maum-ul tulenay-ci anh-ass-eyo
   I-TOP waiter-Gen rude-Rel attitude-Acc feeling bad-Inf-do-Past-but, feeling bad-Rel mind-Acc reveal-NL not-Past-Pol.Dec
   ‘*? I deliberately showed that I was annoyed at the rule attitude of the waiter, but I didn’t reveal my annoyed feeling.’

Reported evidential expression used with first person can have a meaning that the speaker is surprised or denying what was said about herself/himself. It may have strong overtones of irony, surprise and disagreement with what was said about the speaker (Aikhenvald, 2004: 225-6).

(18) Nganasan (first person with a reported evidential)

   djacüxüaqxumu
   make.noise+REP+1.PL.s
   ‘We are said to make a lot of noise! (at night and at day time when we tell stories – which is absolutely not true)’

A full-fledged Korean reported speech does not always have such a first person effect. Aikhenvald also notes that even reported evidentials may not always have first person effect. In Kiowa and Ngiyambaa, a reported evidential may simply implies the information was told by another person (p. 227). Yet most of the grammaticalized quotative forms in Korean in the following examples seem to carry the unique semantic extension like evidential propers. The examples show the similar first person effects when a first person subject is used with Korean reported evidentiality strategies.
(19)  Korean (first person with a reported evidentiality strategy)

a. wuri-ka sikkulep-ta-ko? (main verb of speech deleted)
b. wuri-ka sikkulep-ta-ni? (-ko ha- deletion before sentence ender)
c. wuri-ka sikkulep-ta-y.  (-ko ha- deletion before sentence ender)

we-Nom noisy-REP

'(I heard that) we are noisy!' ('and I am surprised to hear that’ – with mirative overtones; ‘it is not true’ – with implication of strong disagreement; ‘but I don’t think we are that noisy’ – with mild disapproving what was said)'

(20)  Korean (first person with a reported evidentiality strategy)

a. nay-ka chwulcang.ka-ya-ha-n-ta-ko?
b. nay-ka chwulcang.ka-ya-ha-n-ta-ni?
c. nay-ka chwulcang.ka-ya-ha-n-ta-y.

I-Nom business trip.go-have to-REP

'(I heard that) I have to go on a business trip! (and I am surprised to hear that – with mirative overtones; but I should not be going – implied strong disagreement; I didn’t take part in concluding such a decision – implied mild disapproving what was said)

The quotative expression above have gone through a grammaticalization process, such as reanalysis like –ko ha- ‘say that’ deletion or a main clause deletion (Sohn, ms).

Depending on the context and the intonation, each of the following strategies may carry strong or mild overtones of disagreement, but all of them carry mirative overtones of being surprised at the news.
2.3 Evidentiality acquisition

There has not been many studies investigating how second language learners acquire evidentiality in the target language except one empirical study on acquisition of pragmatics Japanese hearsay (Narita 2009). There have been a few pioneering studies on child language acquisition and the implications of the results and the methodologies of these studies have provided the present study with valuable directions.

Properly investigating acquisition of evidentiality involves quite a few challenges. There still are varied views to define what evidentiality is. The heavy inter-dependency among grammatical categories related to evidentiality would be the cause of the disagreement and it even adds difficulties to study of acquisition of evidentiality. Clear and distinctive definition of the target forms and meanings should precede any investigation and the research methods should be able to tear the notion of evidentiality from the other notions. For these reasons, this study adopts Aikhenvald’s view of evidentiality as an independent grammatical category, and views evidentiality as isolated and independent from other related grammatical categories like epistemic modality or tense. Without such a premise, it would not be easy to draw a conclusion that the notion of evidentiality had successfully been acquired independently from the notion of tense, aspect, or epistemic modality. Also, there is another aspect that makes an investigation of evidentiality difficult, and probably makes acquisition itself difficult. Especially in languages like Korean, grammaticalized evidentials do not exist paradigmatically in the morphology, nor are they a required part to form a grammatically acceptable sentence. Not only is it not wrong not to use an evidential expression; there are alternative ways to express similar evidential meanings. In production, learners can always choose other,
probably easier and familiar ways to express their intended meaning without being completely wrong. For instance, you do not really have to use a secondhand evidential in *There was a report. Everyone passed the exam*. The juxtaposition of two sentences provides the source of information that appears in the second sentence, and the passage is still grammatical with or even without a grammatical evidential marking.

I will first summarize some first language acquisition studies on English evidentiality strategies, Turkish evidential suffixes, Japanese and Korean sentence-enders (SE) that encode notions that are related to evidentiality, and then review comparative studies comparing English-speaking children and Korean-speaking children’s development of source monitoring.

2.3.1 English

It has been commonly agreed that English does not have grammatical category of evidentiality. There are various evidentiality strategies, however, such as syntactic constructions that developed evidential extensions. One example would be different complementizers of sensory verb, *hear* in the following sentences.

(21) Adam heard his sister talking to her boyfriend.
(22) Adam heard that his sister talked to her boyfriend.

It is implied that Adam heard the sound of his sister’s talking personally in (21), whereas the most plausible implication of (22) is that he heard from someone else about his sister’s talking and he did not see or hear his sister in person. These different complementizers caused a contrast in evidential nature of information, namely, firsthand sensory information versus hearsay.

Another example of English evidentiality strategy is PVSs (Perception Verb
Similatives), constructions named by Rett & Hyams (to appear). Rett & Hyams’ online experiment with adult English native speakers confirmed the previous research of Asudeh & Toivonen (2012) that the raised PVSs in English would imply direct firsthand information in, as opposed to unraised construction. The following sentences are examples of raised and unraised PVSs and their evidential implications (Rett & Hyams, to appear).

(23) John looks like he is sick.   Raised PVS: direct evidentiality
(24) It looks like John is sick.   Unraised PVS: unmarked for evidentiality

They conducted a data-based study on child language acquisition of the evidentiality of PVSs. They used 70 declarative sentences from 45 American English-speaking children’s spontaneous production data that they found in the CHILDES database (McWhinney and Snow 1985). The range of age was between two and seven years old. They concluded that English-speaking children could distinguish two different types of evidence properly at an early age, despite the fact that English was not “evidential” language (quotation from the original). The goal of their study was to demonstrate that the evidentiality development of English-speaking children was as early as early development in “evidential” languages, such as Turkish or Korean, as reported in Papafragou’s work (Papafragou & Li 2001, Papafragou et al. 2007). It was amazing results to see English-speaking children from two year-olds started to use raised PVS constructions to mark direct evidence as adult native speakers did. Their study made advancement in research in evidentiality acquisition in a language only with evidentiality strategies like English.

However, there were few minor drawbacks that might need attention: First, their children’s production results showed clean 0% of raised PVSs with reference to indirect
evidence, which would have been great because it was exactly how English-speaking adults performed. However, they analyzed only 54 utterances after determining 16 utterances as ‘canonical raising construction’ which is ‘not sensitive to evidence source.’

The criteria for telling canonical PVSs from evidence-sensitive PVSs could have been clearer, because the researchers were also able to present the numbers of canonical PVSs with direct evidence and indirect evidence.

Second, the evidential implications of an unraised PVS could also be further defined, rather than ‘unmarked for evidentiality.’ Unraised PVSs in English seem to have a tendency to represent a certain types of evidence, firsthand as well as non-firsthand. But, especially when they represent non-firsthand evidence, they may more likely represent inference or assumption than hearsay or quotation. Even between inference (based on visible, tangible evidence or results) and assumption (based on logical reasoning, assumption, or simply general knowledge), there could be a tendency or a preference that might be found in adult native speakers’ usage data. Such further investigation may remove the first caveat.

Lastly, they have concluded that English-speaking children demonstrated ‘understanding of semantics of evidentiality, and hence the ability to monitor source of evidence’ and that their conclusive results from English-speaking children were compatible to early development shown in “evidential” languages. Unfortunately, however, such conclusions may be a little too hasty. I cannot speak for other evidential languages that they compare, such as Turkish or Quechua, but at least Korean children’s early development data from Papafragou (Papafragou & Li 2001, Papafragou et al. 2007) might have a few unfortunate flaws in their research questions and assumptions about
semantics of Korean sentence-enders in question. This will be discussed in detail in the later chapter. Also, the researchers assumed that production data of direct evidential forms should indicate the children’s understanding of the semantics of the evidential forms as stating “if the linguistic marking of evidentiality – weather syntactic or morphological – is acquired on the basis of input, as seems reasonable, then children must understand the perspective of the people providing the input. In this sense, then, production data do provide indirect evidence bearing on theory of mind issues.” In fact, L1A research on Theory of Mind (Ozturk & Papafragou 2008; Papafragou & Li 2001; Papafragou et al. 2007) and the seminal investigations of Turkish evidentials by Aksu-Koç (1988) consistently show the opposite results: children learn to produce evidential forms far more earlier (as early as around age two, just like English-speaking children) and more accurately than they understand the meaning of evidential forms that someone else used. Also, children start to produce evidential forms with direct evidence before indirect evidence, yet the meanings and the functions of the evidential forms they use show development as we will see in Turkish study introduced below.

2.3.2 Turkish

A Turkish speaker should make an obligatory choice between two suffixes for past reference: –DI for directly experienced events or situations which the speaker has consciously experienced, and –mI(ş) for indirect experience, expressing information about events or processes that are not directly experienced by the speaker, like hearsay or inference based on some clue (Aksu-Koç, 1988: 18). The following examples are from Aksu-Koç’s study on acquisition of these suffixes (Aksu-Koç, 1988: 148).
(25) Süt döküldü₁² (-DI) ‘The milk spilled.’
(26) Süt dökülmüş (-mIş) ‘The milk (must have) got spilled.’
(27) Balon patladı (-DI) ‘The balloon popped.’
(28) Balon patlamış (-mIş) ‘The balloon (must have) been popped.’

In her seminal study including a longitudinal study and experimental studies, Aksu-Koç (1988) hypothesized that a child would not be able to master these forms simply through one-on-one mappings since the opposition of only two suffixes expressed complex notions, including deictic temporal notions, aspectual notions and evidential notions.

It was found that children’s initial usage of -DI and –mIş appeared to be unstable, starting with aspectual notions, and then deictic past reference appeared, but without discriminating direct from indirect evidence. In the longitudinal study, she found out that before the age of two Turkish children started using -DI, which was predominantly earlier than –mIş. However, early -DI usage marked the notion of ‘completion’ rather than the deictic tense relation of past. In case of –mIş, children started using –mIş rather incorrectly to indicate already established existing states at first. Then, the usage of –mIş became extended to express resultant states for both witnessed and non-witnessed events. Between the age of three and half years old and four and half years old, children gradually started to differentiate witnessed event/state from non-witnessed process.

However, even at the age of six Turkish children were found inconsistent in

₁² -DI is realized as -di, -di, -du, -di, -ti, -tu, -tu, or -ti, and –mIş is realized in the form of –mi(s), -mt(s), -mu(s), or –mu(s) in accordance with vowel harmony (Ozturk & Papafragou, 2008). In some articles the direct experience suffix -DI is represented as –dlI, and the indirect evidence suffix –mIş is represented as –mI.
making correct inference based on evidential forms. Aksu-Koç explained that children realized the function of \(-mi\) would be to indicate the ‘status of information for the speaker,’ and such notion was first manifested to express resultant states with the ‘information new to consciousness (ibid: 199).’ Then \(-mi\) became ‘a marker of new information gatherable from such states and thus modally colored\(^{13}\). Its modal and tense functions of indicating INFERENCE and, by default, PAST time, branched out of its primary aspectual function’ (ibid: 177-178).

Ozturk and Papafragou (2008) further investigated acquisition of direct experience marker \(-DI\) and indirect marker \(-mIs\), targeting Turkish children including slightly older age groups, between 5-year-olds and 7-year-olds. Only their oldest group performed significantly better than chance, but two younger groups of 5- and 6-year-olds did not. They found overall better performance in production tasks than in comprehension tasks, interpreting such asymmetry as evidence of children having ‘a better command of their own sources of information. (So, they were) able to produce the evidential morphemes, even if they were not as successful in unpacking others’ use of evidential morphology into its conceptual presuppositions.’ Their experimental design included the contrast between ‘See’ condition for \(-DI\) and ‘Hear’ condition for \(-mIs\), and the contrast between ‘See’ for \(-DI\) and ‘Infer’ conditions for \(-mIs\), in both production and comprehension experiments.

In their production tasks where the direct experience marker \(-DI\) was targeted, all age groups performed well. But in production tasks for \(-mIs\), even the oldest group made

\(^{13}\) Aksu-Koç (1988) viewed evidentiality as a part of epistemic modality, so did Palmer (1986), Chafe & Nichols (1986), and Bybee (1985).
errors in either hearsay or inference conditions. In their comprehension tasks, the children were asked to pick a character based on the types of evidence and the evidential marker used in a sentence. For instance, in a See vs. Infer contrast, there is a character that personally saw someone drinking lemonade from a bottle, and another character that only saw a half-empty bottle of lemonade. Then children should match the first character that saw actual event with a sentence with –DI, and the second character that saw the remaining evidence with –mIs for its inference meaning. In a See vs. Hear contrast, there is a character that saw someone playing with a doll and another character that only got to hear someone else had played with a doll. Then children should match the first character that had witnessed the playing event with –DI, and the second character that only got to hear about it with –mIs for its hearsay function. It was found that only the oldest 7-year olds showed proper understanding of which character had the right kind of evidence regardless of the types of conditions. The youngest 5-year-old group showed some success in identifying the meaning of –DI with slightly above chance, but did not perform above chance in either of –mIs conditions. The middle group (6-year-olds) did not even understand the evidential meanings of –DI at chance level in See conditions, or the hearsay meaning of –mIs in Hear conditions, but performed significantly above chance with inference meaning of –mIs in Infer conditions.

2.3.3 Japanese

Matsui et al.’s (2006) experimental study investigated how young Japanese children evaluate a speakers’ certainty based on the linguistic forms used with different degrees of epistemic certainty and different evidentiality information. They used three
‘particles’ and four verbs expressing different degrees of certainty. For the particle expressing the speaker’s higher degree of certainty, they used Japanese sentence-final particle -(da)yo that implies the speaker’s strong commitment to the truth about the information that is old to the speaker and new to the listener. This sentence-final -(da)yo form can suggest that the speaker has compelling evidence for his/her belief. For weaker certainty, they had two sentence-final suffixes; one is an epistemic suffix –kana and the other is a hearsay suffix –tte. They used verbs shitteru ‘to know’ and miru ‘to see’ to express the speaker’s stronger certainty. For the verbs expressing weaker certainty, they used omou ‘to think’ and kiku ‘to hear’ (pp. 160-161). The following table summarizes the linguistic forms with varying epistemic certainty they used.

Table 2.8 Japanese certainty and evidentiality markers (adapted from Matsui et al. (2006))

<table>
<thead>
<tr>
<th></th>
<th>Relatively stronger certainty</th>
<th>Relatively weaker certainty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentence-final suffixes</td>
<td>-(da)yo (speaker’s strong commitment to the truth) (speaker’s possession of compelling evidence implied)</td>
<td>-kana (epistemic uncertainty)</td>
</tr>
<tr>
<td></td>
<td>-tte (hearsay evidentiality)</td>
<td></td>
</tr>
<tr>
<td>Verbs</td>
<td>Shitteru ‘to know (that)’</td>
<td>Omou ‘to think (that)’</td>
</tr>
<tr>
<td></td>
<td>Miru ‘to see (that)’</td>
<td>Kiku ‘to hear (that)’</td>
</tr>
</tbody>
</table>

In their experiment, Japanese children between three years old and six years in four age groups are tested individually. A child first watches an animation where a thief is

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14 Matsui et al. (2006) refer to -(da)yo vs. –kana contrast as ‘certainty particles’ as opposed to - (da)yo vs. –tte contrast as ‘evidentiality particles.’ Also, they refer to shitteru vs. omou contrast as ‘certainty verbs’ as opposed to miru vs. kiku contrast as ‘evidentiality verbs.’
ambiguously hiding four familiar objects in different hiding places and leaves the scene. The child is now listen to two characters (animals) saying conflicting statements with different degrees of certainty, for instance, “the one (place) the car is in is the red box-dayo,” or “the one the car is in is the blue box-kana.” Then the child is asked to indicate a more plausible hiding place based on two conflicting statements. They found older Japanese children performed better, and overall better performance with sentence-final suffixes than verbs. They found children performed better with epistemic certainty contrast than the quality of evidence contrast. They ranked these four task pairs in the order of difficulty, from the easiest yo-kana, know-think, yo-tte, and to the most difficult see-hear pair. They children were consistently (with .91 coefficient of reproducibility) performing along with this scalar model, indicating that Japanese children are sensitive to someone else’s certainty expressed in a sentence-final suffix before they understand such certainty of verbs. Also, children’s ability to evaluate varying epistemic certainty appeared to be developed earlier than that of evaluating quality of evidence.

Matsui et al. also reports naturalistic data from JCHAT corpus of a Japanese child, Tai, which was collected between the age of 1;5 and 3;2. There were 3,317 total occurrences of yo, 270 –tte, 145 –kana, and 109 occurrences of miru used by the child. However, no further details are reported regarding the time of occurrences or type/token, or the contexts of these utterances or meanings. Nevertheless, it can be remotely assumed that Japanese sentence-final suffix –yo must have started earliest, then followed by hearsay –tte suffix much later, based on Choi’s (1991) Korean child language sentence-
ender suffixes (SE) data. In the following section, Choi’s seminal investigations of early development of Korean SEs are discussed in detail, which reveal surprisingly early development of young Korean children’s morphological distinction among basic SEs at around 1;8. Her studies triggered further groundbreaking cross-linguistic investigations on child language development and early cognitive development, such as source monitoring ability.

Narita (2009) conducted a study examining the effect of PCR (Pragmatic Consciousness Raining) activities in learning Japanese hearsay evidential markers. She designed her PCR instructional activities based on Schmidt’s (1993) noticing hypothesis and treated one group of English-speaking learners of Japanese to compare with a control group. The PCR instructional activities were designed to raise metapragmatic awareness by asking the learners to compare English hearsay data with Japanese data, and then asking to explain about their own discovery of pragmatic patterns. These PCR treatments alerted learners not only to notice the target pragmatic features, but also report explicitly why they think the target language speakers use the features differently from L2 learners. The learners’ pragmatic knowledge of Japanese hearsay were evaluated in three different times: pre-test one day before the treatment sessions, an immediate post-test, and delayed post-test administered one month later. There were two types of tests; one evaluated learners’ metapragmatic knowledge and the other an oral discourse production test to see if learners could use the target form. There were two sets of Metapragmatic Knowledge Tests (MKT); one tested the learners’ understanding of the scope of the hearsay marker.

Given that Korean and Japanese SEs have much similarities in terms of meanings and functions, especially, Korean SEs –e and –ta are approximate equivalent of Japanese –yo, and Korean hearsay SE –tay must be the equivalent of Japanese –tte.
and the other tested the knowledge of reliability of hearsay information.

The results strongly confirmed that PCR activities were effective for learning L2 pragmatic features. The learners from the PCR group perform much better and they could maintain the knowledge. Below figures are the results of three tests.

Figure 2.1 Summary of MKT 1 tests (Narita 2009)

![Figure 1](image1.png)

**Fig. 1.** Mean scores on the MKT 1 by Group and Time.

Figure 2.2 Summary of MKT 2 tests (Narita 2009)

![Figure 2](image2.png)

**Fig. 2.** Mean scores on the MKT 2 by Group and Time.
Additionally, Narita found the level of awareness, i.e., noticing versus understanding, did not affect the learners’ productive use of target hearsay features.
2.3.4 Korean

Choi’s (1991) study on young Korean children’s spontaneous production focuses on distinctive meanings of basic Korean sentence-ending suffixes (SE). They were found in her three participants (HS, PL, and TJ) between the age of 1;8 and 2;11, whose natural interactions with family members and an investigator were analyzed. Choi found that these children showed a clear morphological distinction between request and statements before the age of two. Table (2.##) shows the Korean SEs, -TA\(^16\), -E\(^17\), -CI, and –TAY\(^18\) the meanings, and the times of the first occurrences by the children\(^19\).

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\(^{16}\) -TA is the plain-level sentence ender for declarative sentence (Sohn, 1999: 235, 269). In the present tense, it follows indicative mood marker \(-(n)u(n)\)- after a verb, and no mood marker attaches after an adjective, including a copula. In the past tense, it follows the past tense marker \(-e\)/\(-a\)/, which are allomorphs.

\(^{17}\) -E, also represented \(-e/a\) in Sohn (1999), is the intimate-level sentence ender. The intimate-level sentence enders have the same form \(-e/a\) for all the sentence types, which are allomorphs. When it is in the past tense, the past tense suffix \(-e\)/\(-a\)/ precedes \(-e\).

\(^{18}\) -TAY is a declarative neutral sentence ender –TA combined with an intimate-level sentence ender \(-E\) in a grammaticalized form, where ‘–ko ha- deletion’ has occurred. Neutral sentence enders are used only in a quotative clause, and the quotative clausal particle –ko and the main verb ha- ‘to say’ are very frequently omitted altogether, leaving only –TAY as a quotative sentence ender in the process of grammaticalization (Sohn, 1999: 271, 325). This ‘–ko ha- deletion’ occurs almost anywhere, before any sentence/clausal suffixes, and even after the quotative clausal particle –ko and the main verb of speech ha- are omitted altogether, their meanings of quotation/hearsay stay with the remainder of a clause or a sentence. Also, a fossilized (grammaticalized) remainder of the quotative forms without –ko ha- often germinates new meanings and/or new pragmatic functions, that they implies that the quotation has been mentioned by non-specific general population or it is used in a folklore or a story-telling contexts (see other languages’ grammaticalized hearsay usage in Aikhenvald 2004). Just like the plain-level declarative sentence ender –TA, after a verb, an indicative mood marker \-(n)u(n)\- precedes the neutral declarative ender –TA in the present tense, and no mood marker is needed for an adjective. In the past tense, it follows the past tense marker \(-e\)/\(-a\)/.

\(^{19}\) Choi (1991) also documented the children’s use of –LAY (desire) and –KKEY (intention).
Table 2.9 Summary of first occurrences of SE in Korean L1 (Choi, 1991:100-101)

<table>
<thead>
<tr>
<th>Sentence-enders (SE)</th>
<th>Meaning</th>
<th>Time of occurrence in child language</th>
</tr>
</thead>
</table>
| -TA                  | New/unassimilated information, and currently in the process of being assimilated to the knowledge system | 1;8.2 (PL) 
1;9.0 (TJ) 
1;9.3 (TJ) (past form) 
1;10.2 (HS)\(^{20}\) |
| -E                   | Old information that has already been assimilated to the knowledge system | 1;9.0 (TJ) (request) 
1;9.0 (TJ) (declarative) 
1;9.2 (PL) (request) 
1;10.2 (HS) (request) 
1;10.3 (HS) (declarative) 
1;11.2 (PL) (declarative) |
| -CI                  | Old established information of which the speaker is certain, and shared by the interlocutor | 1;9.3 (TJ) 
1;10.2 (PL) 
2;0.2 (HS) |
| -TAY                 | Hearsay information                                                     | 1;10.1 (TJ) 
2;0.3 (PL) 
2;4.4 (HS) |

The children started distinguishing –TA expressing the information that has recently been acquired through direct experience and in the process of being assimilated to the child’s knowledge system, from –E that expresses the information that is assimilated to the knowledge system.

(29) TJ (1;9.0 – TJ is looking at a picture of a lamb with eyes closed)

kho ca-n-TA
soundly sleep-pres.ind-TA
‘(it’s) sleeping soundly.’ (Choi, 1991:103)

\(^{20}\) HS’s data starts at 1;10.2 in Choi’s (1991) data, and both –TA and –E distinctively existed in the first data.
(30) PL (1;11.2 – PL was listening to the grandmother’s conversation with another adult about a hair salon where PL had recently had a haircut.)

PL(first name)  meli  ippu-key  hay-ss-E
PL  hair  pretti-ly  do-Past-E
‘(PL) had (her) hair done (there) prettily.’  (Choi, 1991:106)

Throughout this phase, all three children were consistently using –TA for information that are unrelated to the immediately preceding topic, or newly introduced topic.

(31) PL (2;0.3 – PL finds the balloon that she has been looking for)

yeki  iss-TA.  yeki  iss-E.  yeki  iss-E.
here  exist-TA  here  exist-E.  here  exist-E.
‘Here (it) is. Here (it) is. Here (it) is.’  (Choi, 1991:109)

Next phase is around the age of two years old, Korean children start using –CI to mark the already established information about which s/he is certain, and believe to be shared by the interlocutor. Slightly delayed is a phase where children start using –TAY, the hearsay SE.

(32) TJ (2;4.2 – TJ and mother are looking at a picture of bird waving its wing.)

Mother: theykeybi-eysne  pwa-ss-CI?  Say-ka  yaykiha-nun  ke.
Television-Loc  you  see-Past-CI?  Bird-sub  talk-Pres.RL  thing.
‘You saw on TV, bird talking, right?’
TJ:  Say-ka  ppai  ha-n-TAY.
Bird-sub  ‘bye’  say-Pres.Ind-TAY
‘Bird says ‘bye’.’  (Choi, 1991:112)

(33) HS (2;5.4 – in a setting with HS, her sister and the investor)

Sister (to HS):  unni-ka  saykchil  hay-cwu-KKEY.
sister-sub  coloring  do-give-KKEY (intention)
‘I will color for you.’
In addition to the spontaneous production data as we have seen above, there have been empirical cross-linguistic studies on relationship between linguistic development and non-linguistic cognitive development in the mind of growing children, comparing Korean and English-speaking children.

### 2.3.5 Comparative child language acquisition studies

Gopnik and Choi’s (1990) longitudinal study found that their five Korean-speaking children were consistently delayed in terms of showing a naming spurt and ability to classifying objects, which is non-linguistic cognitive skills, compared to English-speaking children. However, except for object classification, Korean children were not delayed in other cognitive development. They made a point that earlier L1 studies with English-speaking children found that non-linguistic object classification ability and a naming spurt were closely related in their development (Gopnik & Meltzoff, 1987).\(^{21}\) Choi and Gopnik’s (1995) another study with extensive longitudinal data, including longitudinal questionnaires, interviews with caregivers, and spontaneous production samples, also had consistent and significant results from Korean and English-speaking children. They additionally found that Korean children used more verbs in their early speech and fewer nouns overall than the English speakers. Also, most Korean children showed early verb spurts before their naming spurts.

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\(^{21}\) Gopnik & Meltzoff (1987) considered a child having a naming spurt if s/he developed 10 new names in a three-week session. They found the naming spurt was related to spontaneous classification ability.
Gopnik et al. (1996) conducted empirical study on Korean children at around 1;2.8 of age using a set of cognitive tasks and linguistic testing to compare with the results from the same experiments with English-speaking children (Gopnik & Meltzoff, 1987). English-speaking children’s results showed that all types of cognitive abilities emerged at almost exactly the same age, with a special observation that half of their participants (6 out of 12) acquired categorization ability before other cognitive abilities. On the other hand, Korean children also showed all the cognitive abilities emerged at around the same age, but the majority (7 out of 8) acquired the other cognitive ability significantly earlier than categorization ability (p < .05). When compared to English-speaking peers, Korean children were significantly delayed in development spontaneous object classification ability, but advanced in cognitive abilities of actions and plans.

In their linguistic testing, they were comparing developments of words for success/failure, disappearance, and naming spurts. English-speaking children did not show any significant differences in all these categories of development, whereas Korean children showed a significant delay in naming spurt development compared to other types of words, which, once again, confirmed the hypothesis of Gopnik & Meltzoff (1987) that there is strong correlation between non-linguistic object classification ability and a

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22 Gopnik & Meltzoff (1987) adapted experimental designs that comprise categorization tasks and cognitive tasks, including object-permanence tasks and “means-ends” tasks. A child was considered to have object-permanence ability or means-ends ability if s/he solved the task of most difficult level of each kind. Object-permanence tasks have a child find a invisibly displaced object in a simple setting and a series setting. “Means-ends” tasks have them decide the most proper actions to accomplish a certain goals. For linguistic testing, the participating children’s parents answered an Early Language Questionnaire with a series of questions about the child’s context-specific language use and samples, the parents recorded the children, and spontaneous speech recording were used. A child was considered as having acquired a word if s/he used it spontaneously in 3 separate contexts either in above data. In Gopnik et al. (1996) the same experimental procedure and scoring procedure were repeated with Korean children.
naming spurt development. However, it was noted that English-speaking children revealed their understanding of meanings by using “relational” words that encode success of failure, like “uh-oh” or “there,” on the other hand, Korean children used verbs to show their understanding of these concepts. For example, they used verb ‘eps-ta’ (‘not exist’-SE) meaning “there is none” to express disappearance, and ‘twa-yss-ta’ (‘become’-Past-SE) meaning “it is done” for success.

Papafragou & Li (2001) and Papafragou et al. (2007) conducted comparative child language acquisition studies with English-speaking and Korean-speaking monolingual children. They employed source-monitoring (non-linguistic) tasks with 3- and 4-year-old monolingual children from each language and also administered linguistic tasks to Korean children as well. Both non-linguistic and linguistic tasks had ‘Looking’ conditions to test the children’s ability to process visual information obtained firsthand, and ‘Telling’ conditions to test their ability to process hearsay information. Only Korean children were administered with the linguistic tasks, since only Korean has grammaticalized means, i.e. sentence enders, that imply whether the information has been obtained through firsthand-based. Such experimental designs by Papafragou and her colleagues in these studies made it possible to grasp the general picture of relationship between Korean children’s source monitoring ability and their acquisition of Korean sentence enders by comparing the results from non-linguistic tasks with those from the corresponding linguistic tasks in terms of both firsthand information and hearsay.

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23 Between Papafragou & Li’s (2001) and Papafragou et al. (2007) there were three administrations of the same non-linguistic tasks with Korean children between three years and five years of age, and two administration with English-speaking children between three years and four years old. Papafragou & Li (2001) administered the non-linguistic experiment once with each language group, and Papafragou et al. (2007) administered non-linguistic tasks twice with different Korean monolingual groups and reported separate results.
information. Nevertheless, due to the critical assumption that the Korean declarative sentence enders, –TA and –E, that they used in linguistic tasks, should have mandatory one-on-one relationship with direct (or visual firsthand) evidence, their results including those from adult Korean native speakers, failed to reach meaningful conclusions on Korean children’s linguistic development. Table (2.#) summarizes the experimental designs used in Papafragou & Li (2001) and Papafragou et al. (2007) to investigate non-linguistic source-monitoring ability of monolingual Korean-speaking and English-speaking children between the age of three and four.

Table 2.10 Design of Non-linguistic source-monitoring experiments (Papafragou & Li, 2001; Papafragou et al., 2007)

<table>
<thead>
<tr>
<th>Setting</th>
<th>There are 8 hiding places in a dollhouse</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One item is hidden in each location</td>
</tr>
<tr>
<td>‘Self’ tasks</td>
<td>‘Others’ tasks</td>
</tr>
<tr>
<td>Looking condition</td>
<td></td>
</tr>
<tr>
<td>A child gets to look</td>
<td>A child watches a character taking a</td>
</tr>
<tr>
<td>inside a hiding place</td>
<td>look inside a hiding place</td>
</tr>
<tr>
<td>Telling condition</td>
<td></td>
</tr>
<tr>
<td>A child is told what</td>
<td>A child watches a character being</td>
</tr>
<tr>
<td>is hidden by the</td>
<td>told about the content in a hiding</td>
</tr>
<tr>
<td>researcher</td>
<td>place</td>
</tr>
</tbody>
</table>

First of all, their non-linguistic source-monitoring had two types of tasks, ‘Self’ tasks and ‘Others’ tasks, adapted previous studies24. The ‘Self’ tasks were to see whether the children could acknowledge their own knowledge source, and the ‘Others’ tasks were

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24 Papafragou & Li’s (2001) and Papafragou et al. (2007)’s Self tasks were adapted from O’Neill & Gopnik (1991), and their ‘Others’ tasks were adapted from Pratt & Bryant (1990).
to see whether these children could reason about someone else’s knowledge state based on their actions. In the ‘Self’ tasks, there were 8 different hiding places in a dollhouse where a certain item was hidden in each place. A participating child had a chance to personally look inside a hiding place (in ‘Looking’ conditions), or s/he was told personally about what was hidden in a hiding location (in ‘Telling’ conditions). Then, each child was asked what was in there and how s/he knew. In the ‘Others’ tasks, a child only observed two characters’ actions where only one of the characters’ action lead to the knowledge of the content of a hiding place. For instance, in the ‘Looking’ conditions of ‘Others’ tasks, a child watched one of two characters taking a look inside a hiding place, while the other character only knocking at the place. In ‘Telling’ conditions, a child watched one character hearing from the researcher about the content of the hiding place, while the other character only getting kissed or hugged by the researcher. Then, the child was asked which character would know what was hidden in the place.

After three administrations with Korean children from three to five years old and two administrations with English-speaking children between three and four years old, the researchers reached contradicting interpretations. Based on the result from one of three administrations of non-linguistic source monitoring tasks where English-speaking 3-year-old group rather surprisingly outperformed in ‘Look’ conditions of ‘Others’ tasks, the researchers reached an overall conclusion that there was no difference that children’s L1 made in their non-linguistic source monitoring abilities. It was surprising conclusion considering earlier results of their own in the 2001 study showed English-speaking three-year-old children were barely at chance level while Korean three-year-olds performed as well as four-year-old groups over 90% of accuracy, so did the results from the other two
administrations of their own in 2007.

(T)he comparison with English data suggests that language acquisition (specifically, the acquisition of evidentiality) cannot be the reason why Korean children become progressively better at thinking about information sources between the ages of three and four – English-speaking preschoolers are just as good at source monitoring even though English does not mark evidentiality grammatically (Papafragou et al., 2007: 287 – 288).

However, the differences in non-linguistic cognitive abilities of these children with different L1 background seem too big to dismiss. In two out of three non-linguistic source monitoring task administrations, three-year-old Korean children performed as well as four- or five-year-old peers without showing any statistical differences, yet with a positive growth with age. In the other non-linguistic source monitoring tasks, three-year-old Korean children did not perform as well as four-year-old peers (3-year-olds 73%, vs. 4-year-olds 91%). However, Korean children, regardless of age, showed a significant Perspective effect in all the administrations, which means that they were constantly and significantly better at indicating their own evidence than understanding someone else’s evidence. Similar performance of young Korean children can actually be observed in Choi and her colleagues’ longitudinal production study: young Korean children around three years of age may not show complete understanding of someone else’s evidence, but their own evidence regardless of type, firsthand or hearsay, seems to be under relatively good control.

In all the experiments with English-speaking children, the results showed a main effect of age between three- and four-year-olds. That is, three-year-old English-speaking groups were significantly inferior to four-year-old peers. There was no overall effect of Perspective in English-speaking groups in all the administrations, but when they
separately analyzed the second trial’s four-year-old English-speaking group, they performed significantly better with their own evidence like all the Korean-speaking age groups showed consistently. The following graphs show the results of non-linguistic source-monitoring experiments in Papafragou et al. (2007).

Figure 2.5 Non-linguistic source-monitoring tasks results of Korean children

![Figure 2.5 Korean-speaking children’s performance on source monitoring tasks (Experiment 1)](image)

Figure 2.6 Non-linguistic source-monitoring tasks results of English-speaking children

![Figure 2.6 English-speaking children’s performance on source monitoring tasks (Experiment 4)](image)
Summarizing the non-linguistic source-monitoring experiment results, we could see clear evidence of cognitive development took place among age groups of Korean children in terms of acknowledging someone else’s information: at the average age of three years and half, Korean children seem relatively poor at indicating the right character with the target information based on a preceding event that leads to the information. It can be noted that Korean three-year-olds did show unstable and inconsistent cognitive abilities which were still inferior to older peers, but could also show the trend of showing no statistically significant difference from older peers in two experiments out of three. On the other hand, amongst English three- and four-year-olds, there always was a significant difference in overall results, but there was no evidence of source-specific sensitivity in English-speaking three-year-old children.

In their linguistic comprehension tasks there were two conditions of ‘Looking’ condition and ‘Telling’ condition like non-linguistic source-monitoring experiments. A
Korean child was asked to select one character out of two that had the right type of source of information based on the SE suffix the character used. The experimental methods used in the linguistic experiments are summarized in Table (# 2) below.

Table 2.11 Design of linguistic experiments (Papafragou & Li, 2001; Papafragou et al., 2007)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Papafragou &amp; Li (2001) compared SEs: –TA vs. –TAY</th>
<th>Papafragou et al. (2007) compared SEs: –E vs. –TAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Looking</td>
<td>A character says “There is a ball in the box-TA,” implying s/he has just seen inside the box in person</td>
<td>A character says “There is a ball in the box-E,” implying s/he has just seen inside the box in person</td>
</tr>
<tr>
<td>Telling</td>
<td>A character says “There is a ball in the box-TAY,” implying s/he was told about what is inside the box from someone else</td>
<td></td>
</tr>
</tbody>
</table>

Korean SEs compared in Papafragou & Li (2001) were the plain-level declarative SE –TA and the hearsay SE –TAY, and Papafragou et al. (2007) compared the intimate-level declarative SE –E and the hearsay –TAY. However, as noted earlier, this design has a critical caveat of supposing exclusive semantic relationship between visual firsthand information and –TA and –E. None of these have to indicate, or even imply that the information is obtained firsthand by the speaker. As a matter of fact, I do not believe Korean has such an evidential sentence-ender suffix. However, there is a post-verbal retrospective suffix –te- that actually indicates firsthand information and has a variety of grammaticalized forms. Aikhenvald (2004) did not recognize this retrospective suffix as an evidential, but this form is worth further attention as a strategy.

The plain declarative SE –TA is used when the information in a proposition is
new (or ‘unassimilated’) to the speaker. It is rather characterized with its main communicative function of active informing, with which the speaker is deliberately indicating the listener that the information is worth paying attention because it has caught his/her attention (Lee, 1991). Therefore, use of –TA may actually imply the immediacy of the moment of the speaker having obtained the information, and there is a high probability that the way the information has been obtained could be firsthand, but not necessarily. On the other hand, the intimate declarative SE –E is used for information that has already been assimilated into the speaker’s belief or factual knowledge system. Unlike –TA, -E does not imply anything about the timing or the way in which the information was obtained. Therefore, the assumption that –E is associated with visual firsthand information only, since –E can be used for information from any source including hearsay, inference, or assumption, as long as the speaker is already sure of it by finishing integration into his/her belief or knowledge system (Lee, 1991). As a matter of fact, the researchers were also puzzled at their empirical results with adult Korean native speakers where the –E option was not rejected but accepted at the rate of 70% in the hearsay condition.

The Declarative Ending –ta has a specialized function in informal discourse of informing the addressee of noteworthy information that has provoked the speaker's cognitive attention. In its use of expressing newly perceived information, -ta is distinguished from the Informal Ending –e, which simply conveys information which has been integrated part of the speaker's knowledge, either as factual knowledge or belief. The information conveyed with -ta is also distinguished from that conveyed with -e in that the information conveyed with -ta is that which has invoked the speaker's cognitive recognition because he or she found it particularly interesting or intriguing. In its function of conveying informative information, -ta is distinguished from –kun and -ne in that the information conveyed with -ta is more highly informative. …(T)he Informal Ending –e is the unmarked and representative sentence-terminal suffix in informal discourse in terms of frequency as well as discourse-pragmatic functions. It conveys information that is integrated part of the speaker's existing
body of knowledge, i.e., assimilated information. It is typically used in exchanging information among communicators (Lee, 1991: 423-424; 380).

The results of the linguistic tasks are not dependable for the incorrect assumptions of their studies about the targeted Korean SEs’ semantic values, nevertheless, their experimental designs showed meaningful possibilities to base further investigation. Their linguistic comprehension tasks have two slightly different designs, but the bottom line is the same: A child is presented two characters and a box only one of them is supposed to have obtained the information about the box content through looking or hearing. The child gets to listen to comment(s) of the character(s), then, s/he is checked for his/her knowledge about which character has the right information through what source. In 2001 experiment, two characters were presented standing next to a closed box and each character made a comment using different SE, –TA or –TAY. That is, the children only got to hear the character’s statement ending in -TA in ‘Looking’ condition, instead of watching the actual action of ‘looking’ done by the target character. Also, instead of watching the actual action of someone ‘telling’ to the target character about the content, a child only heard the character’s statement ending in -TAY. Then, the child was asked to choose the character that saw what was inside the box in ‘Looking’ condition, or the one that heard about what was inside in ‘Telling’ condition. The results of this experiment showed that all the children between three and four who passed nonlinguistic evidential tasks were now at chance, where four-year-old Korean children performed slightly better than three-year-olds, but not significantly. Also both age groups performed slightly better in Telling questions, but not significantly.

Papafragou and her colleagues later revised this experimental design to test
children’s linguistic comprehension by providing a chance to observe the scene where the character obtained specific evidence. For instance, a character opens a box and takes a look before the children’s eyes (Papafragou et al., 2007), or a character drinks lemonade from a bottle (Ozturk and Papafragou, 2008). Thus, in their 2007 experiment ‘Looking’ condition, a character took a look inside the box before a child’s eye, and then the child listened to a recorded sentence involving either –E or –TAY, for instance, “there is a balloon inside the box-E/-TAY.” In ‘Telling’ condition, one of two characters was whispered into the ear, and then a recorded sentence involving either sentence ender is played. Then a child was asked to choose which character said the sentence.

Even though their hypotheses could not be tested with the data from these experimental items, they reached a conclusion that young Korean learners could not attribute an evidentially marked utterance to the appropriate speaker. They were also surprised at the gap between the performances of the same Korean children who successfully performed in non-linguistic source monitoring tasks, but did not excel in linguistic tasks. They noted that “the difference is remarkable given that the structure of the tasks is quite similar: For instance, in the Others task children had to attribute knowledge to a character based on his evidential access to information (perception or communication), whereas in the Semantic task, children had to attribute an utterance marked for evidential access to one of two characters.”

They also conducted a modified TVJ task (Truth-Value Judgment task, Crain & Thornton, 1998) to test the young Korean children’s ability to evaluate false beliefs (Papafragou et al., 2007). The original false-belief experiment has a setting with two characters hiding a certain object in a certain locations before a child’s eye. After one
character leaves the scene, the other character moves the object to a different location. When the first character returns, the child is asked where the character would look for the hidden object. In order to answer correctly, the child should be able to evaluate the characters’ knowledge state. Both Korean children and English-speaking children performed similarly in a false-belief experiment in that three-year-old children typically fail to correctly evaluate the characters’ knowledge states and four-year-old children perform well (Wellman, Cross, & Watson, 2001).

In Papafragou et al.’s modified TVJ task (2007), a Korean child observed a puppet who had just obtained information about an event of another character, either by watching an event or being told about it. This puppet made a comment using either –E or –TAY, but the child was also told that the puppet was not reliable and sometimes he would be just ‘silly’ when making a statement. There were four events in two types of event; one was ‘Looking event’ and the other ‘Telling event.’

Again, this experimental design has a critical flaw in a few ways: First, since the meaning and function of SE –E can express what the speaker acknowledged through hearsay information; the results from Looking-type condition in this experimental design cannot be meaningful.

Second, there is another Korean verbal suffix, -TEY, which is pronounced almost the same as hearsay -TAY, but denotes firsthand retrospective information. There might be some differences in terms of slight intonation variation and length, so the differences may be significant to the native speakers’ years, but this could also present some risks in experimental design.

Lastly, some Korean grammaticalized hearsay SEs including –tay, -tay-yo, and -
*tap-ni-ta* are commonly used in various story-telling contexts, especially like a folklore or a children’s book-reading or children’s story-telling discourse. For instance, one may tell a story of a Cinderella or a bear family as watching a picture book with a child and say “Yesnal yesnal-ey emma kom-ilang appa kom-ilang aki kom-i sal-ass-tay. Enu nal, i kom kacok-i sophwung-ul ka-ki-lo hay-ss-tay (Once upon a time there lived mommy bear, daddy bear and a baby bear-TAY. One day this bear family decided to go on a picnic-TAY).” Such uses of grammaticalized hearsay evidentials are also reported in other languages with grammatical evidentiality (Aikhenvald, 2004). It is actually much likely that the use of Korean hearsay SE –TAY in the ‘Looking event’ of their TVJ task could be understood as such conventional story-telling SE.

In other words, since it is not uncommon for a parent or a guardian to read a picture book to a child as using –TAY for sentences describing the events in the pictures they are looking at together. The event and the puppet’s report presented in their TVJ task are as follows. The reporting puppet Tim watches the other character, Jin, singing. The video was supposed to be from yesterday, and Tim says “ecey cini-nun nolay-lul pwull-ess-tay (yesterday Jin sang a song-TAY).” Even the Korean native speaking adults, while accepting –E for this context by 100%, also accepted such a use of –TAY by 15%. Therefore, it is not wrong for these children to accept –TAY used by the puppet that was looking at a visual information source.

Despite the flaws in the experimental design, their results from ‘Telling event’ were noteworthy. In the following graph that summarizes their TVJ tasks, it is notable that Korean young children are not accepting the proper use of –TAY in ‘Telling task’ about someone else’s evidence.
Figure 2.8 The results of Truth-Value task by Korean-speaking children from 3 years old to 4 years old and adult native Korean speakers (Papafragou et al., 2007)

![Looking events graph]

Accuracy:
- 3 years: 35%
- 4 years: 70%
- Adult: 100%

The puppet’s report sentence ended with:
- e
- tay

Figure 2.9 (Continued) The results of Truth-Value task by Korean-speaking children from 3 years old to 4 years old and adult native Korean speakers (Papafragou et al., 2007)

![Telling events graph]

Accuracy:
- 3 years: 40%
- 4 years: 40%
- Adult: 100%

Fig. 4. Korean 3- and 4-year olds’ and adults’ mean proportion of acceptance of the puppet’s sentences for two different event types: (a) looking events and (b) telling events. **p < .05 (tests against chance).
Lastly, Papafragou et al. (2007) conducted a very impressive production task and could elicit notable production from young Korean children between three and five years old. The experimental setting was actually utilizing the participating children’s personal experience, which made it possible to elicit truly meaningful production data. The procedure was as follows.

In the setting where sentence ender –E was the target of elicitation, a child was told to correct a lying puppet’s silly statement and introduced to a supposedly lying puppet. When the child told the puppet what s/he had done the day before, the puppet always produced a silly report by changing the verb. For instance, if a child told the puppet “I ate ice cream yesterday,” the puppet would say a hearsay statement “(Suzie) kicked ice cream yesterday-TAY, hehehe.” Now, since the puppet’s silly hearsay statement is contradicting the child’s own experience, the child was encouraged to correct the puppet’s report.

Such experimental design still carries some problems in that –E is not necessarily required in the child’s correction, but –E is definitely one of the most plausible and the most possible sentence ender choices. The rationale of this setting is that the child should not only change the verb with –TAY used by the puppet, but also use an SE denoting firsthand experience. At least one thing is for certain; the child was not supposed to repeat the puppet’s –TAY sentence ender about his/her own activity. In order to elicit –TAY, a child was given information about someone else and asked to report about it. First, a child listened to what two puppets had done, where the puppets’ reports were always ending in –E. And then, the child now had to report to the researcher about the puppets’ activity, supposedly changing the sentence ender from –E to –TAY.
Again, this experimental design has bigger problems than the previous one: It was not only that the sentence ender change to –TAY that the researchers intended to see was not mandatory, but a child was also allowed to repeat the puppets’ sentence ender –E, since the child had already learned what the puppets had done, meaning, the information had already been assimilated into the child’s knowledge system. Therefore, -E is totally fine to use in a report about someone else’s activity. The production data from young Korean children from three years to five were confirming the previous findings that the youngest three-year-olds can express their own evidence as well as older groups. The following figures 2.10 are the results from their production tasks (Papafragou et al., 2007).

Figure 2.10 Results of production tasks eliciting ‘direct evidence’ –E

Except the small portion of the non-responsive children was relatively bigger in the three-year-old group, all three groups showed very similar and compatible
performance. The most obvious and the most plausible sentence ender choice, -E, was used evenly across all the age groups. However, what caught my attention but not explained fully were some additional sentence-enders used by these young Korean children. These sentence enders were mentioned as a small portion of tokens with some literal translations of them, however, they actually show these children’s high level of communicative competence. First of all, a grammaticalized sentence ender –nuntey was used more by two older groups. This sentence ender is grammaticalized by means of the main clause deletion (Sohn, 1990), which serves the function of politeness strategy. The original form is a clause-final suffix –nuntey, which literally means ‘and; but; with the background as such,’ with the function of indicating the previous clause is the background of the main clause. When the main clause is omitted, as in the production of these children, this grammaticalized sentence ender develops the function of involving the listener to the conversation by leaving the interpretation with the interlocutor and letting the listener decide whatever conclusion is proper, for instance. In this specific task, in order to respond a silly puppet’s contradicting comment, saying “(Suzie) kicked ice cream-TAY, hehehe,” about what the child had done personally, more than 20% of these four- and five-year-old young Korean children had rather passively – politely, in other words – responded as saying something like ‘I ate ice cream, but (if you insist, I won’t comment further…).’

Younger three-year-olds had less number of this ‘polite passive’ kind of responses, but another grammaticalized sentence ender, –tako, was found. The literal meaning of this –tako form was explained by the researcher as ‘a complementizer specifically used to mark the embedded declarative clause as being quoted, … therefore,
the child appeared to use the –*tako* complementizer to quote his own remark while omitting the verb ‘say.’ This explanation is a true statement but may not represent the whole idea or its function intended by the child who used it. The grammaticalization of –*tako* sentence ender also involves the main clause deletion, where the main verb deleted is *hata* ‘to say.’ When the main clause deletion occurs, the spoken utterance may gain illocutionary force to express the speaker’s attitude towards the contradicting information, as saying “(I said/didn’t I say) I ate ice cream (!)"

The production data from the tasks targeting the hearsay –*TAY* showed that the older Korean children were, the more they used –*TAY*. Figure 2.11 below shows all the types of the SEs and the ratio by age.

Figure 2.11 Results of production tasks eliciting hearsay –*TAY* (Papafragou et al., 2007)
Three-year-old group produced -TAY at the rate of 56.7%, which was viewed as an empirical confirmation of earlier study of spontaneous production (Choi, 1995). However, as explained earlier, it is completely not wrong to use –E for a child to express someone else’s information that they had already processed. Using –E simply means that they expressed what they surely knew and they probably trusted the source of information when puppets were talking about their own past experiences. Also, explained above, use of the grammaticalized quotative sentence ender –tako should also be proper to use in such a task context. Papafragou and her colleagues interpreted only increasing use of hearsay –TAY along with age as a developmental pattern.

Nevertheless, it seems to me that increased use of –TAY, together with more productions of the grammaticalized SE –nuntey in the previous task, may as well be called young Korean children’s development of pragmatic competence. It is obvious that these children were choosing more adult-like evidentiality markers that were more context-proper, becoming a better and more trust-worthy member of speech community by marking secondhand information, and actively considering the listener’s knowledge state.

Also, such growth could be seen as the development of refining or differentiating the types of their own knowledge based on the degree of assimilation into the knowledge systems, which is a crucial piece of information in choosing other Korean SEs such as mirative SE suffixes –ney or –kwun(-a). As a matter of fact, such possibility become more plausible when Papafragou and her colleagues compared the –TAY production in the hearsay elicitation with the accuracy in ‘Tell’ condition of ‘Others’ task of non-linguistic source monitoring tasks, and found a significant positive association between children’s
performance in these two tasks. They noted that this significant positive relation suggested that ‘the more hearsay morphology a child produced, the more accurate the performance of that child was when evaluating the knowledge that others obtained from communication.’

In Sum, we have reviewed some groundbreaking child language acquisition studies and cross-linguistic child language acquisition studies, and found some similarities. These studies shed light on future research in that they pioneered investigating child language acquisition and cognitive development in relation to the notion and the expressions of the source of information using innovative non-linguistic tests and linguistic tests. Their findings are also very inspiring in that they show human language development and cognitive development get affected by the mother tongue in terms of sensitivity to evidential concept, i.e. the types of information source. Young children whose languages with grammaticalized evidential verbal morphology tend to perform better with their own source of belief or source of information. Turkish children tend to be better with direct evidence compared to hearsay or inferential evidence, and only from the age of 7, the children started to show ability to properly match the types of information source and the linguistic morphemes. Unlike Turkish which has a grammatical category of evidentiality and there are two past tense choices depending on the types of evidence, Korean does not have grammatical evidentiality or evidentials, which should exclusively denote the type of information source. Except for one hearsay sentence ender, Korean SE suffixes do not have to denote a certain types of information. Nevertheless, Korean SEs may have some extent of evidential extensions, which means, using a certain Korean SE may happen to generate an accidental implication about a type
of information source. Such evidential extension does not have anything to do with the original meaning or functions of the SE. Korean SEs usually denote the knowledge state with the speaker, such as varying degrees of assimilation of the information to the speaker’s knowledge system, or the speaker’s certainty about the information and indication about the state of the information being shared between the speaker and the interlocutor. Some of the basic Korean SEs were found in young children’s meaningful productions even much before their second birthdays. In Choi’s (1995) naturalistic production data, Korean children at the age of 1;8 ~ 1;10 started using –TA for new/unassimilated information, 1;9 ~ 1;11 for –E for old/assimilated information, and 1;10 ~ 2;4 for hearsay –TAY. However, there are no empirical data that show Korean children at these ages were meaningfully producing and/or understanding the semantic meanings of these sentence-enders.

More cross-linguistic investigation comparing young Korean children and English-speaking children had interesting observations. Some of these studies provided the meaningful evidence that hinted the possibilities of the linguistic characteristics of a child’s language influencing cognitive development. It was empirically observed that Korean children started developing source monitoring ability and producing evidential markers meaningfully as early as three years of age. It was also shown that, however, compared to English-speaking peers, Korean children were consistently delayed in naming spurt and object-classification ability (Gopnik & Choi, 1990), but their delayed naming spurt was preceded by much earlier verb spurt (Choi & Gopnik, 1995). It was also found that they used more verbs and fewer nouns (Choi & Gopnik, 1995). A series of cross-linguistic experimental studies by Papafragou and her colleagues also made
advancement in the field of child language acquisition and cognitive development related to evidentiality, despite of few caveats in their assumptions about the semantics of Korean SEs in their hypotheses. Their studies were comparing Korean children and English-speaking children between the age of three years old and five years old, and their data and experimental results that were not affected by the initial wrong assumption generally confirmed the previous findings about Korean children’s cognitive abilities related to the source of monitoring and associated development in linguistic and pragmatic competence.

So far we have discussed the possibility that general cognitive development and source monitoring development might be influenced by the linguistic characteristics at an early age. One may hypothesize that an adult’s mind might continue having the – possibly, reinforced – relative sensitivities to the concept of evidentiality, that is, the sense of necessity to differentiate the types of information source and linguistically mark it using a grammaticalized morpheme or using semantic extension of a syntactic means or a lexical means. Now, when we turn our attention to adult second language learners learning the target language feature of evidentiality, which has not been visited empirically yet, we can ask quite a few questions: would the adult learners have any difficulties after all? How much of advantage or handicap may their first language bring them? Or, would some other factors in learning interfere learning more? In the next chapter, I will introduce a series of experiments with the research questions discussed in detail.
CHAPTER 3
THE EXPERIMENTS

This chapter introduces an empirical study on second language (L2) acquisition of evidentiality requirement for expressions of psychological state of mind in Korean. There are three experiments; One experiment is an open-ended picture description task, and the other two experiments focus on one of the Korean evidentiality strategies, the –e-hata verbal construction. As discussed in the § 2.2, the –e-hata attaches to a psychological predicate when a speaker expresses someone else’s state of mind based on the information s/he personally obtained. I will first state the research questions, then explain the methods and the results of the experiments.

3.1 Research questions

3.1.1 L2 learners’ challenges

Despite the mandatory characteristics, little is known about the rule of marking evidentiality when expressing someone else’s psychological state of mind or its L1 or L2 acquisition. If learning this rule is harder for some L2 learners or in some context, what would make it harder? When it comes to learning the rule of marking evidentiality for expressions of psychological state of mind, L2 learners seem to face considerable difficulties to overcome.

First of all, the full picture of the evidentiality requirement is never explicitly taught as a rule or mentioned in a Korean language curriculum, except for an introduction of the –e-hata verb construction. The –e-hata verb construction is explicitly taught when
learners are introduced to sensory adjectives or the desiderative adjectival phrase –ko siph-ta ‘to want (to do something); to be feeling like (doing something)’, with an instruction that it should be used with a 3rd person subject. The time of instruction is relatively early, since such predicates are used as one of the basic communicative functions for beginners. However, this instruction does not provide the complete picture of this rule either, nor does it give a satisfying explanation why person agreement is suddenly required in Korean, which does not have person agreement anywhere but with this certain group of adjectives. There is a subject honorific agreement rule in in the grammar of Korean, but the rule is not limited to a certain semantic group, but applies to all the predicates. Also, the boundary of this target predicate group to use the –e-hata form with is not clearly drawn, so it is not known or taught which predicates should need the –e-hata construction or an evidentiality strategy. Such lack of clear instruction may become a handicap for some adult learners.

Moreover, the target evidential forms are not uniform, that is, the requirement to mark someone else’s psychological state of mind can be satisfied with any non-firsthand evidentiality strategy. As discussed earlier, these strategies exist in a wide range of expressions across grammatical categories, including past tense or perfect aspect, verbal constructions, various epistemic modal expressions, any quotative, nominalizations, passivization, etc. Therefore, L2 learners of Korean are exposed to language input that does not come in limited number of forms that have discernible regularity.

Especially, it may become a bigger problem for learners that these evidentiality strategies are not intrinsically evidentials, but they have their own primary meanings and functions. They just happen to convey non-firsthand evidential implications, so in the
course of language learning, L2 learners may only focus on the primary meanings and functions of these expressions, like degree of certainty of an epistemic expression, or the quoting function of a quotative suffix, instead of considering these forms’ semantic extension that is called for as a mandatory rule, or the immediate linguistic contexts that called for such evidential marking. Also, what makes the target language input even messier is the fact that these evidentiality strategies, which are supposedly used for non-firsthand 3rd-person’s inner thought, are often used for 1st person’s inner thought for objectifying purpose as well.

When it comes only to the –e-hata construction, it is dealt with as an important grammar feature in most curricula of Korean as a Second/Foreign Language (KSL/KFL). The most textbooks of college KFL course in the US introduce the –e-hata construction within the first semester. For instance, KLEAR textbook (University of Hawaii Press) used for many college KFL courses has the corresponding grammar feature in Chapter 8, which is the beginning of the second semester (about 50th hours of instruction). The textbook used before 2011 at the Defense Language Institute Foreign Language Center (DLIFLC) in Monterey, California is designed to teach the grammar feature during the 9-10th week in a 64-week course, and the current DLIFLC textbook has it taught during the 6-7th week, which is equivalent of around 200th hours out of about 2,600 hours of intensive instruction. Since DLIFLC has a unique intensive language program, to take examples of other grammar features taught at the similar period in the course, the –e-cwuta ‘to do (something for someone)’ benefactory verb construction, past tense suffix –ess-/ass-, and future/intension suffixes are taught almost at the same time. Even when we focus on the explicitly taught –e-hata construction, however, a learner still faces major
challenges.

First of all, learners should know the semantic change or evidential overtones that combining –e-hata brings to a psychological predicate. The translation of ‘to show the sign of …’ should be the closest to the meaning, but it may still convey the meaning that the experiencer deliberately carries out an action of showing the emotion, whereas the evidential overtone is rather subtly indicating that the speaker of the sentence have passively observed the externally expressed sign of the inner state of mind of the experiencer. Such a subtle semantic difference often gets lost in translation. Also, L2 learners need to master the syntactic differences between an unmarked psychological predicate and its –e-hata-marked predicate. The syntactic differences stand out especially when the original psychological predicate is an adjective, since more differences basically caused by the category change from adjective to a transitive verb. Since not all the psychological predicates are adjectives – some are intransitive verbs and others are transitive verbs – this category change does not apply to all the psychological predicates. To name a few, the e-hata construction assign accusative case marker to a theme, the construction can now form a progressive forms as in -e-ha-ko issta ‘to (doing something),’ or -e-ha-nun cwung-ita ‘to be in the middle of (doing something),’ and uses all the verbal morphology not adjectival morphology (See chapter § 2.2). There has not been a data-based or empirical study on L2 learners’ performance on this feature, nevertheless, as having taught college-level KFL in the US for over 10 years the impression is that the L2 acquisition of the –e-hata construction and proper production of many evidential expressions do not seem to be as successful as other verb phrases or verbal constructions, or other grammatical categories like tense or modality.
3.1.2 Research questions

Given that the acquisition of evidentiality for expressions of psychological state of mind is this much challenging, what factors involved in this specific requirement play important roles in L2 acquisition? Do learners really show significant difficulties with learning the evidential meaning and form? This study has the following factors that could come into play in mind: How significantly would L2 learners’ proficiency matter in L2A of evidentiality? Would L2 learners’ L1 background play a role? If so, how much, or in what way would a learner’s L1 affect the learning? Would linguistic context, such as different predicates make a difference? Would the non-linguistic information of evidence type influence L2 learners’ evaluation of language input? In order to answer these general inquiries, this study employs three experiments to investigate L2 acquisition of Korean evidentiality strategies used for expressions of psychological state of mind, taking the following variables into consideration: learner variables, linguistic variables and non-linguistic contextual variable. There are two learner variables including L1 backgrounds and target language proficiency level. Linguistic variables include psychological predicate types and evidentiality agreement. Two psychological predicate types are used in the experiment: sensory adjectives and desiderative expressions. Evidentiality agreement variable is to see L2 learners identify proper agreements between an experiencer of psychological state of mind and the predicates, and the experiments only deals with 1\textsuperscript{st} person experiencer with an unmarked predicate and 3\textsuperscript{rd} person with a marked predicate. The cases where a 1\textsuperscript{st} person experiencer appears with a psychological predicate marked with non-firsthand evidentiality are considered as the speaker’s
pragmatic choices, instead of mandatory choices. Lastly, as for non-linguistic contextual variable, the study compares the effects of two types of evidence in one of the experimental designs, that is, whether the experiencer has visual firsthand evidence or hearsay information about someone else’s inner state of mind.

The L1 background variable is employed to empirically test whether learners’ L1 with the similar evidentiality requirement for expressions of psychological state of mind, namely Japanese, has a significant advantage over the other L1 without such requirement in L2 evidentiality acquisition, namely, English. In order to look at such effect, KFL learners whose L1 is either Japanese or English were only recruited for all the experiments. If accepting Whorfian (1956) ideas that one’s language actually influence his/her mind, it can be hypothesized that different languages may influence the way the speakers’ minds work, especially in language acquisition. The previous studies on L1 evidentiality acquisition and early cognitive development showed the possibilities that language may affect the learners’ language and cognitive development. If such influence of language on mind is real, it might continue in an adult’s mind, especially when adult’s cognitive activities or learning – in this study, language learning – takes place. Therefore, since English does not require evidentiality marking for any context, it is plausible to hypothesize that English-speaking learners of Korean who are not used to having to mark for source of information, even using a specialized grammaticalized form or a syntactic form, might show more difficulties in attaining successful acquisition of Korean mandatory evidentiality marking for an expression of someone else’s psychological state of mind. On the other hand, since Japanese operates on the similar rules, it can be hypothesized that Japanese-speaking learners of Korean may have some advantages in
learning the feature. The other learner variable is general proficiency level. If an L2 learner is proficient enough, s/he might have already overcome the L1 ‘handicap,’ and L1 effect may not be as significant as proficiency.

Linguistic variables of this study are types of psychological predicates and evidentiality agreement. There are two types of predicates with which the participants’ performance are to be compared: sensory adjectives and desiderative expression –ko siph-ta ‘to want to (do something); to be feeling like (doing something).’ One of the most frequently used evidential marking strategies is the –e-hata construction, and it is explicitly taught in KSL/KFL curriculum along with the desiderative form –ko siph-ta ‘to want (to do something); to be feeling like (doing something)’ fairly early in the curriculum, almost at the same time as past and future tense. Some KFL textbooks, like KLEAR (University of Hawaii Press), mention the sensory adjectives with a 3rd person subject should accompany –e-hata, but not all the textbooks do. Therefore, it is hypothesized that Korean desiderative –ko siphta predicates would be easier for L2 learners to identify as psychological predicates that require a marking than sensory adjectives. The other linguistic variable is evidentiality agreement between the person of the subject of a sentence and the psychological predicate. All the experimental and distractor sentences are in the present tense and a psychological predicate is a sentence-final predicate. This condition requires a sentence with a 3rd person subject to have an evidential marking. So, when a subject is a 3rd person and the –e-hata construction is used with a sentential predicate, the sentence is correct. When a subject is a 3rd person and a sentential predicate does not have any other marking, it is incorrect. When it comes to sentences with a 1st person subject, bare psychological predicates are definitely correct,
and most of the time evidentially marked psychological predicates are also correct. However, this study only treats a bare sentential predicate. It is because the use of evidentiality marking brings in additional implications, such as objectifying inner state of mind, to the base meaning of the proposition. Such applied uses of the psychological predicates are deemed to belong to more advanced level learners or native speakers of Korean. Also, all the experimental and distractor sentences are used in additional linguistic and/or non-linguistic context, which means contextually it becomes clear whose evidence is talked about in a sentence. Therefore, even when a subject is omitted in a sentence, it is clear in the context whether the sentence-final psychological predicate should be marked (since a 3rd person subject is omitted), or it is ok not to be marked (since a 1st person subject is omitted).

The non-linguistic contextual variable employed in this study is types of evidence: visual firsthand information vs. hearsay information. Unlike very young children whose cognitive abilities have not fully developed, it is assumed that adult learners should have no problem in acknowledging that someone has firsthand information about someone else after having a face-to-face conversation with her/him, or hearsay of information after having a conversation with her/him. Therefore, there should no need to test adult L2 learners with purely non-linguistic source monitoring abilities as we have seen in child language acquisition studies. However, the current study is still asking how well adult L2 learners can identify the needs to express the non-linguistic knowledge about information source originated from someone else than the speaker, in order to investigate evidentiality acquisition. Thus, the study gives learners problems that they have to solve using their non-linguistic knowledge obtained from a context which
triggers required linguistic evidential marking. Based on the L1 study results, it was hypothesized that the visual firsthand condition where a speaker personally witnesses and talks to the other person to learn about the other’s psychological state of mind might be easier than the hearsay condition where a speaker obtains the information through a reported speech over the phone.

Experiment 1 and 2 are receptive tests, using only the –e-hata construction as an evidentiality strategy in the experimental items, and Experiment 3 is an open-ended production test. In Experiment 1, participants are asked to identify a proper experiencer of the expressed psychological state of mind based on the non-linguistic contextual cue and the linguistic cue. Experiment 2 is grammaticality judgment task (GJT) to rate the grammaticality of a part of an utterance based on the linguistic context. And Experiment 3 is a picture description task of which scenario encourages participants to report about someone else’s psychological state of mind to a 3rd party.

The research questions are summarized below. Three experiments are designed with learner variables, linguistic variables, and non-linguistic variable to test learners’ receptive ability as well as productive ability to answer the research questions.

1. The study tests how well adult L2 learners of Korean identify a person whose psychological state of mind is expressed based on a given linguistic cue (the e-hata evidentiality strategy) and a non-linguistic cue (the context that triggers a mandatory evidentiality expression).

2. The study tests how accurately adult L2 learners of Korean perform in a GJT
(Grammaticality Judgment Test) to evaluate whether a sentence is incorrect on sentences where evidentiality agreement is not met because someone’s psychological state of mind are not marked with evidentiality expression.

3. The study tests whether there is an effect of a learner’s L1 on L2 evidentiality acquisition. If an L2 learner’s L1 affects the acquisition of evidentiality, the L2 learner group whose L1 also has evidentiality requirement would perform significantly better than the other learner group whose L1 does not have such a requirement.

4. The study tests whether there is an effect of the types of evidence on the performance of L2 learners. There are two ways how the speaker of a sentence obtains the information, a face-to-face contact (visual firsthand evidence) and a phone conversation (hearsay evidence).

5. The study tests whether there is an effect of the types of a psychological predicate on L2 acquisition of required evidentiality. There are two groups of psychological predicates to be tested: sensory adjectives and desiderative expressions, –ko siph-ta ‘to want to (do something); to be feeling like (doing something).’

6. The study tests whether there is an effect of general proficiency level of learners.
The study examines the productive ability of L2 learners of Korean on evidentiality requirement. The analysis will focus on the comparison of receptive and productive performance and the types of evidentiality strategies the adult L2 learners use in a verbal production task where they have to report someone else’s psychological state of mind to a third party.

The following section will discuss experimental materials and procedures of each experiment in detail.

3.2. Experiment 1

Experiment 1 investigated how well L2 learners of Korean would understand the evidential concept and meaning expressed by the –e-hata construction used in a required context. Two non-linguistic conditions were incorporated to provide contextual clues that a speaker had just obtained the information through a face-to-face conversation or a phone conversation. Such condition used with evidential marking lead a necessary interpretation of who would be the experiencer of the expressed psychological state of mind.

3.2.1. Method

3.2.1.1. Participants

Total of 96 adult learners of Korean language participated in the study, including 53 Japanese-speaking learners, 43 English-speaking learners. Data from one English-speaker were excluded due to the bilingual language background. Thus, data from 53
Japanese learners and 42 English-speaking monolingual learners were included in the analysis. 22 adult Korean native speakers also participated in the study as a control group. Six of the Korean native speakers only participated in the picture description production task (Experiment 3), and 16 participated in all three studies.

All the Japanese participants were recruited from Korean language programs in universities in Seoul, Korea. 8 English-speaking learners were recruited from the above language programs in Seoul, Korea and 35 English-speaking learners were recruited from Defense Language Institute Foreign Language Center (DLIFLC) in Monterey, California, and the students who had finished at least one third of the Korean Basic Course were invited to the study. Except for two from Seoul, most of the Korean native speakers were recruited from Monterey, California.

All the learner participants answered a biographical data survey and a 10-item cloze test in addition to the experiments. The biographical data survey asked the participants’ age, native language, the duration of studying Korean, the duration of stay in Korea, and the duration of studying Korean in Korea. The question asking duration of studying Korean had three multiple choices to choose from; 1) less than one year, 2) between one year and three years, or 3) more than three years. Most of the participants from DLI who answered they had studied Korean between one year and three years had studied Korean barely over one year, up to one year and four months.

The cloze test was a one-page fill-in-the-blank style reading test to measure the general proficiency level of a participant. The cloze test used in this study is in Appendix A. Participants were asked to fill in each blank with appropriate word(s), phrases or a clausal connector that would fit the passage most naturally in four Korean passages. The
difficulty level and the length of the sentence and passage gradually increased. The first few items consisted of only one short and simple sentence, and the latter passages involved higher-register vocabulary and formal expressions. There were 10 blanks and each blank carried 1 point, and half a point was granted based on the semantic appropriateness. Scoring was done by the researcher and another native Korean language instructor.

In the analysis, in addition to the L1 background, the students are grouped into two proficiency groups based on the cloze test results. The duration of study, the duration of stay in Korea or the duration of studying Korean in Korea failed to show significant correlation with cloze test results or experiment performances, and was not considered as a reliable indicator of the students’ proficiency. For instance, one English-speaking learner who answered to have studied Korean over three years performed quite poorly in the cloze test and all the experiments. Tables and charts below present the average scores of the learner participants’ cloze test by L1, the duration of studying Korean, and by proficiency.
Table 3.1 Participants’ mean length of stay in Korea and mean length of studying Korean in Korea by the duration of studying Korean

<table>
<thead>
<tr>
<th>Native Language</th>
<th>Number of participants by duration of studying Korean</th>
<th>Mean cloze test score</th>
<th>Mean length of stay in Korea</th>
<th>Mean length of studying Korean in Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>0 – 1 year</td>
<td>4.07</td>
<td>7.39 months</td>
<td>7.06 months</td>
</tr>
<tr>
<td></td>
<td>1 – 3 years</td>
<td>5.57</td>
<td>21.17 months</td>
<td>14.52 months</td>
</tr>
<tr>
<td></td>
<td>3 years and up</td>
<td>3.00</td>
<td>33.08 months</td>
<td>20.36 months</td>
</tr>
<tr>
<td>Japanese</td>
<td>0 – 1 year</td>
<td>5.03</td>
<td>1.65 months</td>
<td>0.65 months</td>
</tr>
<tr>
<td></td>
<td>1 – 3 years</td>
<td>6.74</td>
<td>21.17 months</td>
<td>4.50 months</td>
</tr>
<tr>
<td></td>
<td>3 years and up</td>
<td>7.54</td>
<td>24 months</td>
<td>22 months</td>
</tr>
</tbody>
</table>

Figure 3.1 Participants’ Cloze test results by mean length of studying Korean by L1

![Average cloze test scores by duration of studying Korean and L1](image)
3.2.1.2. Experimental Procedure and Items

For each item in Experiment 1, a participant watched a short movie on a computer screen where there were three-to-four characters: Frog, Lamb, Pig, and Monkey. The number of characters varied depending on a story. Plush toy dolls were used to play these roles. Experimental materials were created by the Microsoft Windows Live Movie Maker software and the audio recording was done using Audacity software. The characters were placed in a room-like space divided into indoor and outside by a wall. There is always one character sitting outside the wall. After a brief moment of two of the characters seemingly talking to each other, one of the characters turns front (toward the viewer) and moves close to the camera. When this character is in front of the camera (the viewer), s/he makes a comment, which includes a statement of psychological state of mind where there is no explicit subject of a sentence. The participant is now asked to
answer to a question asking who it was that felt the expressed psychological state. On the answer sheet (Appendix 2), each question was presented with multiple choices. All the multiple choice items had color-printed facial pictures of the applicable animals with Korean and English names. All the multiple choice items were in the same order throughout the experiment.

There were total four experimental conditions, using two non-linguistic contextual conditions, ‘See Condition’ and ‘Hearsay Condition,’ and two linguistic evidentiality agreement conditions, ‘1st person with unmarked psychological predicate’ and ‘3rd person with marked psychological predicate.’ All the experiential items were correct sentences. Four experimental conditions are summarized in Table (3.2) below.

Table 3.2 Experimental conditions in Experiment 1

<table>
<thead>
<tr>
<th>Condition 1</th>
<th>See Condition</th>
<th>1st person subject + without –e hata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition 2</td>
<td>See Condition</td>
<td>3rd person subject + with –e hata</td>
</tr>
<tr>
<td>Condition 3</td>
<td>Hearsay Condition</td>
<td>1st person subject + without –e hata</td>
</tr>
<tr>
<td>Condition 4</td>
<td>Hearsay Condition</td>
<td>3rd person subject + with –e hata</td>
</tr>
</tbody>
</table>

Two types of linguistic conditions were with or without an evidential expression –e-hata, based on the person of the omitted subject. Two types of non-linguistic contexts were about how a speaker obtained the information of the psychological state of mind of another person: a visual face-to-face contact (See condition) and an auditory hearsay contact through a phone conversation (Hearsay condition).

This study did not include any cases where a first person subject took the
evidential expression –e-hata, since such usage of the –e-hata with a 1\textsuperscript{st} person subject could bring in an additional semantic implication to the sentence, such as deliberate or intentional action or objectification. Also, the case where a third person subject was used without the –e-hata was not included, since such unmarked usage can be possible only when the speaker can assume the privilege of knowing the inner thoughts and emotions of the experiencer, such as omniscient narrator or a close kinship relation (See Chapter 2.2). Thus, a first person subject was used only in the condition where a plain psychological predicate without the –e-hata, and a third person subject was used only with a predicate that was evidentially marked with –e-hata.

In the See conditions (condition 1 and 2), two characters (e.g., Monkey and Piggy) face each other in a room and the third character is sitting outside alone. After two facing characters are seemingly talking to each other, one character (e.g., Monkey) turns toward the camera (the viewer), moves close to the camera and makes a comment. The following screen shots are examples of the See Conditions.

Figure 3.3 Screen shots of a video clip of See Conditions (Condition 1 and 2)
The comment always has two parts. First sentence is always a statement about the activity that s/he has just been engaged in, e.g. talking to Piggy, or meeting Piggy. The types of verbs that describe the activity in the See condition are limited to ‘to meet,’ ‘to talk with,’ and ‘to see.’ For experimental items, the second statement is about someone’s psychological state of mind, but this statement is always missing an explicit subject. For example, ‘e-hwu, pangkum twayci-ul mann-ass-nuntey; kipwun-i manh-i napp-ayo (Geez, (I) just met Piggy. And (I) feel really bad).’ This comment is an example of condition 1, where the speaker is the experiencer, and simply stating his/her own thought. In condition 2, where the speaker is mentioning about someone else’s psychological state of mind which s/he has just observed, the –e-hata construction is used to mark the psychological state of mind. For instance, a comment of Monkey in condition 2 is ‘e-hwu, pangkum twayci-ul poass-nuntey, kipwun manh-i napp-a-hay-yo (Geez, (I) just saw Piggy. And (he seems to) feel really bad).’ The –e-hata construction in condition 2 has the evidential connotation that Monkey got to learn about how Piggy felt based on his visual observation.

In the Hearsay conditions (condition 3 and 4), the setting of a movie is slightly different from that of the See conditions in that there are always two characters inside the room and they were not facing each other. There also are two phones, one with a talking character in the room and the other with the outside character. At first, the outdoor character and the indoor character are holding a phone and seemingly talking to each other. After a brief phone conversation, the indoor character turns toward the viewer and makes a comment without looking at the other indoor character. The following screen
shots are examples of the Hearsay Conditions.

Figure 3.4 Screen shots of a video clip of Hearsay Conditions (Condition 3 and 4)

A comment in Hearsay Condition also has a comment about the previously engaged activity followed by a psychological statement with omission of a sentential subject. An example of condition 3 is ‘wa, pangkum kaykwuli-hako cenhwaha-yss-nuntey, kath-i pathi-ey acwu ka-ko siph-eyo (Wow, (I) just talked on the phone with Frog, and (I) really want to go to the party with (him)),’ where the speaker, Lamb, is stating her own wish to go to the party with Frog. Lastly, condition 4 uses the –e-hata construction for an omitted 3rd person subject, for example, ‘wa, pangkum kaykwuli-hako cenhwaha-yss-nuntey, kath-i pathi-ey acwu ka-ko siph-e-hay-yo (Wow, (I) just talked on the phone with Frog, and (he seems to) really want to go to the party with (me)).’ The only possible interpretation of this comment with the –e-hata construction is that Lamb noticed Frog’s desire to go to a party with her through the phone conversation.

After listening to a talking character’s comment, a participant was asked to choose one of the multiple choices on the answer sheet. On the answer sheet there is a
question per comment asking who it was that had the feeling or desire. All the multiple choices had a color-printed picture of the animal character along with the names in Korean and English, and all the characters were arranged in the same order throughout the experiment. For example, ‘who’s in a bad mood here?’ or ‘who wants to go to the party?’ Figure (3.5) is a part of the answer sheet.

Figure 3.5 Experiment answer sheet sample

<table>
<thead>
<tr>
<th>1. Which of the following characters wants to become a teacher?</th>
</tr>
</thead>
<tbody>
<tr>
<td>양 (Lamb)</td>
</tr>
<tr>
<td><img src="image1" alt="Lamb" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Which of the following characters is having a hard time due to a cold?</th>
</tr>
</thead>
<tbody>
<tr>
<td>양 (Lamb)</td>
</tr>
<tr>
<td><img src="image1" alt="Lamb" /></td>
</tr>
</tbody>
</table>

There were two types of psychological predicates: sensory adjectives and desiderative expressions –*ko siph-ta* ‘to want (to do something); to be feeling like (doing something).’ Each predicate type had 4 vocabulary items for each condition, so there were 8 experimental items in each experimental condition and the total of 32 experimental items.

In addition to four experimental conditions with 32 items, there were distractor
and filler items. The total of distractors and fillers made up 50 per cent of the total number of the experimental items, so that the participants should not figure out the targeted forms while taking the task. The distractors were designed to use other independent grammar features, A–pota B ‘B than A’ and relative clause. The object of comparison A–pota ‘than A’ phrase can precede or follow ‘B,’ therefore, two distractor items had preceding object of comparison phrases and two items had the reverse phrasal order. The other distractors using relative clauses had a relative clause modifying a different element of a sentence. There were total 8 distractor items. The fillers comprised of sentences with coordination structure. There were four fillers in See conditions and four in Hearsay conditions, so total 8 fillers were designed. Therefore, the total number of distractors and fillers put together was 16, the half of the number of the total experimental items. The following Table 3.3 summarizes all 32 experimental items and 16 distractors and fillers.
Table 3.3 Summary of the items used in Experiment 1

<table>
<thead>
<tr>
<th>Experiment 1 EXPERIMENTAL ITEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition 1</td>
</tr>
<tr>
<td>Condition 2</td>
</tr>
<tr>
<td>Condition 3</td>
</tr>
<tr>
<td>Condition 4</td>
</tr>
<tr>
<td>Total number of experimental items</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DISTRACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-&lt;i&gt;pota&lt;/i&gt; A</td>
</tr>
<tr>
<td>Relative clause</td>
</tr>
<tr>
<td>Total number of distractors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FILLERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unrelated grammatical sentences</td>
</tr>
<tr>
<td>Total number of fillers</td>
</tr>
<tr>
<td>Total number of items</td>
</tr>
</tbody>
</table>

3.2.3. Results

3.2.3.1. Overall results

The results by L1 background and proficiency show the main effect of L1 (Experimental item accuracy F (1, 91) = 31.5, p<0.05; total item accuracy F (1, 91) = 45.5, p<0.05). Regardless of the L2 learners’ general proficiency, evidentiality agreement condition, evidence types, or predicate types, Japanese learners outperformed English-speaking learner groups in identifying the proper experiencers. The low proficient
Japanese-speaking learners showed better performance than high proficient English-speaking learners in identifying the proper experiencer. The overall proficiency (Low proficient learners vs. High proficient learners) also showed the main effects on both overall answers and experimental items. Table 3.4 shows the overall results.

Table 3.4 Overall results of experiencer identification task by L1 and proficiency

<table>
<thead>
<tr>
<th>L1</th>
<th>Proficiency group (Cloze test average, number of participants)</th>
<th>Experimental (out of 32)</th>
<th>Total (out of 48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low (3.17, n = 26)</td>
<td>21.3 (66.6%)</td>
<td>34.7 (71.0%)</td>
<td></td>
</tr>
<tr>
<td>High (6.13, n = 16)</td>
<td>22.8 (71.3%)</td>
<td>36.5 (76.0%)</td>
<td></td>
</tr>
<tr>
<td>Japanese</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low (3.58, n = 12)</td>
<td>23.9 (74.7%)</td>
<td>38.8 (80.9%)</td>
<td></td>
</tr>
<tr>
<td>High (7.15, n = 41)</td>
<td>28.6 (89.5%)</td>
<td>43.8 (91.3%)</td>
<td></td>
</tr>
<tr>
<td>Native speakers of Korean (n = 16)</td>
<td>31.1 (97.3%)</td>
<td>46.9 (97.6%)</td>
<td></td>
</tr>
</tbody>
</table>

Learners were divided into four groups of Low proficient English speakers, High proficient English speakers, Low proficient Japanese speakers, and High proficient Japanese speakers. This grouping of L1-Proficiency had significant main effects on overall performance (F = 19.97, p<0.05) and experiment performance (F = 14.92, p<0.05). Among Japanese speakers, their proficiency level significantly affected their performances in terms of all of the variables tested, except for an evidentiality agreement condition for 1st person at the level of p < 0.5. The following table shows the results of ANOVA on each variable calculated in SPSS with independent variable of L1-Proficiency.
Table 3.5 Descriptive statistics and ANOVA on Japanese learners’ performance by proficiency

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean (out of 16)</th>
<th>SD</th>
<th>Mean Square</th>
<th>F</th>
<th>p. (Sig)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Evidentiality Agreement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st person Condition</td>
<td>14.75</td>
<td>1.531</td>
<td>2.796</td>
<td>1.276</td>
<td>Significant 0.268 (&lt;0.5)</td>
</tr>
<tr>
<td>3rd person Condition</td>
<td>12.81</td>
<td>4.519</td>
<td>41.589</td>
<td>3.111</td>
<td>Significant 0.003 (&lt;0.05)</td>
</tr>
<tr>
<td><strong>Evidence Types</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>See Condition</td>
<td>14.28</td>
<td>2.597</td>
<td>11.413</td>
<td>2.199</td>
<td>Significant 0.029 (&lt;0.05)</td>
</tr>
<tr>
<td>Hearsay Condition</td>
<td>13.28</td>
<td>2.273</td>
<td>10.263</td>
<td>2.958</td>
<td>Significant 0.004 (&lt;0.05)</td>
</tr>
<tr>
<td><strong>Predicate Types</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensory Adjectives</td>
<td>13.30</td>
<td>2.391</td>
<td>9.202</td>
<td>2.021</td>
<td>Significant 0.045 (&lt;0.05)</td>
</tr>
<tr>
<td>Desiderative Phrases</td>
<td>14.26</td>
<td>2.435</td>
<td>12.110</td>
<td>3.131</td>
<td>Significant 0.003 (&lt;0.05)</td>
</tr>
<tr>
<td><strong>Correct Experimental Items</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(out of 32)</td>
<td>42.71</td>
<td>4.956</td>
<td>41.292</td>
<td>2.701</td>
<td>Significant 0.008 (&lt;0.05)</td>
</tr>
<tr>
<td>(out of 48)</td>
<td>27.57</td>
<td>4.668</td>
<td>50.573</td>
<td>3.183</td>
<td>Significant 0.003 (&lt;0.05)</td>
</tr>
</tbody>
</table>

Among English-speaking L2 learners, their proficiency did not have any significant effect on their performances in any variables tested. Below Table shows the descriptive statistics and ANOVA results of English-speaking learners’ performance compared between two proficiency groups calculated using SPSS.
Table 3.6 Results of English-speaking learners’ performance by proficiency

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean (out of 16)</th>
<th>SD</th>
<th>Mean Square</th>
<th>F</th>
<th>p. (Sig)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidentiality Agreement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st person Condition</td>
<td>9.81</td>
<td>4.127</td>
<td>18.460</td>
<td>1.127</td>
<td>Significant 0.379 (&lt;0.5)</td>
</tr>
<tr>
<td>3rd person Condition</td>
<td>12.07</td>
<td>3.219</td>
<td>7.945</td>
<td>0.692</td>
<td>Not Significant 0.755</td>
</tr>
<tr>
<td>Evidence Types</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>See Condition</td>
<td>11.60</td>
<td>3.029</td>
<td>8.894</td>
<td>0.956</td>
<td>Not Significant 0.514</td>
</tr>
<tr>
<td>Hearsay Condition</td>
<td>10.29</td>
<td>2.472</td>
<td>5.057</td>
<td>0.766</td>
<td>Not Significant 0.687</td>
</tr>
<tr>
<td>Predicate Types</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensory Adjectives</td>
<td>10.38</td>
<td>2.163</td>
<td>4.191</td>
<td>0.854</td>
<td>Not Significant 0.605</td>
</tr>
<tr>
<td>Desiderative Phrases</td>
<td>11.50</td>
<td>3.459</td>
<td>10.340</td>
<td>0.813</td>
<td>Not Significant 0.643</td>
</tr>
<tr>
<td>Correct Experimental Items (out of 32)</td>
<td>21.88</td>
<td>5.181</td>
<td>23.877</td>
<td>0.846</td>
<td>Not Significant 0.612</td>
</tr>
<tr>
<td>Correct Experimental Items (out of 48)</td>
<td>35.00</td>
<td>6.172</td>
<td>34.340</td>
<td>0.862</td>
<td>Not Significant 0.598</td>
</tr>
</tbody>
</table>

Next each variable was closely examined for its effect on each group. First, the two types of predicate, sensory adjective vs. desiderative phrases, had a main effect on the all the L2 learners’ performance in Experiment 1 (4-group F (1, 3) = 10.07, p = 0.024 < 0.05). When two Japanese speaker groups were compared, their p value was 0.056, so it was not significant at 95% level since it was slightly over 0.05, but significant at 0.5 level. When two language groups were compared, it was significant at < 0.5 level with p value of 0.089, and within English speaker groups, it was also significant at < 0.5 level with p
value of 0.457.

The type of evidence, between See condition and Hearsay condition, also had
main effect on Experiment 1 performance on 4 groups (F (1, 3) = 7.28, p = 0.043 < 0.05).
Again, this variable had more significant effect within Japanese speakers, with p value of
0.073, which was not significant at the 0.05 level, but significant at the 0.5 level. When
two language groups were compared, it was significant at the < 0.5 level, with p value of
0.126. However, English speakers failed to show significant differences with this variable
with p value of 0.515, which was slightly over 0.5.

Lastly, the variable of evidentiality agreement, between the 1\textsuperscript{st} person
experiencer condition and the 3\textsuperscript{rd} person experiencer condition, also had significant effect
on the performance, but with the least variances among the variables. Learners in 4
groups of L1-proficiency showed significantly different performance by the different
agreement condition (F (1, 3) = 1.20, p = 0.417 < 0.5), and when they were looked at by
L1 groups, it had a similar significant differences (p = 0.374 < 0.5). Japanese speaker
groups could also show similar significance at < 0.5 level, with the p value of 0.425 < 0.5,
but English speakers again failed to show differences (p = 0.671).

3.2.3.2. \textit{Comparison with answers with alternative choices}

In order to examine how the participating learners’ made decisions on
experiencer of the expressed psychological state of mind, the incorrect answers selecting
the alternative options were also analyzed. All the experimental items had an alternative
choice between the speaker and the interlocutor, other than the correct answer choices. I
call such choices alternatives, instead of distractors, since the third character existing in
the same scene is called a distractor. For instance, when an experimental sentence has a subject-less psychological predicate which is marked for evidentiality in the form of –e-hata construction, the answer to the question asking who had the expressed feeling or thought should be the interlocutor, not the speaker. If an L2 learner had chosen the speaker as the experiencer in this case, it means s/he did not understand the implication of the evidentiality marking.

For the other case where the speaker did not use an evidentiality marking, there is a possible interpretation that the psychological state of mind might have belonged to both characters (plural 1st person), if an idea is possible to be shared, since the speaker and the interlocutor had just discussed the issue. However, the instruction of the task was clearly asking participants to pick only one most plausible experiencer, and the speaker must be chosen with much higher priority. Since the learner variables, namely L1 background and proficiency level, had strong main effects, the L2 learners’ answers to the 32 experimental items are examined closely in four L1-Proficiency groups by linguistic variable (evidentiality agreement, predicate type) and the contextual variables (see vs. hearsay conditions).

The results by evidentiality agreement show English speakers and Japanese speakers performed differently: Japanese speakers performed much better in the condition for 1st person agreement than that for 3rd person, whereas English speakers performed better in the 3rd person conditions. The following table shows the learners’ performance in different evidentiality agreement conditions in the L1-proficiency group.
Table 3.7 Results by evidentiality agreement types by L1 and proficiency

<table>
<thead>
<tr>
<th>L1</th>
<th>Proficiency group (Cloze test, N)</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; Person Condition (out of 16)</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; Person Condition (out of 16)</th>
<th>Alternative 1&lt;sup&gt;st&lt;/sup&gt; Person Condition</th>
<th>Alternative 3&lt;sup&gt;rd&lt;/sup&gt; Person Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Low (3.17, n = 26)</td>
<td>9.5 (59.6%)</td>
<td>11.8 (73.6%)</td>
<td>6.2 (38.5%)</td>
<td>3.6 (22.4%)</td>
</tr>
<tr>
<td></td>
<td>High (6.13, n = 16)</td>
<td>10.3 (64.1%)</td>
<td>12.6 (78.5%)</td>
<td>5.3 (33.2%)</td>
<td>3.3 (20.7%)</td>
</tr>
<tr>
<td>Japanese</td>
<td>Low (3.58, n = 12)</td>
<td>14.3 (89.6%)</td>
<td>9.6 (59.9%)</td>
<td>1.3 (7.8%)</td>
<td>6.3 (39.1%)</td>
</tr>
<tr>
<td></td>
<td>High (7.15, n = 41)</td>
<td>14.9 (93.0%)</td>
<td>13.8 (86.0%)</td>
<td>1.0 (6.3%)</td>
<td>2.2 (13.6%)</td>
</tr>
</tbody>
</table>

The results by types of predicates show that all the learner groups performed better with desiderative –*ko siphta* phrases than with sensory adjectives. Their performance were getting better in the order of low proficient English speakers, high proficient English speakers, low proficient Japanese speakers, and high proficient Japanese speakers, with low proficient Japanese speakers outperforming high proficient English speakers. The following table shows the learners’ performance to handle sensory adjectives and desiderative phrases.
### Table 3.8 Results by predicate type task by L1 and proficiency

<table>
<thead>
<tr>
<th>L1</th>
<th>Proficiency group (Cloze test, N)</th>
<th>Sensory Adjectives (out of 16)</th>
<th>Desiderative phrases (out of 16)</th>
<th>Alternative Sensory Adjectives</th>
<th>Alternative Desiderative phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low (3.17, n = 26)</td>
<td>11.3 (70.4%)</td>
<td>10.0 (62.7%)</td>
<td>4.5 (27.9%)</td>
<td>5.3 (32.9%)</td>
</tr>
<tr>
<td></td>
<td>High (6.13, n = 16)</td>
<td>12.1 (75.8%)</td>
<td>10.7 (66.8%)</td>
<td>3.8 (23.4%)</td>
<td>4.9 (30.5%)</td>
</tr>
<tr>
<td></td>
<td>Low (3.58, n = 12)</td>
<td>12.4 (77.6%)</td>
<td>11.5 (71.9%)</td>
<td>3.4 (21.4%)</td>
<td>4.1 (25.5%)</td>
</tr>
<tr>
<td></td>
<td>High (7.15, n = 41)</td>
<td>14.8 (92.7%)</td>
<td>13.8 (86.3%)</td>
<td>1.1 (6.7%)</td>
<td>2.1 (13.1%)</td>
</tr>
</tbody>
</table>

All the L2 learner groups performed better in a context where the speaker had just had a face-to-face contact than a hearsay contact on the phone. As with the performance with different predicate type, low proficient Japanese speakers outperformed high proficient English speakers. The following table shows the learners’ performance in different contexts.

### Table 3.9 Results by evidence type task by L1 and proficiency

<table>
<thead>
<tr>
<th>L1</th>
<th>Proficiency group (Cloze test, N)</th>
<th>See Condition (out of 16)</th>
<th>Hearsay Condition (out of 16)</th>
<th>Alternative See Condition</th>
<th>Alternative Hearsay Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low (3.17, n = 26)</td>
<td>11.3 (70.4%)</td>
<td>10.0 (62.7%)</td>
<td>4.5 (27.9%)</td>
<td>5.3 (32.9%)</td>
</tr>
<tr>
<td></td>
<td>High (6.13, n = 16)</td>
<td>12.1 (75.8%)</td>
<td>10.7 (66.8%)</td>
<td>3.8 (23.4%)</td>
<td>4.9 (30.5%)</td>
</tr>
<tr>
<td></td>
<td>Low (3.58, n = 12)</td>
<td>12.4 (77.6%)</td>
<td>11.5 (71.9%)</td>
<td>3.4 (21.4%)</td>
<td>4.1 (25.5%)</td>
</tr>
<tr>
<td></td>
<td>High (7.15, n = 41)</td>
<td>14.8 (92.7%)</td>
<td>13.8 (86.3%)</td>
<td>1.1 (6.7%)</td>
<td>2.1 (13.1%)</td>
</tr>
</tbody>
</table>
3.3. Experiment 2

The goal of Experiment 2 was to see how accurate L2 learners’ understanding of the evidentiality requirement for expressions of psychological state of mind of someone else than the speaker, using a grammaticality judgment test (GJT) in listening mode. Both Experiment 1 and 2 are testing learners with receptive listening skills, two experiments take opposite approaches to the target feature of evidentiality requirement. Experiment 1 tests learners’ ability to reason about a connotation of a given evidentiality attached to someone’s internal state of mind or absence of evidentiality, whereas Experiment 2 tests accuracy of learners’ knowledge to handle the linguistic context that needs to be equipped with such a connotation. All the participants from Experiment 1 participated in Experiment 2.

3.3.1. Method

3.3.1.1. Experimental Procedure and Items

Before starting a GJT session, the researcher briefly explained to each participant about what kind of judgment is grammaticality judgment, which should be distinguished from general understandability judgment. Then, a participant listened to a short recorded narration on a computer using earphones or a headset. Each narration had two parts: the first sentence provided a context of the following sentence and was always correct. This first contextual sentence was followed by a beep which alerted a participant to get ready for the last sentence, which was the test item to be judged against grammaticality. Participants could listen to a narration more than once if they wanted. Then, the
participant was asked to evaluate the grammaticality of the last sentence on an answer sheet with 4-level Likert-scales for each item. The right-most option is labeled ‘Very natural’ and the left-most button is labeled ‘Not acceptable at all.’

All the sentences were in the present tense, since the past tense could carry the evidential connotation in some context. The ungrammaticality was attributed only from lack of evidential marking where required. Like Experiment 1, the types of the psychological predicates were limited to sensory adjectives or desiderative phrases ‘to be feeling like (doing something).’ Since the boundary of psychological predicates has not been surveyed or it has not been established what kinds of predicates with what semantic values denoting inner psychological state of mind of someone absolutely require an evidential marking (cf. Rhoades-Ko, 2006), not to mention that KFL/KSL instructions or curriculum had not been explicitly teaching such a rule.

There was no non-linguistic context in Experiment 2, but there were three experimental conditions designed based on the evidentiality agreement. Conditions 1 and 2 were correct conditions and the same as in Experiment 1. That is, the experimental items of Condition 1 had 1st person subjects without the –e-hata construction, and those of Condition 2 had 3rd person subjects with the –e-hata construction. Condition 3 was the incorrect condition where a 3rd person subject was used without the –e-hata construction. A possible correct condition where a first person subject with the –e-hata construction was excluded from the experimental design because the implication of such use of the firsthand evidentiality with the first person would bring in applied connotations of deliberateness or objectification, which usually requires a higher level of proficiency in order to truly appreciate and consider it grammatical. The three experimental conditions
are summarized in Table 3.9 below.

Table 3.10 Experimental conditions in Experiment 2

<table>
<thead>
<tr>
<th>Condition</th>
<th>Correct/incorrect</th>
<th>Composition</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition 1</td>
<td>Correct</td>
<td>1st person subject + without –e hata</td>
<td>10</td>
</tr>
<tr>
<td>Condition 2</td>
<td>Correct</td>
<td>3rd person subject + with –e hata</td>
<td>10</td>
</tr>
<tr>
<td>Condition 3</td>
<td>Incorrect</td>
<td>3rd person subject + without –e hata</td>
<td>10</td>
</tr>
</tbody>
</table>

There were two types of psychological predicates like Experiment 1: sensory adjectives and desiderative expressions –ko siph-ta ‘to be feeling like (doing something).’ Each predicate type had 5 vocabulary items for each condition, so there were 10 experimental items in each experimental condition and the total of 30 experimental items.

Like Experiment 1, there were distractor items and filler items. There were 15 distractors and 10 fillers, so the total number of these items (n = 15) took up half of the total number of experimental items. Distractor items also had 5 grammatical items and 5 ungrammatical items. The grammaticality of distractors were attributed from a completely unrelated grammar features. For instance, one criterion was distinction between different types of Korean dative case markers, -ey for an inanimate object and –hanthey for an animate object. The use of the nominative case marker –i/-ka for verbs of existence –issta was used while the accusative marker –ul/-lul was presented as the ungrammatical counterpart. Among five filler items, three sentences were correct simplex sentences where all the sentential elements are in the canonical order. Two filler sentences were incorrect sentences, where agrammaticality caused the ungrammaticality.
That is, agrammatical sentence were involving impossible word order, missing sentential elements, etc. Therefore, there were total of 45 items including 30 experimental items and 15 distractors/fillers. The following table summarizes the items used in Experiment 2.

Table 3.11 Summary of the items used in Experiment 2

<table>
<thead>
<tr>
<th>EXPERIMENTAL ITEMS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition 1</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; person subject</td>
<td>without –e hata</td>
<td>Correct</td>
</tr>
<tr>
<td>Condition 2</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; person subject</td>
<td>with –e hata</td>
<td>Correct</td>
</tr>
<tr>
<td>Condition 3</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; person subject</td>
<td>without –e hata</td>
<td>Incorrect</td>
</tr>
<tr>
<td>Total number of experimental items</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DISTRACTORS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammatical</td>
<td>2 grammatical features usually taught at the beginning level of Korean as a Second Language curricula are selected</td>
<td>Correct</td>
<td>5</td>
</tr>
<tr>
<td>Ungrammatical</td>
<td></td>
<td>Incorrect</td>
<td>5</td>
</tr>
<tr>
<td>Total number of distractors</td>
<td></td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FILLERS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammatical</td>
<td>Grammatical sentences are randomly created correct sentences that do not represent any particular features relevant to the study.</td>
<td>Correct</td>
<td>3</td>
</tr>
<tr>
<td>Agrammatical</td>
<td>Agrammatical sentences are created by switching word order or omitting element in a sentence.</td>
<td>Incorrect</td>
<td>2</td>
</tr>
<tr>
<td>Total number of fillers</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Total number of items</td>
<td></td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>Total number of correct items</td>
<td></td>
<td></td>
<td>28 (62.22%)</td>
</tr>
<tr>
<td>Total number of incorrect items</td>
<td></td>
<td></td>
<td>17 (37.78%)</td>
</tr>
</tbody>
</table>
3.3.2. Results

3.3.2.1. Overall results

The answers to each grammaticality judgment task were converted to numeric values from 0 to 3, and the maximum score one could earn was 135 points. Learners’ L1 background showed a significant main effect on both total scores ($F = 13.9$, $p<0.05$) and the scores on the experimental items ($F = 12.8$, $p<0.05$). The learners’ proficiency had a significant effect at Alpha level of 0.5 among Japanese speakers ($F = 0.9$, $p<0.5$ for total scores, $F = 0.6$, $p<0.5$ for experimental item scores), but did not make any difference among English speakers. Like Experiment 1, each variable’s effect on four L1-Proficiency groups of English Low, English High, Japanese Low, and Japanese High. As a matter of fact, the average score of the low proficient English speaker group was even slightly higher than that of the more proficient peer group. The overall results by L1 background and proficiency show below.

Table 3.12 The overall results of grammaticality judgment task by L1 and proficiency

<table>
<thead>
<tr>
<th>L1</th>
<th>Proficiency group (Cloze test average, number of participants)</th>
<th>Experimental (out of 90)</th>
<th>Total (out of 135)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Low (3.17, n = 26)</td>
<td>59.2 (65.7%)</td>
<td>89.8 (66.5%)</td>
</tr>
<tr>
<td></td>
<td>High (6.13, n = 16)</td>
<td>59.1 (65.6%)</td>
<td>90.5 (67.0%)</td>
</tr>
<tr>
<td>Japanese</td>
<td>Low (3.58, n = 12)</td>
<td>64.7 (71.9%)</td>
<td>96.8 (71.7%)</td>
</tr>
<tr>
<td></td>
<td>High (7.15, n = 41)</td>
<td>67.7 (75.3%)</td>
<td>101.6 (75.2%)</td>
</tr>
<tr>
<td>Native speakers of Korean (n = 16)</td>
<td>77.9 (86.5%)</td>
<td>117.4 (87.0%)</td>
<td></td>
</tr>
</tbody>
</table>
First how well each L1-Proficiency group performed in each experimental condition was examined. The results from the experimental items by L1 background and proficiency are presented in Table below.

Table 3.13 The results of experimental items in GJT by L1 and proficiency

<table>
<thead>
<tr>
<th>L1</th>
<th>Proficiency group (Cloze test, N)</th>
<th>1st Person Correct Condition (out of 30)</th>
<th>3rd Person Correct Condition (out of 30)</th>
<th>3rd Person Incorrect Condition (out of 30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Low (3.17, n = 26)</td>
<td>23.2 (77.2%)</td>
<td>20.7 (69.1%)</td>
<td>15.3 (50.9%)</td>
</tr>
<tr>
<td></td>
<td>High (6.13, n = 16)</td>
<td>23.8 (79.4%)</td>
<td>21.2 (70.6%)</td>
<td>14.1 (46.9%)</td>
</tr>
<tr>
<td>Japanese</td>
<td>Low (3.58, n = 12)</td>
<td>24.7 (82.2%)</td>
<td>23.2 (77.2%)</td>
<td>16.8 (56.1%)</td>
</tr>
<tr>
<td></td>
<td>High (7.15, n = 41)</td>
<td>25.9 (86.4%)</td>
<td>23.2 (77.5%)</td>
<td>18.6 (61.9%)</td>
</tr>
<tr>
<td>Native speakers of Korean (n = 16)</td>
<td></td>
<td>28.2 (94.0%)</td>
<td>27.0 (90.0%)</td>
<td>22.7 (75.6%)</td>
</tr>
</tbody>
</table>

All the participant groups performed significantly better in the 1st person correct condition. When learners were divided into four groups of L1-Proficiency group, a significant main effect was found in the 1st person correct condition ($F = 3.809, p<0.05$), followed by the 3rd person correct condition ($F = 2.082, p = 0.108, p<0.5$). Participants’ performance in the 3rd person incorrect condition was the poorest, and there was a significant main effect of L1-Proficiency grouping ($F = 2.446, p = 0.069, p<0.5$). Surprisingly, the high proficient English speaker group’s performance was below chance and even lower than low proficient English-speaking peers which was at the chance level.
Next, each variable was examined for its effect on each group. First of all, the two types of predicate, sensory adjective vs. desiderative phrases, had a main effect at Alpha level of 0.5 on the all the L2 learners’ performance (4-group F (1, 3) = 2.62, p = 0.187 < 0.5). All the L2 learners performed better with desiderative phrases –ko siphta than sensory adjectives. However, this effect existed only between two L1 groups (English vs. Japanese, p = 0.183 < 0.5), or between two Japanese groups (Japanese Low vs. Japanese High, p = 0.494 < 0.5), but such effect was not found among English speakers (English Low vs. English High, p = 0.983). Among English speakers, low proficient English speakers performed better with desiderative phrases but high proficient English speakers outperformed low proficient peers. The results by predicate types are presented below.

Table 3.14 The results of experimental items with different predicates in GJT

<table>
<thead>
<tr>
<th>L1</th>
<th>Proficiency group (Cloze test, N)</th>
<th>Sensory Adjectives (out of 45)</th>
<th>Desiderative Phrases (out of 45)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Low (3.17, n = 26)</td>
<td>27.8 (61.8%)</td>
<td>31.3 (69.7%)</td>
</tr>
<tr>
<td></td>
<td>High (6.13, n = 16)</td>
<td>28.9 (64.2%)</td>
<td>30.2 (67.1%)</td>
</tr>
<tr>
<td>Japanese</td>
<td>Low (3.58, n = 12)</td>
<td>30.8 (68.5%)</td>
<td>33.8 (75.2%)</td>
</tr>
<tr>
<td></td>
<td>High (7.15, n = 41)</td>
<td>25.9 (86.4%)</td>
<td>23.2 (77.5%)</td>
</tr>
<tr>
<td>Native speakers of Korean (n = 16)</td>
<td>39.1 (86.8%)</td>
<td>38.8 (86.3%)</td>
<td></td>
</tr>
</tbody>
</table>
The evidentiality agreement types were looked at three different ways: 1) all three conditions of correct condition with 1\textsuperscript{st} person experiencer, correct condition with 3\textsuperscript{rd} person experiencer, and incorrect condition with 3\textsuperscript{rd} person experiencer were examined for having any effects, 2) two conditions with 3\textsuperscript{rd} person experiencer were examined, and 3) two conditions with different person experiencers were also compared. First, three conditions did not have any effects on any L2 learner groups’ performance (4 L1-Proficiency groups, p = 0.800, within Japanese group, p = 0.767, and within English group, p = 0.993).

However, this condition almost show statistically significant differences between two L1 groups (English vs. Japanese 2 L2 groups, p = 0.533). The incorrect and correct conditions with 3\textsuperscript{rd} person experiencer did not show any statistical differences, again, except that it could almost be significant between two L1 groups (English vs. Japanese 2 L2 groups, p = 0.592, 4 L1-Proficiency groups, p = 0.839, within Japanese group, p = 0.840, and within English group, p = 0.941). Lastly, the effect of having 1\textsuperscript{st} person experiencer or 3\textsuperscript{rd} person experiencer was examined, but it failed to show any significant differences in any learner groups.

Participants’ performances with different predicate types were compared within the evidentiality agreement condition. All the L1-proficiency groups performed better with desiderative phrases than sensory adjectives. Also, the L1 background and proficiency had significant effects on performances with both sensory adjective (F = 2.986 p<0.05) and desiderative phrases (F = 3.010, p<0.05).
Table 3.15 The results of 1\textsuperscript{st} person condition GJT by predicate type

<table>
<thead>
<tr>
<th>L1</th>
<th>Proficiency group (Cloze test, N)</th>
<th>1\textsuperscript{st} Person Sensory adjectives (out of 15)</th>
<th>1\textsuperscript{st} Person Desiderative Phrases (out of 15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Low (3.17, n = 26)</td>
<td>10.8 (72.3%)</td>
<td>12.3 (82.1%)</td>
</tr>
<tr>
<td></td>
<td>High (6.13, n = 16)</td>
<td>10.8 (72.1%)</td>
<td>13.0 (86.7%)</td>
</tr>
<tr>
<td>Japanese</td>
<td>Low (3.58, n = 12)</td>
<td>11.0 (73.3%)</td>
<td>13.7 (91.1%)</td>
</tr>
<tr>
<td></td>
<td>High (7.15, n = 41)</td>
<td>12.3 (82.3%)</td>
<td>13.6 (90.6%)</td>
</tr>
<tr>
<td>Native speakers of Korean</td>
<td>Low (n = 16)</td>
<td>13.9 (92.5%)</td>
<td>14.3 (95.4%)</td>
</tr>
</tbody>
</table>

Table 3.16 The results of 3\textsuperscript{rd} person correct condition GJT by predicate type

<table>
<thead>
<tr>
<th>L1</th>
<th>Proficiency group (Cloze test, N)</th>
<th>3\textsuperscript{rd} Person Sensory adjectives Correct Condition (out of 15)</th>
<th>3\textsuperscript{rd} Person Desiderative Phrases Correct Condition (out of 15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Low (3.17, n = 26)</td>
<td>9.2 (61.3%)</td>
<td>11.5 (76.9%)</td>
</tr>
<tr>
<td></td>
<td>High (6.13, n = 16)</td>
<td>10.0 (66.7%)</td>
<td>11.2 (74.6%)</td>
</tr>
<tr>
<td>Japanese</td>
<td>Low (3.58, n = 12)</td>
<td>11.3 (75.6%)</td>
<td>11.8 (78.9%)</td>
</tr>
<tr>
<td></td>
<td>High (7.15, n = 41)</td>
<td>10.9 (72.8%)</td>
<td>12.3 (82.1%)</td>
</tr>
<tr>
<td>Native speakers (n = 16)</td>
<td></td>
<td>13.4 (89.2%)</td>
<td>13.6 (90.8%)</td>
</tr>
</tbody>
</table>
When it comes to the correct sentences with a 3\textsuperscript{rd} person subject, participants also performed better with desiderative phrases than sensory adjectives. The differences that participants’ L1 and proficiency brought to the ability to sensory adjectives was significant at 0.05 level (F = 2.916, p<0.05), but different L1 background and proficiency did not make as great of a differences with correct desiderative sentences for a 3\textsuperscript{rd} person subject (F = 0.851, p = 0.470, p<0.5).

On the other hand, when participants were judging incorrect sentences with a 3\textsuperscript{rd} person subject without any marking, not only that the overall performance fell down, but also the desiderative phrases did not see the usual good performance compared to sensory adjectives. Especially English speakers were around chance level, and the learners’ L1 background and proficiency did make a significant difference in performance with desiderative phrases (F = 3.203, p<0.05), but not as great of a differences with sensory adjectives (F = 1.657, p = 0.182, p<0.5). Within Japanese speakers’ groups, their proficiency did not bring significant effects on either predicate types, but only marginally significant (sensory adjectives F = 0.738, p = 0.394, p<0.5, and desiderative phrases F = 0.360, p = 0.551).
Table 3.17 The results of 3rd person incorrect condition GJT by predicate type

<table>
<thead>
<tr>
<th>L1</th>
<th>Proficiency group (Cloze test, N)</th>
<th>3rd Person Sensory adjectives Incorrect Condition (out of 15)</th>
<th>3rd Person Desiderative Phrases Incorrect Condition (out of 15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Low (3.17, n = 26)</td>
<td>7.8 (51.8%)</td>
<td>7.5 (50.0%)</td>
</tr>
<tr>
<td></td>
<td>High (6.13, n = 16)</td>
<td>8.1 (53.8%)</td>
<td>6.0 (40.0%)</td>
</tr>
<tr>
<td>Japanese</td>
<td>Low (3.58, n = 12)</td>
<td>8.5 (56.7%)</td>
<td>8.3 (55.6%)</td>
</tr>
<tr>
<td></td>
<td>High (7.15, n = 41)</td>
<td>9.5 (63.4%)</td>
<td>9.0 (60.3%)</td>
</tr>
<tr>
<td>Native speakers (n = 16)</td>
<td>11.8 (78.8%)</td>
<td>10.9 (72.5%)</td>
<td></td>
</tr>
</tbody>
</table>

3.3.2.2. Alternative variables in GJT

This section will examine other possible factors that might have affected the participants’ answers: The lengths of the sentences to evaluate and the lengths of the final verb phrase (VP). By examining the effects of these variables on accuracy, it is possible to eliminate the possibilities that the participants might have answered correct (or wrong) on all, or most of, the long sentences or short sentences without really evaluating the appropriateness of the sentences. Also, the lengths of the final VPs might have affected the participants’ tendency to judge the grammaticality of the sentences.\(^{25}\)

The lengths of the sentences were measured by the number of seconds from the moment the beep was over to the very end, which covered the length of the last sentences.

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\(^{25}\) I greatly thank Dr. O’Grady for valuable suggestions to check these possible variables.
to be evaluated. The lengths of the final VPs were measured by the number of syllables in the last verb phrases of the sentence.

Table 3.18 Descriptive statistics and the results of ANOVA of alternative variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Mean Square</th>
<th>F</th>
<th>p. (Sig)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lengths of the Sentence (in sec.)</td>
<td>5.10</td>
<td>1.294</td>
<td>0.191</td>
<td>0.882</td>
<td>Not Significant 0.629</td>
</tr>
<tr>
<td>Lengths of the Final VP (in number of syllables)</td>
<td>5.07</td>
<td>1.388</td>
<td>0.104</td>
<td>0.496</td>
<td>Not Significant 0.778</td>
</tr>
</tbody>
</table>

Figure 3.6 Normal distributions of alternative variables
3.4. Experiment 3

3.4.1. Methods

3.4.1.1. Experimental Procedure and materials

Experiment 3 was an open-ended production task, where a participant was encouraged to report to a 3\textsuperscript{rd} party about someone else’s psychological state of mind based on a picture story. A participant was presented a drawing pad (6’ x 8’) with a series of hand-drawn pictures of a story. The researcher asked a participant to verbally perform in a role-play-like situation as describing feelings or actions of the characters in each picture, one picture at a time. The picture story is as follows.

Each participant was told a brief introductory story about a gold box in a small village: There were only 10 households and a king who ruled this small village. One day the king decided to give each household a gift of a gold box. However, the king did not want to deliver gold boxes himself, but he really wanted to know how the villagers would react to his gift. So, the king gave his royal secretary a mission to visit each home in the town and deliver a gold box and report back to him about the villagers’ reaction. Here, a participant was asked to play the role of the royal secretary. They were also told that the king would not have visual access to villagers’ reaction but would like to know what the reaction was like at each location. As a matter of fact, however, the gold boxes were empty, and some of the villagers get to find out the box was empty right in front of the secretary. This condition caused a variety of emotional and behavioral reactions from of the villagers, and the participants were also told about the empty content of the gold box but encouraged to ‘say anything’ about the villagers in each picture.
Since there were 10 households, there were 10 pictures for participants to describe. Even though an imaginative mind can think of some kind of psychological state of mind, like feelings or desire for every single picture, among the 10 households, 5 were experimental items and 5 were distracter items. That is, 5 pictures were designed to possibly elicit psychological predicates with 5 different emotional reactions, and the other 5 pictures were supposed to lead the participants to use action verbs with actions and behavioral reactions. But each participant might choose completely different alternative ways to describe any given pictures. Below are the 10 images in the order that participants were introduced.

Figure 3.7 Introductory images to the story in Experiment 3

<table>
<thead>
<tr>
<th>Introduction 1</th>
<th>Introduction 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Introduction 1" /></td>
<td><img src="image2" alt="Introduction 2" /></td>
</tr>
</tbody>
</table>

Figure 3.8 Experimental materials in Experiment 3

| ![Experimental materials](image3) | ![Experimental materials](image4) |
Figure 3.8 (Continued) Experimental materials in Experiment 3
3.4.2. Results

3.4.2.1. Data analysis

The production data form picture description tasks were transcribed and coded in the following order based on the criteria set by the research questions. First, all the utterances including psychological predicates were selected and marked. These utterances were then coded for learner variables, linguistic variables, and whether they were correct or not. As in the other receptive experiments, learner variables were the participant’s L1 background (Japanese or English) and cloze test results (below 5.0 or above 5.0). The linguistic variables considered types of psychological predicates and types of evidentiality strategies. Since a certain evidentiality strategies can be used only with a certain predicates, the data analysis had five major groups of evidentiality strategies and had subcategories taking types of predicates into consideration. The five types of evidentiality strategies were 1) verb phrasal constructions, such as the e-hata construction, 2) tense and aspectual strategies such as past tense, perfect aspect, or passivization, 3) epistemic modality, 4) nominalization, and 5) quotatives. The following table 3.19 summarizes the types of strategies found in the learners’ production of picture description.

All the psychological predicates, including adjectives and verb phrases were classified into above categories. There were also Not Applicable (NA) categories of coordinate clauses and subordinate clauses where no evidentiality strategy was required.
Table 3.19 Summary of the types of evidentiality strategies produced in Ex 3

<table>
<thead>
<tr>
<th>Evidentiality strategy</th>
<th>Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb phrasal constructions</td>
<td>-e-hata ‘to show the sign of (in a state)’</td>
</tr>
<tr>
<td></td>
<td>-key poita ‘to look (adjective)’</td>
</tr>
<tr>
<td></td>
<td>-e-poita ‘to look (adjective)’</td>
</tr>
<tr>
<td>Tense / aspect</td>
<td>Past tense</td>
</tr>
<tr>
<td></td>
<td>Perfect</td>
</tr>
<tr>
<td></td>
<td>Perfect/passivization:</td>
</tr>
<tr>
<td></td>
<td>-e-cita ‘to become (in a state)’</td>
</tr>
<tr>
<td></td>
<td>-e-hay-cita (e-hata + -e-cita) ‘to become showing the sign of (state)’</td>
</tr>
<tr>
<td>Epistemic modality</td>
<td>(RL) kes kath-ta ‘it seems that …’</td>
</tr>
<tr>
<td></td>
<td>-nun-ci ‘it may be the case that …’</td>
</tr>
<tr>
<td></td>
<td>(RL) moyang-ita ‘it looks like…’</td>
</tr>
<tr>
<td>Nominalization</td>
<td>(RL) salam(-issa) ‘(there is) a person who is…’</td>
</tr>
<tr>
<td></td>
<td>(RL) nukkim(-ita) ‘(it is) a feeling that is…’</td>
</tr>
<tr>
<td></td>
<td>(RL) kipwun(-ita) ‘(it is) a feeling that is…’</td>
</tr>
<tr>
<td></td>
<td>(RL) phyo.ceng(-ita) ‘(it is) a facial expression that is…’</td>
</tr>
<tr>
<td></td>
<td>(RL) elkwul(-ita) ‘(it is) a face that is…’</td>
</tr>
<tr>
<td></td>
<td>(RL) mosup/moyang(-ita) ‘(it is) a appearance that is…’</td>
</tr>
<tr>
<td></td>
<td>(RL) sang.hwang(-ita) ‘(it is) a situation that is…’</td>
</tr>
<tr>
<td>Quotatives</td>
<td>-ta-ko hay-ss-eyo ‘(someone) said that…’</td>
</tr>
<tr>
<td></td>
<td>-ta-ko hay-ss-pniita ‘(someone) said that…’</td>
</tr>
<tr>
<td></td>
<td>-ta-ko malhay-ss-eyo ‘(someone) said that…’</td>
</tr>
</tbody>
</table>

Figure 3.9 below shows the frequencies of the psychological predicates used by L2 learners. English speakers were overall more expressive of the psychological states of mind on the picture prompts than Japanese learners. Japanese learners were showing more conservative and uses so showed the highest accuracy rate (Low proficient Japanese
speaker’s accuracy rate: 89.3%, High proficient English speaker’s accuracy rate: 80.5%, overall: 81.7%), whereas English speakers were taking more risks (Low proficient English speaker’s accuracy rate: 61.0%, High proficient English speaker’s accuracy rate: 74.3%, overall: 66.0%).

Figure 3.9 Frequencies of evidentiality strategies used with psychological predicates by learners

![Bar chart showing frequencies of evidentiality strategies used with psychological predicates by learners.](image)

Participants also used evidentiality strategies for the meanings that were not psychological state of mind of someone else, like events or actions. The majority of these were quotations and epistemic modal expressions, and a few nominalizations. These data were consolidated into a miscellaneous category.

3.4.2.2. Verb phrasal constructions

Korean verb phrases that are used by learners as evidentiality strategies are grouped into two: the -e-hata construction ‘to show the sign of (being in a state),’ and the constructions using the verb poita ‘to look (state); to be seen (in a state).’ Most frequent
types of poita-type constructions included the -e-poita construction and the -key-poita construction, where –key is an adverbializer that attaches to an adjective. The number of occurrences of the verb poita were combined and considered as one strategy.

The -e-hata construction was used evenly by both Japanese- and English-speaking learners. It is one of the most frequently used evidentiality strategies by learners (total 94 utterances) and also used very accurately overall (95% accuracy). This form was preferred by more proficient Japanese-speaking learners than less proficient Japanese learners, but English-speaking learners used the e-hata construction evenly regardless of their proficiency level.

Figure 3.10 The -e-hata constructions used by L2 learners by L1 and proficiency

Figure 3.11 The poita-type constructions used by L2 learners by L1 and proficiency
The *poita*-type constructions were much more preferred by English-speaking learners and more advanced learners. Especially among the more proficient English-speaking learners use this form as much as the –*e-hata* construction. The incorrect uses were classified if the use is not target-like, or the meaning was not represented properly. The following examples are the correct and incorrect samples.

**Correct uses of verb phrasal constructions used by L2 learners**

(1) nemwu  kipp-e         poy-eyo  
    very   happy-Comp        look-SE  
    ‘(he) looks very happy.’   (Japanese-speaking learner, Cloze test 5.5)

(2) cokum  mwusew-e      poy-ess-eyo  
    little scared-Comp       look-Past-SE  
    ‘(he) looked a little scared.’   (English-speaking learner, Cloze test 7.0)

**Incorrect uses of verb phrasal constructions used by L2 learners**

(3) i  kacok-un  cokum mwusew-n  poy-ess-eyo  
    this family-Top little scared-Rel look-Past-SE  
    ‘This family looked scared.’   (English-speaking learner, Cloze test 8.5)

(4) i  salam-un  caymi.iss-key  poy-ess-eyo  
    this person-Top funny-Comp look-Past-SE  
    ‘This person looked funny.’   (English-speaking learner, Cloze test 4.5)

3.4.2.3. **Tense and Aspectual Strategies**

The most frequently used strategy was past/perfect tense. Korean past tense suffix –*ess-/ass*- may be used for both functions depending on the verbal aspect of the predicate used with and the context. Also, given that more than one evidential strategy can be used to mark the psychological state of mind, the past tense was the most preferred strategy to be used in addition to some other evidential strategy. For example,
45.5% of the total verb phrasal constructions were also used in the past form (56 utterances in past tense among 123 utterances). Epistemic modal expressions, on the other hand, did not accompany the past tense as much; only 2 occurrences out of 29 epistemic strategies (7%) were in the past tense. Therefore, in this section of the analysis, only the utterances that used past tense or perfect aspect as the only evidential strategy were accounted for. That is, in these utterances L2 learners were depending only on the evidential extension that the past tense brought to a psychological predicate in order to make it ‘sound right.’ The following figures summarize the past/perfect strategies of the learners.

Figure 3.12 Past tense strategies used by L2 learners by L1 and proficiency

The past/perfect as an evidentiality strategy was used much more by English-speaking learners. However, most of the Japanese learners who used past/perfect strategies were highly proficient learners, whereas lower proficient English-speaking learners were more actively using past tense. There was one utterance by a Japanese-speaking learner classified as perfect aspect, which was using –e-pelita ‘to end up (doing something), to have finally (done something),’ and this case was also classified as a nominalization strategy as well.
What especially caught my attention was the use of Korean verb phrase, -e-cita ‘to become (in a state); to get to (be in a state),’ which was a verb phrase but classified as a perfect aspectual strategy. A Korean verb cita ‘to become; to get to (be in a state)’ forms a verb phrase by taking –e-–a complementizer with either an adjective or a verb. When it forms a verb phrase with an adjective, it expresses a change of the state, as in chwuw-e-cita ‘to become cold,’ (cold-Comp-become, where chwupta is an adjective meaning ‘to be cold’), or cak-a-cita ‘to become small,’ (small-Comp-become, where cakta is an adjective meaning ‘to be small’). It also forms a passivized intransitive verb phrase by following a derivational passivized verb, as in ic-hy-e-cita ‘to be forgotten,’ (forget-Der.Pass-Comp-become, where ic(-ta) is a transitive verb meaning ‘to forget,’ and ic-hi(-ta) is a derivational passivized verb meaning ‘to be forgotten,’) or in po-y-e-cita ‘to be shown,’ (see-Der.Pass-Comp-become, where po(-ta) is a transitive verb meaning ‘to see,’ and po-i(-ta) is a derivational passivized verb meaning ‘to be seen; to be shown’). When the -e-cita form is preceded by an adjective, however, it always denotes a change of state.

There were total of 37 uses of this -e-cita construction as a strategy to mark – somehow – a psychological state of mind. Except for two instances, all of these were used by English speakers. The following figures summarize the -e-cita construction strategies of the learners.
The -e-cita construction strategy, together with past/perfect strategy, was much more preferred by English speakers, regardless of their level. Among these -e-cita construction uses, except for two cases, all of the forms were used as a main sentential verb in the past tense, which made the perfect meaning clear.

**Uses of -e-cita constructions used by L2 learners**

(6) kapcaki hayngpok.ha-y ci-ko iss-ess-eyo
    suddenly happy-Comp become-Nom exist-Past-SE
    ‘(he) was suddenly becoming happy.’
    (English-speaking learner, Cloze test 4.0; not target-like)

(7) cacw sulp-a ci-nun salam iss-nunthey.yo
    often sad-Comp become-RL person exist-SE
    ‘There is a person who gets sad often.’ (English-speaking learner, Cloze test 5.5)

Among the two, one was in the past progressive form and analyzed as ‘not target-like (incorrect)’ because the form was used with an adverb kapcaki ‘suddenly.’ The other was in a relative clause, meaning ‘someone who gets sad often.’
3.4.2.4. Epistemic Modality Strategies

There were a total of 29 utterances that used epistemic modal strategies between both language groups. The most frequently used epistemic modal expression was *(RL)* *kes kattha* ‘it seems that…; I think…’ and it was used 25 times (86.2%). This form was dominantly more often used by high proficient learners, regardless of L1 background. One Japanese participant used all the five utterances of correct uses of *kes kattha*. Among the 25 uses, two utterances were used in the present form in a coordinative clause before –*nunthey*, and two were used in the past tense as sentence-final predicates. The rest of the utterances were in the present tense as sentence-final predicates.

Figure 3.14 The epistemic modality used by L2 learners by L1 and proficiency

There were four utterances that were not *kes kattha*, and all used by all different high proficient Japanese speakers. There were two forms of epistemic modal expressions and each was used twice. One was *(RL) moyang-ita* ‘it looks like…,’ and *(RL) ci* subordinate clause, where a main clause has been deleted, meaning ‘(I am not sure) whether it is the case…’ Such a modal expression that has gone through a main clause deletion, or de-subordination, is a evidentiality strategy that denotes non-firsthand
evidential meaning. The samples of these utterances are as follows.

(8) Uses of epistemic modal expressions used by L2 learners

\[ ku \quad salam-un \quad mit-ul \quad swu \quad eps-nun \quad moyang-i-ye.yo \]
that \quad person-TOP \quad believe-RL \quad way \quad not \quad exist-RL \quad appearance-is-SE
\‘That person looks like he can’t believe.’ \quad (Japanese-speaking learner, Cloze test 5.5)

3.4.2.5. Nominalization strategies

There were total of 40 nominalization strategies found. Like epistemic modal expressions, there was a certain types of head nouns that were dominantly used. 18 out of 40 cases used a ‘person’ (17 salam and 1 halapeci ‘grandfather’), 9 cases used nouns meaning ‘feeling’ (kipwun and nukkim), and 6 cases used a ‘face’ or ‘facial expression’ (elkwul or phyoceng).

Figure 3.15 The frequencies of nouns used in nominalization strategy

These nominalization strategies were used most successfully and properly by high proficient Japanese speakers. Even though L2 learners with both L1 background attempted using the strategies evenly, Japanese speakers showed better control over the accuracy.
3.4.2.6. Quotative strategies

There were total of 50 utterances using quotative strategies. Like nominalization strategies, among the Japanese learners, high proficient speakers preferred using quotative strategies, and among English speakers low proficient and high proficient speakers were evenly attempting to use quotative forms. Characteristics of the quotative strategies are the fact that it is not used by itself, but it is more often used with other strategies, such as in the past tense, or in the present tense as a subordinate or coordinate clausal predicate.

Figure 3.17 Quotative strategies used by L2 learners by L1 and proficiency
3.4.2.7. Clausal Structure as Evidentiality Strategies

When a psychological predicate is used in a coordinate clause or in a subordinate clause, it does not have to be used with an evidentiality strategy. Especially, when a subordinate clause is expressing reasoning with –ese/-ase, it should not be in the past tense, or the form becomes unacceptable and ungrammatical. Some utterances had a psychological predicate inside a coordinate or subordinate clause without any marking, they were classified as NA (Not Applicable) and marked for correct or incorrect based on accuracy.

3.5. Discussion

3.5.1. Experiment summary

This section summarizes and the experimental results, interprets the results to answer the research questions, and further discusses the implications and caveats. The results from the receptive experiments are first discussed before the production data. The purposes of two receptive experiments were different, but we could observe some common grounds. The findings from the experiments are below.

1. First of all, learners’ L1 background was the most significant main effect across the experiments. In both Experiment 1 and 2 Japanese-speaking learners outperformed English-speaking learners in identifying the proper experiencers, regardless of their general proficiency, evidentiality agreement
conditions, evidence types, or predicate types. The low proficient Japanese-speaking learners consistently performed better than high proficient English-speaking learners.

2. Learners’ general proficiency level (Low proficient learners vs. High proficient learners) was also found as a main effect in a certain functions. Especially among Japanese speakers, their proficiency level significantly affected their performances in terms of all of the variables tested, whereas English-speaking learners’ proficiency level did not have statistically significant effect on their performances in any variables tested in any experiment. In other words, given that most of the English-speaking learners were poorer than low level Japanese speakers, highly proficient English-speaking learners were as much “clueless” as their low proficient peers when it comes to Korean evidentiality, as one of the most proficient English-speaking participants commented at the end of the experiment. Put together, when learners were divided into four groups of English Low, English High, Japanese Low, and Japanese High, there was a significant main effect on performance, which was mainly due to the overall L1 differences and within-group differences amongst Japanese speakers.

3. Among the linguistic or contextual variables, the psychological predicate type overall made relatively slightly bigger impacts than others across experiments. This means that when L2 learners dealt with a desiderative phrases, they
performed significantly better than with a sensory adjective.

4. Evidence type was tested only in Experiment 1 in two forms of See condition and Hearsay condition, and it showed a main effect to four learner groups. Again, more advanced Japanese speaking learners were more sensitively react to different evidential context than the lower level Japanese speaking learners, whereas English-speaking learners did not show any significant differences across proficiency levels.

5. Regarding evidentiality agreement conditions, it cannot be concluded one type is easier than the other. Learners’ performance varied depending on the targeted functions, conditions, and contexts, i.e. when they had to find a proper experiencer based on the predicate, or when they had to tell a predicate was used correctly. Below the results of evidentiality agreement are summarized.

A. In the experiencer-identification task (Experiment 1), the evidentiality agreement had an overall significant effect to differentiated learners’ performance, but a closer examination revealed interesting traits in learner performance. Even though low proficient Japanese speakers outperform high proficient English speaker in overall performance, English speakers showed much better command in interpreting e-

marked predicates for a 3rd person than unmarked predicates for a 1st person subjects. This performance could be interpreted that English
speakers picked the interlocutors more regardless of the linguistic forms, but they do show discernibly better differences in See Condition than in Hearsay Condition. When it comes to proficiency level difference, again, Japanese speakers were showing significant differences, whereas English speakers did not show differences by their levels.

B. Learners’ answer choices of so-called Alternatives were also looked at, and found the English-speaking learners were more regularly hooked by the distractors in the 1st person conditions and Japanese learners – especially Low level – were more distracted in the 3rd person conditions. Such answers could reveal what kinds of evidence the leaners depend on when they made a judgment. A learner watches two-three people interact, where some information is exchanged between two of them. One of them reports to the learner, saying “(I am) bored,” or “(He seems) bored.” Now a question should be answered based on the comment and the context, of course, however, there is a 50:50 chance for an L2 learner who is completely oblivious. But the tendencies of the distraction show that about 30-40% of the English speakers systematically made decisions that the interlocutor of the speaker is the experiencer of the feeling, regardless of the forms of the psychological predicates. On other hand, about 40% of Low level Japanese learners thought the speaker was still expressing his/her own feeling after talking to another person, regardless of the marked psychological predicates.

C. In the GJT, on the other hand, learners found sentences with 1st person
experiencers much clearer to tell the grammaticality than ones with 3\textsuperscript{rd} person experiencers. All the learner groups, regardless of L1 or proficiency performed much better with 1\textsuperscript{st} person condition than 3\textsuperscript{rd} person condition.

D. Within the correct conditions, learners performed, again, significantly better with the sentences with 1\textsuperscript{st} person experiencers. Also, they performed significantly better with desiderative phrases than sensory adjectives regardless of the condition. Such performance conforms with other experiments where learners showed significantly better performance with desiderative phrases.

E. Within the incorrect conditions with 3\textsuperscript{rd} person experiencer, however, all the learner groups performed significantly better with sensory adjectives. Such significant better performance was observed between two L1 groups, or 4 L1-Proficiency groups, but was not observed between Low group and High group. This means, both English- and Japanese-speaking learners were somehow able to tell something was wrong when Korean sensory adjectives for a 3\textsuperscript{rd} person experiencer were used in the bare form in the present tense, significantly better than when a desiderative phrase was used in the wrong way.

6. L2 learners’ picture description task could partially reveal how these learners attempt to resolve the issue of ‘somehow’ marking someone else’s psychological state of mind. As observed in the literature on L1 evidentiality
acquisition where children whose language had grammaticalized evidentiality
developed their production abilities earlier and more accurately than their
receptive understanding, L2 learners production data also show more active
and more accurate productive ability to mark required evidentiality in the
target meanings and forms. What was interesting was a certain evidentiality
strategies were dominantly preferred by a certain L1 speakers, and some of
them were attempted mainly by higher proficient learners.

A. Despite of the relative poor performance in receptive tasks in Experiment
1 and 2, English speakers were attempting to mark psychological
predicates somehow, even if the attempts did not turn out native-like or
grammatically correct. Overall, English speakers produced almost twice
as many evidentiality strategies, and produced correct evidentiality
strategies more than 1.5 times compared to Japanese speakers. Japanese
speakers, on the other hand, showed more conservative and careful
produce, showing much higher accuracy rate of 81.7%, compared to
English speakers with 66.0% of accuracy rate.

B. English-speaking learners used past tense and perfect aspect along with
someone else’s inner state of mind, regardless of their proficiency level.
One of the expressions that was noticeable was the -e-cita construction
used in the past tense which brought about the perfect meaning used with
a psychological predicates. This use of the construction is not wrong, but
it should not have been chosen by native speakers of Korean as frequently
as one might think based on these English-speaking learners’ active use.
As a matter of fact, low proficient English speakers were slightly more actively trying these strategies.

C. Epistemic modal expressions were by far predominantly used by highly proficient learners regardless of learners’ L1. There were actually five utterances produced by Japanese speaker, but they were all from one person. This participant had shown a quite good verbal proficiency and other experiment performance, but scored only 3.0 on the cloze test. With relatively limited Korean learning experience of 4 months in Korea, this participant showed 93.3% accuracy on experimental items in GJT, and 87.4% on total GJT items, which were higher than NS’s average judgments. This person, however, scored 81.3% of overall accuracy and 71.9% of experimental accuracy in experiencer identifying task, which were actually around and below average performance of the rest of the low proficiency Japanese peers.

This study found that learners’ L1 turned out to be the most critical variable to make a difference in successful learning Korean evidentiality for psychological state of mind. Korean L2 learners with different L1 background showed differences in their accuracy in identifying the proper experiencer expressed in the evidentially marked predicates or in telling evidentially marked sentences were correct or incorrect, showing some of the even advanced learners whose L1 does not have similar evidentiality show inferior or even lack of understanding of what a certain markings of a psychological predicate mean.
A question arising from the present finding is whether the linguistic marking of evidentiality can affect non-linguistic source reasoning in speaker of different languages. One might interpret this results that the systematic (e.g. grammaticalized) markings of evidential distinction in language (such as Korean and Japanese) could make such distinctions more salient in the minds of their speakers. On the other hand, any difficulties for those English-speaking L2 learners whose L1 does not have evidentiality requirement in acquiring evidentiality markers for psychological state of mind might have more to do with their unfamiliarity with such evidential concepts or its obligatory use. This possibility was suggested in a different context by Whorf (1956), who pointed out that Hopi’s grammatical feature made a certain conceptual distinctions easier for the Hopi speaker because of the force of habitual linguistic practices.

Second, the types of psychological predicates also turned out to play an important role in learning the meaning and functions of evidentiality requirement. All the learners performed much better with desiderative expressions, -ko siphta ‘to want to; to be feeling like (doing something),’ which was explicitly taught in a KFL/KSL curriculum than sensory adjectives. The evidentiality agreement types also made a difference in that the condition where 1st person experiencer did not need any evidential marking undoubtedly showed the highest accuracy, but English-speaking learners picked the proper 3rd person experiencers quite accurately based on marked predicates.

3.5.2. Caveats

There were a few caveats that appeared in the course of conducting experiments. It is hoped that the discussion about such concerns helps future investigations and leads
to advancement in the Korean evidentiality studies and Korean L2 acquisition studies. The caveats discussed here include 1) low GJT acceptance rate on incorrect 3rd person condition, 2) possible influence of a picture description task setting, 3) the unique characteristics of learner populations and/or learner proficiency measures, and 4) the possible direct L1 transfer from Japanese lexical/grammatical knowledge to the target language tasks.

Table 3.20 The results of 3rd person incorrect condition GJT by predicate type

<table>
<thead>
<tr>
<th>Experimental sentences using desiderative phrases without an –e-hata construction</th>
<th>Acceptance Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>My children want to the IMAX movie at a large theatre so much.</td>
<td>77%</td>
</tr>
<tr>
<td>My sister wants to travel to Europe since she has travelled only in Asia.</td>
<td>71%</td>
</tr>
<tr>
<td>(But) my son wants to play video games at home every day.</td>
<td>67%</td>
</tr>
<tr>
<td>My husband wants to go hiking this weekend.</td>
<td>73%</td>
</tr>
<tr>
<td>My younger brother wants to become a car racer as watching a car racing on TV</td>
<td>75%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experimental sentences using sensory adjectives without an –e-hata construction</th>
<th>Acceptance Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>My roommate is very thankful as greeting to me.</td>
<td>88%</td>
</tr>
<tr>
<td>Grandmother is happy to see me as holding my hands and hugging me.</td>
<td>71%</td>
</tr>
<tr>
<td>My friend feels (using) English difficult since she has to use it overseas.</td>
<td>83%</td>
</tr>
<tr>
<td>My older sister hates the credit card company since their service is not friendly.</td>
<td>73%</td>
</tr>
<tr>
<td>My youngest sister is scared of such horror movies as bursting into cry.</td>
<td>79%</td>
</tr>
</tbody>
</table>

First, Experiment 2 results showed low acceptance rate of the incorrect experimental items even by Korean native speakers. A closer item analysis revealed that
there might be a possibility that the kinship-experiencer had affected the judgment. As noted earlier, there are few cases where evidentiality marker may not be strictly required, including an omniscient 3rd person narrator and emotionally close 3rd person experiencers, like kinship relation (Sohn 1999). Even though an experiencer of the expressed psychological state of mind is a 3rd person, the speaker may express the psychological state of mind without marking for evidentiality if there is kinship relationship between the speaker and the experiencer, like one’s own child, family member, or someone really close. Table 3.20 shows the English translation of the experimental items with 3rd person experiencer used in Experiment 2 and their acceptance rates by native speakers.

The mean accuracy rate (acceptance rate) of native speaker was 86.5%, and the mean accuracy of incorrect condition was 75.6%. As seen in the above table, all the experiencers can be said to be in a quite close relationship with the speaker/narrator, but there are differences between the cases where the experiencers are family members and the cases where the experiencers are friends or roommates. All the experiencers in the kinship relationship had the acceptance rates of below 80%, whereas the acceptance rates for experiencer who was a roommate or a friend were at least 88% or 83%, respectively. For instance, the lowest accuracy rate was from a sentence about one’s own son (67%). These results, on the bright side, confirm the explanation of Sohn (1999) about the kinship relation lift the requirement to mark for evidentiality if an experiencer and the speaker are different.

Another possible caveat was how the past tense was dealt with in the experimental design of picture description Experiment 3. The setting of the production task was asking each participant to ‘report to the king about each household’s reaction,’
and the premise was that ‘the king had no visual access to the scene.’ The task itself intrinsically included a task of describing the events that happened in the past from the perspective of the speech moment. Even though the many of the participants were describing each scene as pretending they were participating in the role in the here-and-now mode, so used present tense. But some participants were actually asking the researcher which tense they should be in, and the researcher encouraged them to use ‘any tense they wanted to use.’ It was an unavoidable problem since the moment of events and the moment of report cannot be truly simultaneous. Also use of past tense might have been promoted by the setting of the story, so it may not truly be the indicator of the participants’ competence of dealing with the evidentiality problem. Nevertheless, again on the bright side, use of past tense did not naturally solve the evidentiality requirement with all the pictorial situations’ psychological states of mind. Also, the task of describing pictures as flipping pages naturally induced performance in the present tense from many participants.

Also, the homogenous characteristics of English-speaking L2 learner group could be a caveat of this study. One may see that the curriculum which the majority of English-speaking participants have learned Korean with, and the overall level of the English speakers may be too ‘uniform.’ These are real concerns and plausible arguments, however, it is also true that there are a wide range of proficiency levels even among one class of students in DLIFLC, just like any other educational setting, and it is too big of an exaggeration that learners at DLIFLC are homogenous. Had a more systematic and more comprehensive level test accompanied the experiments in the present study, such a caveat could have been less of an issue.
Lastly, it was suggested that it would be very plausible that, for Japanese participants, simple L1 lexical or grammatical knowledge transfer occurred during the experiences. It could be especially true that most of the lexical items used in the experiments have Japanese equivalents. However, at the same time, it was also pointed out that the way evidentiality requirement should work for Japanese psychological predicates were not exactly the same as the way Korean requirement worked. As a matter of fact, a close examination of the Japanese participants’ productions, there were quite unique and different evidential strategies were used often.

26 I deeply thank Dr. Sohn for providing such insights. This aspect should be carefully considered in the future investigation through collaborative research endeavor with Japanese scholars.
CHAPTER 4
CONCLUSION

This dissertation attempted an empirical investigation on second language acquisition of evidentiality using different variables including learner variables, linguistic variables, and a context variable. The general finding was overall superior performance of the learner with the similar evidential requirement in their native language. The required feature was not explicitly taught, hard to detect in natural input, and many solutions for the requirements are grammaticalized, thus it must be one of the hardest features for an adult second language learner to learn. The fact that learners who had already been used to consider for evidentiality for psychological state of mind had absolute advantage cannot help draw attention here. Such results may lead to further inquiry, or rather controversial hypothesis that a language’s linguistic features can influence the way its speakers’ minds work. If the language we speak can influence our cognition, the way we view the world, categorize and classify objects and space (c.f. Gentner & Goldin-Meadow, 2003), it is quite plausible to hypothesize that adult second language learners’ learning would also be influenced.

Whorf (1941) discussed the plurality and numeration in Hopi, To support his belief that our languages’ linguistic features have much to do with how and what we think, one of the Uto-Aztecan languages in Arizona, in comparison to those of what he called SAE (Standard Average European, a general group of western European languages including English, French, German, and so forth). In Hopi, the concept of ‘time,’ ‘matter,’ and ‘space’ are different from SAE, and plurals and cardinals are used only for entities
that can form an objective group. A phrase like ‘ten days’ exists in SAE, but it is not possible in Hopi because ‘ten days’ cannot be objectively experienced but only one day at a time. Whorf explained that in the SAE speakers’ habitual thought, the awareness of time or any cyclic sequences, like steps, brought about the imaginary plurals. He called this process ‘objectification’ because imaginary interpretation is reflected on external language use in SAE. This habitual thought also assumed that the mentally constructed imaginary plurals are just as much countable as usual countable entities. On the other hand, Hopi’s expressions for ‘ten days’ should be an operational one that reaches one singular day by a suitable count. Thus, SAE’s ‘they stayed ten days’ becomes ‘they stayed until the eleventh day’ in Hopi, and ‘ten days is greater than nine days’ becomes ‘the tenth day is later than the ninth.’ Similarly, Hopi’s noun class does not distinguish mass nouns or have any subclass. All the nouns have individual sense already with an implication of being in a suitable type, body, or a container and do not need a unit or a container. Nouns do not convey the meaning of generality of statement, but verbs or predicates do. Therefore, ‘a glass of water’ becomes ‘a water,’ and ‘a dish of corn flour’ becomes ‘a (quantity of) corn flour.’ Whorf viewed grammatical patterns as interpretations of experience as following.

“(Such examples) … will suffice to show how the cue to a certain line of behavior is often given by the analogies of the linguistic formula in which the situation is spoken of, and by which to some degree it is analyzed, classified, and allotted its place in that world which is to a large extent unconsciously built up on the language habits of the group. And we always assume that the linguistic analysis made by our group reflects reality better than it does. The linguistic material in the above examples is limited to single words, phrases, and patterns of limited range. One cannot study the behavioral compulsiveness of such material without suspecting a much more far-reaching compulsion from large-scale patterning of grammatical categories, such as plurality, gender and similar categories (animate, inanimate, etc.), tenses, voices, and other verb forms, classifications of the type of “parts of speech,” and the matter of whether a given
experience is denoted by a unit morpheme, and inflected word, or a syntactical combination. A category such as number (singular vs. plural) is an attempted interpretation of a whole large order of experience, virtually of the world or of nature; it attempts to say how experience is to be segmented, what experience is to be called “one” and what “several.” (1941: 137)

Korean expressions of evidentiality acquisition is also offering a unique testing ground for this kind of inquiry. Despite of the mandatory use with specific meanings of psychological state of mind, there has not been a comprehensive survey of the evidential strategies or evidential semantic extensions, let alone a study on adult language acquisition. We also observed some evidence showing possibilities that linguistic features of a language – such as a mandatory sentence ender in Korean – might be influencing the way young language learners acquire language and their cognitive development. The evidence was from cross-linguistic child language acquisition studies comparing Korean-speaking and English-speaking children, where young English-speaking children learn nouns significantly earlier (naming spurt) and develop specific types of cognitive abilities significantly earlier than Korean children, such as classifying objects. Young Korean children, on the other hand, showed surprisingly early productions of verbal categories, even before their second birthdays, including modality, aspects, and source of information, as well as cognitive abilities to distinguish types of information sources. Researchers, however, did not find huge gaps between two language groups in development of these cognitive abilities, but could discover statistically meaningful gaps.

This implies that all the children, regardless of what language they learn to speak, develop their cognitive abilities in a general sense in the similar pace, nevertheless there still are fine differences in timing and manner in developing specific concepts depending on what language they learn. It can be viewed that such significant differences to be
attributed to the characteristics of languages: Korean is characterized as agglutinative, relatively rich inflectional verbal morphology to mark subject honorifics, tense/aspect, modality, mood, addressee honorifics, speech levels, sentence types, and other semantic distinctions like information source, mirativity, etc. Moreover, inflection of these verbal categories is mandatory, so their meanings and functions could be more prominent than nominal categories to those young learners. Therefore, it is very plausible that not just Korean children, but all the Korean speakers regardless of the language learning phase, may have developed keen sensitivity to verbal morphology. At the same time, the heavily context-dependent characteristics of Korean allow a sentence to frequent omit nominal sentence elements, like the subject or the object, if they are recoverable in the context especially in speech. Closely related to this sentential element omission, when it comes to word order, which carries the most essential information in an English sentence, it carries relatively little importance in building a Korean sentence. On the other hand, English has relatively less complex inflectional verbal morphology does not depend on inflectional verbal morphology to express above concepts like aspects, sentence types, or information sources. Also, the importance of nominal categories in an English sentence is much more prominent compared to Korean, and nominal sentential elements are obligatory and hardly omitted. The distinctions amongst types of nouns, such as countable versus uncountable mass nouns or singular versus plural nouns, matter more in English than in Korean, and such types of nominal element affects the choice of verbs.

While such influences in first language acquisition studies seem real, the results from the present study can be viewed to imply such influence of linguistic feature on adults’ minds, which have already been fully developed. More specifically, these results
could support the view that a learner’s native language may affect the way s/he processes and evaluates non-linguistic information about a situation, which attribute to a certain linguistic forms. When one has to learn the meanings and functions of the unique linguistic form in the target language, such influences from one’s L1 exist in the process of adult second language acquisition. English-speaking learners of Korean may be relatively insensitive to evidentiality concept itself or the requirement in such specific contexts, whereas Japanese-speaking learners may have more stable knowledge about the form and more successful retention of the acquisition of evidentiality.

Accepting Whorfian ideas, it might be the case that the language we speak may make us more sensitive or more automatized in acknowledging and evaluating a certain qualities, values, or a certain events or facts with higher priority over others, and making conscious or unconscious decisions on what contents to communicate and how. For instance, if a language requires marking a type of information source in a grammaticalized verbal inflection (evidentials), like Tariana, its speakers must constantly check and evaluate their own sources of information, only to convey meanings properly in a sentence and communicate in a proper way that is accepted in the language community. If a language has features to require the speakers to distinguish from countable nouns from mass nouns, or singularity and plurality of referential objects for nominal categories, like English, its speakers must have become more and more sensitive to classification of objects in specific ways and become more and more evaluative about the types and names of objects and the categorical values of object. If a language requires markings of addressee-honorific agreement and speech level in a sentence-final suffix, like Korean, its speakers should constantly evaluate the level and the type of formality of
a speech setting, and the relationship between the speaker themselves and the addressee, and repeated practices for every single sentences for life might make them develop keen sensitivity to a certain types of contextual information. Speakers of different languages have varied cognitive priorities in identifying certain facts, classifying types, evaluating values, and expressing such concepts.

There has not been much second language research on the effect of learner’s first language on evidential concepts, but I hope there will be more studies and more discussions based on the present study’s results and methodological issues. Even though the scope of this study was rather limited to a certain evidentiality strategies and to a certain kind of context where evidentiality is required, this study tried to become a stepping stone for future research in evidentiality and language acquisition of evidentiality by providing the field of language education, especially involving less commonly taught languages with evidentiality, the teachers and researchers of such languages with a new perspective of evidentiality teaching.
APPENDIX A: EXPERIMENT 1 ANSWER SHEET

A table with images repeats after each question. There are 3 questions on each page and 48 questions are on 16 pages. All the experiment, distracter, and filler items are randomized. The items are presented in the Appendix E.

Korean Language Study

Watch a short video clip as listening to one of the characters at the end of each clip. Answer a question after each video clip by checking one of the options below.

Each video clip has an independent story; none of the stories of the video clips are related to each other.

1. Which of the following characters wants to become a teacher?

<table>
<thead>
<tr>
<th>양 (Lamb)</th>
<th>원숭이 (Monkey)</th>
<th>개구리 (Frog)</th>
<th>돼지 (Piggy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Lamb Image]</td>
<td>![Monkey Image]</td>
<td>![Frog Image]</td>
<td>![Pig Image]</td>
</tr>
</tbody>
</table>

2. Which of the following characters is having a hard time due to a cold?
3. Which of the following characters thinks the Chinese restaurant in front of his/her house has good food?
4. Which of the following characters finishes homework faster?
5. Which of the following characters feels thankful for getting help?
6. Which of the following characters has a birthday tomorrow?
7. Which of the following characters thinks playing on a beach is fun?
8. Which of the following characters fears Farris Wheels?
9. Which of the following characters cannot come to school tomorrow?
10. Which of the following characters wants to have some birthday cake?
11. Which of the following characters likes really spicy kimchee?
12. Which of the following characters makes food that others enjoy?
13. Which of the following characters wants to learn to play the guitar?
14. Which of the following characters is traveling to Japan?
15. Which of the following characters is in a bad mood?
16. Which of the following characters is looking forward to snow more?
17. Which of the following characters wants to go to Disney Land?
18. Which of the following characters thinks playing on a beach is fun?
19. Which of the following characters plays basketball better?
20. Which of the following characters has an ill younger brother?
21. Which of the following characters want to have some birthday cake?
22. Which of the following characters fears Farris Wheels?
23. Which of the following characters wants to receive birthday gifts?
24. Which of the following characters is having a hard time due to a cold?
25. Which of the following characters received more Christmas gifts?
26. Which of the following characters misses one’s younger brother?
27. Which of the following characters thinks the Chinese restaurant in front of his/her house has good food?
28. Which of the following characters feels bored?
29. Which of the following characters bought the gift?
30. Which of the following characters wants to hold a Christmas party?
31. Which of the following characters helps out a friend in a difficulty?
32. Which of the following characters wants to become a teacher?
33. Which of the following characters wants to hold a Christmas party?
34. Which of the following characters is going to travel to France?
35. Which of the following characters wants to buy a new iPhone?
36. Which of the following characters bought the gift?
37. Which of the following characters is in a bad mood?
38. Which of the following characters makes food that others enjoy?
39. Which of the following characters feels thankful for getting help?
40. Which of the following characters thinks the math problems are difficult?
41. Which of the following characters wants to buy a new iPhone?
42. Which of the following characters calls his/her younger brother?
43. Which of the following characters wants to go to Disney Land?
44. Which of the following characters thinks the math problems are difficult?
45. Which of the following characters wants to receive birthday gifts?
46. Which of the following characters feels bored?
47. Which of the following characters misses his/her younger brother?
48. Which of the following characters wants to learn to play the guitar?
APPENDIX B: EXPERIMENT 2 ANSWER SHEET

(A table repeats after each question number. There are 8 questions on each page after the first page. The total 45 questions are on 6 pages.)

*Korean Language Study – Grammaticality Judgment Test*

Listen to a short narration and answer each question.

- All you have to do is to make a grammaticality judgment on the very last sentence.
- You will hear a beep before the last sentence starts.
- There are four levels of grammaticality, ranging from ‘0’ for ‘Not Acceptable At All’ to ‘3’ for ‘Very Natural.’ You may choose any number in between based on your judgment.
- Each narration has an independent story.

<table>
<thead>
<tr>
<th>1.</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Acceptable At All</td>
<td></td>
<td></td>
<td></td>
<td>Very Natural</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Acceptable At All</td>
<td></td>
<td></td>
<td></td>
<td>Very Natural</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Acceptable At All</td>
<td></td>
<td></td>
<td></td>
<td>Very Natural</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4.</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Acceptable At All</td>
<td></td>
<td></td>
<td></td>
<td>Very Natural</td>
</tr>
</tbody>
</table>
APPENDIX C: CLOZE TEST

CLOZE TEST

Study of acquisition of emotional and event descriptions in Korean

Please fill in the blanks with a proper word, an expression or a connector that completes the passage.

1. 실례합니다- 여기서 시내 방향으로 ____________ 버스가 있어요?
2. 창문이 열려 있어서 방안이 좀 충분해요. 창문을 좀 _________주세요.
3. 남대문 시장은 한국을 ____________ 외국인들이 즐겨 찾는 관광지입니다. 왜냐하면 싸고 좋은 ____________이 아주 많기 때문입니다.
4. 오랫동안 여행할 때는 짐이 가벼운 것이 좋으니깐 꼭 ____________ 것만 가지고 가세요.
5. 요즘은 바쁜 일과 속에서도 여가 시간을 즐기는 사람들이 많아졌습니다. 예를 들어, 많은 사람들이 주말을 이용해서 운동을 하거나, 평소 좋아하던 음악이나 그림, 영화를 보러 공연이나 ____________을 찾습니다. 이런 여가생활은 업무 때문에 ____________ 스트레스를 줄여줍니다.
6. 국립공원 동산로 중 특히 암벽 같이 위험하고 가파른 곳에는 등산객들의 추락을 방지하기 ____________, 철계단과 쇠줄, 보호망간 등 안전장치를 설치해놓았다. 동산로 설치는 이렇게 등산객들이 편리하고 안전하게 등산할 수 있도록 한 것이며, 또한 산의 자연환경을 _______ 하려는 목적도 동시에 가지고 있다. 등산객들이 정해진 동산로를 이탈하면 산은 그만큼 훼손되고 파괴될 수 밖에 없기 때문이다. 그러므로 등산이나 야영을 할 때는 각각 정해진 동산로와 ____________을 벗어나지 않는 것이 산을 보호하고 자신의 안전을 위해서도 꼭 지켜야 할 점이다.
Biographical Data Survey

Study of acquisition of emotional and event descriptions in Korean

Please tell me about yourself as a learner of Korean. The information you provide will be used only for the purpose of the study, and all the personal information will be managed very carefully.

1. How old are you? __________________________

2. What is your native language? (circle and/or write down) English or

3. How long have you studied Korean? (Check one of the following options)
   a. Less than 1 year
   b. Between 1 year and 3 years
   c. Longer than 3 years

4. Have you been to Korea? (Yes No)
   If so, how long did you stay? ______________ Year(s) ______________ Month(s)

5. Are you interested in participating in a follow-up speaking task? (Yes No)
   What you will do at the production task is to verbally describe 10 pictures in a story, and it will take about 10 to 15 minutes.

If so, please tell me more about yourself, so that I can contact you to make an appointment.

Name: ________________________________________

Team number (and Department, if known): ___________________________

Thank you very much for participating in the study!
APPENDIX E: EXPERIMENTAL ITEMS

Experiment 1 Condition 1: 1st person subject without –e hata (SEE condition)

1. *e-hwu, pangkum yang-ul mann-ass-nuntey, kipwun-i manh-i napp-ayo*
   ‘Geez, (I) just met Lamb, and (I) feel really bad.’
   (원숭이) 어휴, 방금 양을 만났는데, 기분이 많이 나빠요.

2. *e-hwu, pangkum toyayci-hako hakkyo yayki-lul hay-ass-nuntey, swuhak mwuncey-ka nemwu elyew-eyo*
   ‘Geez, (I) just talked to Piggy about school, and (to me) math problems are too hard.’
   (개구리) 어휴, 방금 돼지하고 학교 얘기했는데, 수학 문제가 너무 어려워요.

3. *aikwu, cikum kaykwuli-hako yaykihay-ass-nuntey, ha-l il-I eps-ese simsimhay-yo*
   ‘Geez, (I) just talked to Frog, and (I) feel bored since (I) have nothing to do.’
   (양) 아이구, 지금 개구리하고 얘기했는데, 할 일이 있어서 심심해요.

4. *cham, pangkum yang-hako yelum panghak yayki-lul hay-ass-nuntey, pataska-eyse no-nun kes-i cham caymi-iss-eyo*
   ‘Well, (I) just talked to Lamb about summer vacation, and (to me) playing at the beach is really fun.’
   (원숭이) 참, 방금 양하고 여름 방학 얘기했는데, 바닷가에서 노는 것이 참 재미있어요.

5. *aikwu, pangkum toyayci-hako sayngil yayki-lul hay-ass-nuntey, sayngil keyik-i cham mek-ko siph-eyo*
   ‘Well, (I) just talk to Piggy about birthdays, and (I) want to eat birthday cake so much.’
   (개구리) 아이구, 방금 돼지하고 생일 얘기했는데, 생일 케익이 참 먹고 싶어요.

6. *aikwu, pangkum yang-hako yaykihay-ass-nuntey, ppalli Disneylnad-ey kath-i ka-ko siph-eyo*
   ‘Well, (I) just talk to Lamb, and (I) want to go to Disneyland (with her) soon.’
   (돼지) 아이구, 방금 양하고 얘기했는데, 빨리 디즈니랜드에 같이 가고 싶어요.

7. *cham, pangkum wenswungi-hako handuphon yayki-lul hay-ass-nuntey, say aiphon-ul cham sa-ko siph-eyo*
   ‘Well, (I) just talk to Monkey about cell phones, and (I) really want to go buy a new
8. *cham, pangkum kaykwuli-hako umak yayki-lul hay-ass-nuntey, kitha-ul cincca paywu-ko siph-eyo*

‘Well, (I) just talk to Frog about music, and (I) really want to learn (to play) guitar.’

(돼지) 참, 방금 개구리하고 음악 얘기를 했는데, 기타를 진짜 배우고 싶어요.

---

**Experiment 1 Condition 2: 3rd person subject with –e hata (SEE condition)**

1. *e-hwu, pangkum yang-ul mann-ass-nuntey, kipwun-i manh-i napp-a-hay-yo*

‘Geez, (I) just met Lamb, and (she seems to) feel really bad.’

(양) 아휴, 방금 양을 만났는데, 기분 많이 나빠해요.

2. *e-hwu, pangkum toyayci-hako hakkyo yayki-lul hay-ass-nuntey, swuhak mwuncey-lul nemwu elyew-e-hay-yo*

‘Geez, (I) just talked to Piggy about school, and (to him) math problems (seem to) be too hard.’

(돼지) 참, 방금 돼지하고 학교 얘기를 했는데, 수학 문제를 너무 어려워해요.

3. *aikwu, cikum kaykwuli-hako yaykihay-ass-nuntey, ha-l il-I eps-eše simsimhay-hay-yo*

‘Geez, (I) just talked to Frog, and (he seems to) feel bored since (he) has nothing to do.’

(양) 아이구, 지금 개구리하고 얘기했는데, 할 일이 없어서 심심해해요.

4. *cham, pangkum yang-hako yelum panghak yayki-lul hay-ass-nuntey, pataska-eyse no-nun kes-ul cham caymi-iss-e-hay-yo*

‘Well, (I) just talked to Lamb about summer vacation, and (to her) playing at the beach (seems to) be really fun.’

(양) 아휴, 방금 양하고 여름 방학 얘기를 했는데, 바닷가에서 노는 것을 참 재미있어해요.

5. *cham, pangkum toyayci-hako sayngil yayki-lul hay-ass-nuntey, sayngil keyik-ul cham mek-ko siph-e-hay-yo*

‘Well, (I) just talk to Piggy about birthdays, and (she seems to) want to go eat birthday
cake so much.'

(개구리) 참, 방금 돼지고 생일 얘기를 했는데, 생일 케익을 참 먹고 싶어해요

6. aikwu, pangkum yang-hako yaykihay-ass-nuntey, ppalli  Disneylnad-ey kath-ika-ko siph-e-hay-yo

‘Well, (I) just talk to Lamb, and (she seems to) want to go to Disneyland (with me) soon.’

(돼지) 아이구, 방금 양하고 얘기했는데, 빨리 디즈니랜드에 같이 가고 싶어해요

7. cham, pangkum wenswungi-hako handuphon yayki-lul hay-ass-nuntey, say  
  iPhone-ul cham sa-ko siph-e-hay-yo

‘Well, (I) just talk to Monkey about cell phones, and (he seems to) really want to go buy a new iPhone.’

(양) 아휴, 방금 원숭이하고 핸드폰 얘기했는데, 새 아이폰을 참 사고 싶어해요

8. cham, pangkum kaykwuli-hako umak yayki-lul hay-ass-nuntey, kitha-ul cincca  
  paywu-ko siph-e-hay-yo

‘Well, (I) just talk to Frog, and (he seems to) really want to learn (to play) guitar.’

(개구리) 참, 방금 개구리하고 음악 얘기했는데, 기타를 진짜 배우고 싶어해요

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Experiment 1 Condition 3: 1st person subject without –e hata (HEARSAY condition)

1. cham, pangkum wenswungi-hako siktang umsik yayki-lul hay-ass-nuntey, cip palo  
  aph cwungkwuk siktang umsik-i cham masiss-eyo

‘Well, (I) just talked to the monkey about restaurant food, and (to me) the food at a  
Chinese restaurant right in front of (my) house is really delicious.’

(개구리) 참, 방금 원숭이하고 식당 음식 얘기했는데, 바로 앞 중국식당 음식이 참 맛있어요

2. e-hwu, pangkum yang-hako Disneyland yayki-lul hay-ass-nuntey, Farris Wheel-i  
  cincca mwusew-eyo

‘Geez, (I) just talked to the sheep about Disneyland, and (I) am really scared of Farris Wheel.’

(돼지) 어휴, 방금 양하고 디즈니랜드 얘기했는데, Farris wheel 이 진짜 무서워요
3. e-hwu, cikum yang-hako cenhwa-lo yaykiha-yss-nunthey, kamki ttaymwum-ey manh-i himtul-eyo
‘Geez, (I) just talked the sheep on the phone, and (I) feel really difficult due to a cold.’
(원숭이) 어휴, 지금 양하구 전화로 얘기했는데, 감기 때문에 많이 힘들어요.

4. cham, pangkum kaykwuli-hako cenhwa-ol yaykihayass-nuntey, isa-ha-nun kes-ul
towacw-ese cham komaw-ayo
‘Well, (I) just talked to the frog on the phone, and (I) am really thankful (for him) to help
(me) with moving.’
(양) 참, 방금 개구리하고 전화로 얘기했는데, 이사하는 것을 도와줘서 정말 고마워요.

5. wa, pangkum wenswungi-hako cenhwahayss-nuntey, kath-i Christmas pathi-lul
ha-ko siph-eyo
‘Wow, (I) just talked on the phone with the monkey, and (I) want to hold a Christmas
party with (him)’
(개구리) 와, 방금 원숭이하고 전화로 얘기했는데, 같이 크리스마스 파티를 하고 싶어요

6. aikwu, pangkum toyayci-hako cenhwahayass-nuntey, ppalli sayngil senmwul-ul
pat-ko siph-eyo
‘Geez, (I) just talk to the piggy, and (I) want to receive (my) birthday gifts soon.’
(원숭이) 아이구, 방금 돼지고 전화했는데, 빨리 생일 선물을 받고 싶어요

7. aikwu, pangkum kaykwuli-hako kacok yayki-lul hayass-nuntey, mikwuk-ey iss-nun
tongsayng-ul cham po-ko siph-eyo
‘Geez, (I) just talk to the frog about family, and (I) really want to see (my) younger
brother in the States.’
(돼지) 아이구, 방금 개구리하고 가족 얘기했는데, 미국에 있는 동생이 참 보고 싶어요

8. cham, pangkum wenswungi-hako hakkyo colepsik yayki-lul hayass-nuntey,
colepha-n taum Sensayngnim-il toy-ko siph-eyo
‘Well, (I) just talk to the money about school graduation, and (I) want to become a
teacher after graduation.’
(양) 참, 방금 원숭이하고 학교 졸업식 얘기했는데, 졸업한 다음 선생님이 되고 싶어요.
Experiment 1 Condition 4: 3rd person subject with –e hata (HEARSAWY condition)

1. *cham, pangkum wenswungi-hako siktang umsik yayki-lul hay-ass-nuntey, cip palo aph cwungkwuk siktang umsik-i cham masiss-e-hay-yo*
   ‘Well, (I) just talked to the monkey about restaurant food, and (to him) the food at a Chinese restaurant right in front of (his) house (seems to) be really delicious.’
   (개구리) 참, 방금 원숭이하고 식당 음식 얘기를 했는데, 집 바로 앞 중국식당 음식을 참 맛있어해요.

2. *e-hwu, pangkum yang-hako Disneyland yayki-lul hay-ass-nuntey, Farris Wheel-ul cincca mwusew-e-hay-yo*
   ‘Geez, (I) just talked to the sheep about Disneyland, and (she seems to) be really scared of Farris Wheel.’
   (돼지) 어휴, 방금 양하고 디즈니랜드 얘기를 했는데, Farris wheel 을 진짜 무서워해요.

3. *e-hwu, cikum yang-hako cenhwa-lo yayki-hayass-nuntey, kamki ttaymwum-ey manh-i himtul-e-hay-yo*
   ‘Geez, (I) just talked the sheep on the phone, and (she seems to) feel really difficult due to a cold.’
   (원숭이) 어휴, 지금 양하고 전화로 얘기했는데, 감기 때문에 많이 힘들어해요.

4. *cham, pangkum kaykwuli-hako cenhwa-ol yaykihayass-nuntey, isa-ha-nun kes-ul towacw-ese cham komaw-e-hay-yo*
   ‘Well, (I) just talked to the frog on the phone, and (he seems to) be really thankful (for me) to help (him) with moving.’
   (양) 참, 방금 개구리하고 전화로 얘기했는데, 이사하는 것을 도와줘서 정말 고마워해요.

5. *wa, pangkum wenswungi-hako cenhwahayss-nuntey, kath-i Christmas pathi-ey acwu ka-ko siph-e-hay-yo*
   ‘Wow, (I) just talked on the phone with the monkey, and (he seems to) really want to go to the party with (me)’
   (개구리) 와, 방금 원숭이하고 전화했는데, 같이 크리스마스 파티에 아주 가고 싶어해요.

6. *aikwu, pangkum toyayci-hako cenhwahayass-nuntey, ppalli sayngil senmwul-ul pat-ko siph-e-hay-yo*
‘Geez, (I) just talk to the piggy, and (he seems to) want to receive (his) birthday gifts soon.’
(원숭이) 아이구, 방금 돼지하고 전화했는데, 빨리 생일 선물을 받고 싶어해요.

7. aikwu, pangkum kaykwuli-hako kacok yayki-lul hayass-nuntye, mikwuk-ey iss-nun tongsayng-ul cham po-ko siph-e-hay-yo
‘Geez, (I) just talk to the frog about family, and (he seems to) really want to see (his) younger brother in the States.’
(돼지) 아이구, 방금 개구리하고 가족 얘기를 했는데, 미국에 있는 동생을 참 보고 싶어해요.

8. cham, pangkum wenswungi-hako hakkko colepsik yayki-lul hayass-nuntye, colepha-n taum Sensayngnim-i toy-ko siph-e-hay-yo
‘Well, (I) just talk to the money about school graduation, and (he seems to) want to become a teacher after graduation.’
(양) 참, 방금 원숭이하고 학교 졸업식 얘기를 했는데, 졸업한 다음 선생님이 되고 싶어해요.

Experiment 1 Distracters: A grammar feature B-pota A ‘A than B’ is used in two conditions where phrase orders of ‘A’ and ‘B’ are alternated.

1. (양) 참, 방금 원숭이하고 날씨 얘기를 했는데, 저보다 원숭이가 겨울에 눈이 오기를 더 기다려요.

2. (원숭이) 어휴, 방금 양하고 수업 얘기를 했는데, 양보다 제가 숙제를 더 빨리 해요.

3. (개구리) 아이구, 지금 돼지를 만났는데, 양이 돼지보다 크리스마스 선물을 더 많이 받았어요.

4. (돼지) 참, 방금 개구리하고 얘기했는데, 개구리가 원숭이보다 농구를 더 잘해요.
Experiment 1 Distracters: Relative clauses modifying an object of a sentence are used alternated.

5. (양) 참, 방금 원숭이하고 선물 얘기를 했는데, 원숭이는 개구리가 사준 선물을 제일 좋아해요.

6. (양) 참, 방금 원숭이하고 선물 얘기를 했는데, 원숭이는 개구리한테 사준 선물을 제일 좋아해요.

7. (개구리) 아이구, 지금 왜지하고 음식 얘기를 했는데, 왜지는 원숭이가 만든 음식을 아주 맛있게 먹어요.

8. (개구리) 아이구, 지금 왜지하고 음식 얘기를 했는데, 원숭이는 왜지가 만든 음식을 아주 맛있게 먹어요.

Experiment 1 Fillers: eight (8) unrelated grammatical sentences

1. (돼지) 와, 지금 양하고 얘기했는데, 방학 때 양은 중국에 여행가고, 개구리는 일본에 여행가요.

2. (원숭이) 아이구, 방금 개구리하고 한국 음식 얘기를 했는데, 개구리가 매운 김치를 아주 잘 먹어요.

3. (양) 아이구, 지금 왜지를 만나서 얘기했는데, 왜지 동생이 아파서 병원에 있어요.

4. (개구리) 참, 지금 원숭이를 만나서 얘기했는데, 내일이 원숭이 생일이에요.

5. (돼지) 와, 지금 양하고 얘기했는데, 양이 다음 달부터 1년 동안 프랑스에 공부하러 가요.

6. (원숭이) 와, 방금 개구리하고 얘기를 했는데, 개구리는 뉴욕에 있는 동생하고 자주 전화해요.
7. (양) 아이구, 지금 돼지하고 전화로 얘기했는데, 돼지가 아과서 내일 학교에 못 와요.

8. (돼지) 아이구, 지금 원숭이하고 얘기했는데, 원숭이 차가 고장나서 개구리 차를 같이 타고 다니요.

Experiment 2 GJT test items. Sentences for evaluation are underlined.

Experiment 2 Condition 1: 1st person subject without –e hata (CORRECT)

1. 요즘 이사할 아파트를 찾고 있는데요, 저는 학생이니까 그냥 학교에서 가깝고 값이 싼 아파트면 좋겠어요. (beep) 그런 아파트를 찾으면 저는 빨리 이사하고 싶어요.

2. 저는 한국말을 배우면서 한국어 수업을 같이 듣는 일본인 친구들을 많이 사졌어요. (beep) 그래서 저는 나중에 일본어도 배우고 싶어요.

3. 제가 고등학교 때 제 영어 선생님이 저를 참 많이 도와 주셨어요. (beep) 그래서 저도 학교를 졸업하면 고등학교 영어 선생님이 되고 싶어요.

4. 이번 주말에 친구들과 여행을 갈까 해요. 저는 오랫동안 바닷가에 안 가봤어요. (beep) 그래서 저는 이번에 동해안 바닷가에 가고 싶어요.

5. 오늘은 아침 일찍부터 수업이 계속 있는 날이에요. 수업을 계속 들으면 참 피곤해져요. (beep) 그래서 오후에 아르바이트하러 가기 전에 저는 한 시간쯤 쉬고 싶어요.

6. 저는 지금 미국에서 영어를 공부하고 있는데, 아직 영어를 잘 못해요. (beep) 그래서 특히 수업 시간에 미국인 선생님이 빨리 말하면 저는 알아듣기가 좀 힘들어요.

7. 저는 매주 주말마다 집에서 친구들과 영화를 같이 보는데요, 그 다음에 그 친구들과 그 영화에 대해서 얘기해요. (beep) 저는 이렇게 영화에 대해 얘기하는 것이 참 재미있어요.
8. 저는 학교가 지하철역하고 아주 가깝고, 집도 지하철역하고 가까워요. (beep) 이렇게 지하철을 타고 다니니까 저는 학교 다니는 것이 참 편리해요.

9. 저는 숙제도 벌써 다 했고, 오늘은 지금부터 수업도 없어요. 그런데 친구들은 다 아직 수업을 듣고 있어요. (beep) 혼자 이렇게 할 일이 없어서 저는 지금 좀 심심해요.

10. 저는 일주일 전에 한국에 와서 아직 한국말을 잘 못해요. (beep) 그래서 혼자 슈퍼마켓에서 쇼핑하는 것이 저는 제일 어려워요.

Experiment 2 Condition 2: 3rd person subject with –e hata (CORRECT)

1. 저희 남편이 다니던 회사를 그만두고 직업을 바꾸려고 해요. 그런데 작은 도시보다 큰 도시에 회사도 많고 직장도 많지요. (beep) 그래서 저희 남편은 큰 도시로 이사하고 싶어요.

2. 크리스마스나 설 같은 명절엔 가족들이 모여서 음식을 많이 만들어 먹죠. (beep) 우리 아이들은 이번 명절엔 특히 한국 명절 음식을 아주 먹고 싶어해요.

3. 제 남자친구는 연극이나 뮤지컬을 직접 극장에 가서 보는 걸 아주 좋아해요. (beep) 이번 주말에 새 뮤지컬이 오픈하는데, 남자 친구가 저랑 같이 가서 보고 싶어요.

4. 우리 오빠는 여행을 많이 다니면서 다른 문화의 사람들 만나는 걸 좋아해요. (beep) 그래서 나중에 직업을 찾을 때도 오빠는 여행을 많이 다닐 수 있는 직업을 가지고 싶어요.

5. 저는 미국에 살고 있는 미국인 친구가 있는데요. 이번에 한국으로 1주일 동안 여행을 오려고 해요. (beep) 그래서 한국에 오면 그 친구는 서울에서 저를 만나고 싶어요.

6. 우리 언니가 10년 만에 오랜 친구와 이메일로 연락을 했어요. (beep) 언니는 그 친구의 이메일을 여러 번 읽으면서 참 반가워요.
7. 제 풀메이트는 한국에 한국말을 배우러 왔는데 아직 한국말을 잘 못해서 제가 자주 도와줘요. (beep) 특히 쇼핑하기 잘 때 같이 가서 도와주면 풀메이트가 점심을 사주면서 참 고마워해요.

8. 오늘은 날씨가 참 좋은 주말인데 나이가 어린 사촌 동생들을 데리고 동물원에 놀러 나왔어요. (beep) 우리 다섯 살짜리 막내 사촌 동생이 펭귄 구경하는 걸 제일 재미있어해요.

9. 우리 언니는 요즘에 낮에는 회사에 다니고 저녁에는 또 학원에서 밤 늦게까지 수업을 듣고 있어요. (beep) 특히 언니는 밤에 집에 돌아온 다음에도 숙제할 때 참 힘들어요.

10. 우리 여동생은 영화나 드라마를 보면서 정말 잘 옹이어요. (beep) 특히 슬픈 한국 드라마를 볼 때 우리 동생은 막 옹면서 슬퍼해요.

Experiment 2 Condition 3: 3rd person subject without –e hata (INCORRECT)

1. 저는 주말에 집에서 쉬는 게 좋은데 우리 남편은 밤에 나가서 뭐 하는 걸 좋아해요. (beep) 이번 주말에도 남편은 가까운 산에 등산하고 싶어요.

2. 이번에 나온 쓰리디 아이맥스 영화가 아주 인기가 많아요. (beep) 우리 아이들도 이번 아이맥스 영화를 큰 극장에서 아주 보고 싶어요.

3. 우리 가족은 취미가 서로 너무 달라요. 우리 남편은 스키 타는 걸 아주 좋아하고, 저는 쇼핑을 좋아해요. (beep) 그런데 우리 아들은 집에서 메일 비디오 게임만 하고 싶어요.

4. 우리 언니는 지금까지 일본하고 중국에 많이 여행나뜨했어요. (beep) 우리 언니는 지금까지 아시아만 여행타봤지만 이번엔 유럽으로 여행가고 싶어요.

5. 제 남동생은 빠른 자동차나 자동차 레이싱에 아주 관심이 많아요. (beep) 그래서 티비에서 자동차 레이싱을 할 때마다 우리 남동생은 그걸 보면서 자동차 레이싱이 되고 싶어요.
6. 이번 설날에 할머니댁에 놀러왔는데, 아주 오랜만에 할머니댁에 오는 거예요. (beep)그래서 할머니가 저를 안고 제 손을 꼭 잡으시면서 아주 반가와요.

7. 저랑 방을 쓴 풋매이트가 있는데, 풋매이트 부모님이 일주일 동안 방문하셨어요. 그래서 저는 그 동안 제 부모님댁에 있으려고 해요. (beep)그래서 풋매이트가 인사하면서 아주 고마와요.

8. 저는 드라큐라가 나오는 공포영화를 정말 좋아하는데, 우리 막내 여동생은 그런 공포영화를 정말 싫어하고요. (beep)그런 공포영화를 보면 막내 동생은 막 울면서 정말 두시워요.

9. 우리 언니가 요즘 그래봐 카드회사에 아주 화가 났는데, 거기는 손님이 되기 전엔 친절했대요. (beep)그런데 카드를 만든 다음부터는 서비스가 너무 부친절하다면서 우리 언니가 회사를 너무 싫어요.

10. 저는 제 재일 친한 친구하고 외국에 배낭여행을 하고 싶은데 친구는 그냥 국내여행을 하라고 해요. (beep)외국에서는 영어를 쓰면서 다니어야한다면서 친구가 영어를 좀 어려워요.

**Distracters: (10 items) 2 grammatical features usually taught at the beginning level of KFL**

**Grammatical: (5 items)**

1. 이번 겨울 방학에 하와이에 여행 갔다 올 계획이에요. (beep)그리고 오는 길에 일본에 하루쯤 방문할 거예요.

2. 박 선생님이 저한테 집에 가기 전에 잠깐 사무실에 오라고 하셨어요. (beep)수업 끝나고 박선생님 사무실한테 급방 갔다올게요.

3. 학교 안에 있는 우체국을 찾으러면 학교 도서관 건물에 가세요. (beep)도서관 앞문에서 나와서 건물 오른쪽으로 돌아가면 바로 우체국이 있어요.

4. 지금 살고 있는 아파트는 모든 게 다 렌리해요. (beep)특히 우리 아파트에서 길을 건너면 바로 앞에 큰 시장을 있어요.

5. 주말에 인천에 있는 이모댁에 늘러 갈 거예요. 그런데 어떻게 가는지 모르겠어요. (beep)그래서 이모댁에 전화해서 물어봐야겠다요.
6. 중요한 한국어 시험이 급한데 언제인지 날짜를 모르겠어요. (beep) 그래서 친구를 전화해서 물어봐야겠어요.

7. 한국에는 거울에 눈도 많이 오고 날씨도 아주 추워요. (beep) 그런데 캘리포니아에는 거울에서 눈이 별로 안 와요.

8. 저희 행복에는 바다도 있고 산도 있어서 여름에 바닷가에 수영하러 자주 갑어요. (beep) 그런데 서울에는 바다가 없어서 수영장에 수영하기가요.

9. 우리 언니는 병원에서 간호사로 일하고 있어요. (beep) 그리고 우리 동생은 컴퓨터 회사에서 엔지니어로 일하고 있어요.

10. 저는 이 회사에서 인턴으로 한 달 동안 일하고 있어요. (beep) 이제 이 회사로 직원에서 일하고 싶어요.

Fillers: (5 items) randomly created; not representing any particular grammar features
Grammatical: (3 items) Agrammatical: (2 items)

1. 이번 봄 방학에 미국에 한 이주일 쯤 갔다올 거예요. (beep) 미국에서 친구들과 가족을 만날 거예요.

2. 제가 살고 있는 아파트는 아주 넓고 깨끗하구요, 교통도 참 편리해요. (beep) 그런데 방값이 좀 비싸요.

3. 날씨가 너무너무 추운데 버스를 계속 기다려도 버스가 안 와요. (beep) 그래서 택시는 좀 비싸지만 그래도 택시를 타야겠어요.

4. 이번 설날 명절에는 고향에 가서 친척들을 만날 거예요. (beep) 들. 만나면, 도. 동생 사촌, 반가와요. 그리고.

5. 미국에 여행을 가려면 비자를 받아야 해요. (beep) 빨리. 필요해요. 저는. 그런데, 밝에. 일주일.
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